July 9, 2003	Mulu-Page	NL Hydro 2004 Capital Budget Application
	Page 1	Page 2
1 (9:01 a.m.)	1	they arise from the cross-examination of Ms.
2 CHAIRMAN:	2	Andrews. The first undertaking is found on
3 Q. I was writing down the date in my notebo	ook 3	page 75 of the transcript at approximately
4 this morning and I started out to put down	n 4	lines 13 to 17 and they relate to the control
July with a J and I thought it was probably	y 5	system project for Holyrood which is found on
6 more appropriate to call it January. Howev	er. 6	page B-17 of section B. The question that was
7 I just wanted to mention before we begin, v	with 7	left with you as an undertaking, Mr. Haynes,
8 this schedule change today we'll be only	y 8	was whether any of the alternatives outlined
9 taking one break this morning and that will	·	on page 5 of Tab 2 of section G, which was a
on or about 10:30. And this afternoon we'	10	whether they reflect the manufacturer's short
break for 15 minutes or so around 2:45. A	ny 11	term recommendations that were outlined in the
preliminary matters? There are some	-	report filed in response to IC-27. Have you
undertakings.	13	had the opportunity to review that?
14 MR. KENNEDY:	14 MR.	HAYNES:
15 Q. Yes, Chair, and I think that's the only	15 A	. Yes, I did and I guess as respect of both
preliminary matter.	16	alternative two and three follow the short
17 CHAIRMAN:	17	term recommendations as put forth by
18 Q. Okay. There are 17 I think according to the	ne 18	Westinghouse for all the relevant systems of
19 transcripts.	19	Holyrood.
20 GREENE, Q.C.:	20 Q	The next undertaking is also found on page 75,
21 Q. Yes, Mr. Chairman, there are and with the	ne 21	going over to page 76 and it relates to the
consent of counsel, I was going to ask the	e 22	undertaking to provide the cost incurred by
appropriate witness on the Panel each one	of 23	Hydro to install the four permanent ambient
the 17 to have the answer on the record. The	he 24	monitoring stations at the Holyrood plant.
25 first four will be addressed to Mr. Haynes a	and 25	Mr. Haynes, can you now provide the cost for
	Page 3	Page 4
1 that, please?	1	said, I printed it off before I got the hard
2 A. Yes, the total cost spent was \$414,000 for t	the 2	copy off. The next one did relate to the
3 four current permanent ambient sites.	3	opacity meters at the Holyrood plant. So from
4 Q. The third undertaking is also found on page	e 75 4	now on I won't refer to the page numbers, I'll
5 at approximately lines 11 to 19 and it relate	es 5	just go through the undertaking. And there
6 to the opacity meters also installed at the	6	the issue was whether there was a specific
7 Holyrood plant and the -	7	project in 2000 related to the opacity meters.
8 HUTCHINGS, Q.C.:	8	Mr. Haynes, have you checked with respect to
9 Q. Excuse me, they're not all on page 75. I	9	this?
10 can't follow.	10 A	Yes. The opacity meters were intended to be
11 GREENE, Q.C.:	11	installed during 1999 and two were. One
12 Q. Oh, I'm sorry.	12	carried over to 2000 so it was a part of that
13 HUTCHINGS, Q.C.:	13	budget and the total cost was \$398,000.
14 Q. The second one, according to the transcript	t is 14 Q	. And the installation of the meters occurred
on page 88.	15	over the two year time frame.
16 GREENE, Q.C.:	16 A	. Over the two year time frame but it was under
17 Q. I printed off a version last night before the	17	onea carry over, basically, because of
18 hard copy -	18	various reasons.
19 CHAIRMAN:		. The last undertaking for Mr. Haynes was with
20 Q. It's always different than the printed hard	20	respect to filing the brief referred to in the
21 copy.	121	minutes of July 5, 2002 which were the minutes
21 copy.	21	•
22 GREENE, Q.C.:	22	of a meeting with the Department of the
22 GREENE, Q.C.: 23 Q. Perhaps if we just go by the number. It's th	22 23	of a meeting with the Department of the Environment. We have copies of this brief
22 GREENE, Q.C.:	22 23 . 24	of a meeting with the Department of the

July 9, 2005	Mulu-rage	e NL Hydro 2004 Capitai Budget Application
	Page 5	Page 6
1 marked, Mr. Chair.	1	from 1.8 to 2. But there was no further
2 MR. KENNEDY:	2	finalization of that report.
3 Q. Reply to an undertaking.	3	Q. So that discussion was with respect to the
4 GREENE, Q.C.:	4	sulphur content in the fuel burnt at Holyrood,
5 Q. Reply to an undertaking.	5	was it?
6 MR. KENNEDY:	6	A. Yes, that's correct.
7 Q. So that would be U-Hydro number -	7	Q. That completes the undertakings for Mr.
8 GREENE, Q.C.:	8	Haynes. Turning now to Mr. Downton, the first
9 Q. One.	9	one that is noted in the transcript related to
10 MR. KENNEDY:	10	the corporate applications environment project
11 Q. Number six.	11	which is B-59 and the undertaking related to
12 GREENE, Q.C.:	12	the number of person hours required or
13 Q. Number six.	13	anticipated and included in that project. Mr.
14 CHAIRMAN:	14	Downton, have you had the opportunity to
15 Q. Number six.	15	review that?
16 GREENE, Q.C.:		R. DOWNTON:
17 Q. Mr. Haynes, this report is entitled "A	17	A. Yes, I have. The number of person hours for
18 Preliminary Review of SO2 emission at	18	the corporate applications environment is
19 Newfoundland and Labrador Hydro's Holyroo		5,100.
20 Generating Station." Was this review	20	Q. The next undertaking related to project B-62,
21 finalized?	21	the security program, and the undertaking was
22 A. There was no additional report presented to	22	to provide details of material supplied
the Department of Environment. Basically they	23	component. Can you please provide that
24 did relax the minimum, the proposed minimum		information now, Mr. Downton?
25 sulphur content. They increased I should say,	25	A. Yes. The material supplied totals \$30,000 and
surplied content. They increased I should say,		^_
1 (2 1 5 \$7,000 \$	Page 7	Page 8
that's comprised of \$7,000 for a server and		A. 2005 would be 1.5 million.
2 \$23,000 for software.	2	Q. 2005?
3 Q. The next undertaking related to the same		A. 1.2 million.
4 project, project B-62 and it was whether th		Q. And 2007?
5 project would address the issue of the wel		A. 1.2 million.
6 server being outside the firewall. Mr.	6	Q. The next undertaking related to project B-62
7 Downton, does this project address that issu		of the security program again and it was an
8 A. The web server is outside the firewall and		undertaking to provide the breakdown of the
9 will stay outside the firewall.	9	material supplied cost. Would you please
Q. And why is it necessary to stay outside the		provide that now?
11 firewall?	11	A. Yes, basically the materials is to purchase
12 A. Basically because it's security, security	12	the secure ID tokens.
reasons. That way all the traffic does not	13	Q. And the amount of the material supplied was?
come to Hydro's network to get on the w		A. 35,000.
server or the internet server.	15	Q. Or 30,000? Would you like -
Q. The next undertaking related to project B-6		A. Just a second.
the Evergreen Project and the undertakin	-	Q. B-62.
relate to the cost of the five year plan for	18	A. Sorry. B-62 for the first year it's -
this project. Mr. Downton, what is the total		Q. 30,000.
20 cost for this particular project?	20	A. Yes, 30,000. Oh I thought that was B-64.
A. Basically the total cost for 2005, 2006, 200		Q. Sorry, yes, it is B-64.
which is the last three years of the evergree		A. 35,000.
program was 3.9 million.	23	Q. 35,000 and it's all for the secure tokens.
Q. What would be the annual cost anticipated		A. Yes.
25 forecast for 2005?	25	Q. The next undertaking related to the cost of

Ju	ly 9, 2003 Multi	I-P	age [™] NL Hydro 2004 Capital Budget Application
	Page 9		Page 10
1	the thin client. Have you had the opportunity	1	of the desktop. Would you please advise what
2	to confirm the cost you indicated yesterday?	2	that is?
3	A. It's approximately \$1,200.	3	A. Yes, it's an IBM Think Centre S-50.
4	Q. The next undertaking also related to the thin	4	HUTCHINGS, Q.C.:
5	client and it was to provide information as to	5	Q. Which centre?
6	whether other alternatives other than the	6	A. Think Centre.
7	Neoware product were considered for the thin	7	Q. Think?
8	client use at Hydro. Have you had the	8	A. Think. Think Centre S-50.
9	opportunity to review that?	9	GREENE, Q.C.:
10	A. Yes. The Neoware EON Preferred Series 3000	10	Q. That's think as in T-h-i-n-k.
11	Thin Client, the HP EVO T20 Thin Client and	11	A. Yes.
12	the Wise Winterm 3235LE Thin Clients were	12	Q. And the next undertaking was with respect to
13	looked at.	13	the cost of the desktop, what is the
14	Q. Why was the new ware thin client selected of	14	approximate cost of the desktop?
15	the alternatives that were considered?	15	A. Approximate cost is \$1,600.
16	A. The neo ware thin client was the preferred	16	Q. The next undertaking related to the thin
17	technical solution.	17	client for Hydro and whether the contract with
18	HUTCHINGS, Q.C.:	18	IBM included the supply of the thin client
19	Q. I'm sorry I didn't hear the model number for	19	device. Does the contract include the thin
20	the HP device.	20	client devices?
21	A. Sorry, HP EVO T20.	21	A. Yes, it does.
22	GREENE, Q.C.:	22	Q. The next undertaking related to the type of
23	Q. The next undertaking related to the desktop	23	laptop and the cost of the laptop that is
24	pub used by Hydro in the evergreen project and	24	proposed for the project.
25	the undertaking related to the type or model	25	A. The laptop is a Think Pad T-40 and the
	Page 11		Page 12
1	approximate cost is \$2,800.	1	CHAIRMAN:
2	Q. The last undertaking related to providing the	2	Q. Okay, I'm sorry.
3	best practices of the Garner group with	3	MR. KENNEDY:
4	respect to refreshing end user infrastructure.	4	Q we'll match it with the undertaking number.
5	We have available copies of this document now	5	HUTCHINGS, Q.C.:
6	for the parties. It is copyrighted and we	6	Q. So the other one becomes 16, is that right?
7	received the permission of the Gartner group	7	CHAIRMAN:
8	overnight to provide this to the Board and to	8	Q. No, that was number 6.
9	the parties. And that concludes all of the	9	MR. KENNEDY:
10	undertakings that were given yesterday, so	10	Q. That was number 6.
11	that answers have now been provided to all of	11	CHAIRMAN:
12	the undertakings given to date in the hearing.	12	Q. Oh, in response toyes, fine, I have you.
13	CHAIRMAN:	13	MR. KENNEDY:
14	Q. Thank you. Would this be U-Hydro No. 7, Mr.	14	Q. It was in response to undertaking number 6 and
15	Kennedy?	15	this is in response to undertaking number 17.
16	MR. KENNEDY:	16	GREENE, Q.C.:
17	Q. Yes, it would, Chair.	17	Q. The only question I had is we also answered
18	GREENE, Q.C.:	18	two yesterday. I don't know if you're keeping
19	Q. Thank you, Mr. Chairman and Commissioners.	19	
20	CHAIRMAN:	20	17 from yesterday and two from the day before.
21	Q. Thank you, Ms. Greene. Now then Mr. Hutchings	21	MS. THISTLE:
22	are you -	22	Q. Yes.
23	MR. KENNEDY:	23	CHAIRMAN:
24	Q. Sorry, Chair, that's U Hydro No. 17. Although	24	Q. Are the numberings okay?
25	it's the next document put in -	25	MR. KENNEDY:
		_	

	Tuiti-1 age TVL Hydro 2004 Capital Budget Application
	Page 14
1 Q. Absolutely. The Board secretary has it fully	speed, any of that information?
2 in control.	2 MR. DOWNTON:
3 GREENE, Q.C.:	3 A. In my understanding that would be defined by
4 Q. I'm sure Ms. Thistle is.	4 the information that I give you, the model
5 MR. KENNEDY:	5 number.
6 Q. We'll verify that though and -	6 Q. Okay, so it's a standard S-20 Think Centre
7 CHAIRMAN:	7 desktop.
8 Q. Very well. So, Mr. Hutchings, are you ready	8 A. That's my understanding, yes.
9 now to continue?	9 Q. No additional bells or whistles or additional
10 HUTCHINGS, Q.C.:	memory or anything like that?
11 Q. I'll continue at this point, Mr. Chair.	11 A. Not that I'm aware of.
Obviously I'm going to need a little bit of	12 Q. And equally with respect to the Think Pads and
time to look at some of the material that came	the thin client devices.
out of the undertakings and I'll do that	14 A. That's correct.
perhaps during the break and might have some	15 Q. They're the standard models.
further questions to go back on that.	16 A. Yes.
17 MR. ERIC DOWNTON EXAMINATION BY JOSEPH HUTCHINGS, Q.C.	Q. And I take it when you called for the proposal
18 HUTCHINGS, Q.C.:	to provide these things you didn't have any
19 Q. Thank you, Mr. Chairman. Good morning,	special requirements that were unique to
20 gentlemen. Mr. Downton, I'm just wondering	20 Hydro's network or anything of that nature,
21 first of all if you have any additional	21 did you?
information in terms of the specifications of	22 A. No.
the particular devices that you're talking	23 Q. These were just standard pieces of equipment
24 about, the desktop computer, for instance, you	that could be found in any office.
25 know, do you have details of the capacity, the	25 A. Yes.
	Page 16
1 (9:17 a.m.)	1 review, I guess centralizing access to the
2 Q. In respect of the secure access project and	logs and a part of any logs would be a backing
the \$35,000 for these tokens, how many tokens	
4 are we talking about, do you know?	4 preservation purposes. But I'm not sure if
5 A. If you do approximate math it would be about	5 that's what you mean.
6 280 tokens.	6 Q. Well, one of the things that the project
7 Q. 280. Just come back for a moment to a project	
8 at B-62, the centralized log monitoring and	the third last line from the bottom page of B-
9 analysis system. You told us this morning	9 62, "Users have the right to expect that the
that of the material cost there was provision	data they work with on a daily basis is not
11 for \$7,000 for server and \$23,000 for	disclosed to unauthorized individuals and not
software, is that correct?	destroyed or modified either intentionally or
13 A. Yes.	accidentally." How do you go about preventing
Q. And in the project justification, there's	intentional or accidental destruction of data
discussions of the numerous system application	<u> </u>
logs that keep track of any user activity	16 A. Well basically all of our corporate
within the Hydro groups networks and this	information is backed up. Basically, that's
project will centralize all that logging	automated as part of the server
activity and produce meaningful reports for	infrastructure. And, basically, the logthe
20 the information. That's your intent, is that	20 centralized log monitoring, that interfaces
21 correct?	with the servers to ensure that there's no
22 A. Yes, that is the intent.	security breaches from access to the servers.
	-
23 Q. Does this project effectively involve backing	23 Q. In order to meet the goal that you've set here
23 Q. Does this project effectively involve backing 24 up everything on Hydro's system? 25 A. No. Basically the intent of this is to	-

	•		
	Page 17		Page 18
1	A. We back up corporate data based on a certain	1	A. Again I'm not sure where exactlythe
2	defined cycle. Like the JD Edwards	2	inference of the question.
3	information, we back that up. The server	3	Q. I mean in your document here at the bottom of
4	information that everyone has on the server, I	4	page B-62, you're saying that users have the
5	mean that's backed up on a routine basis but	5	right to expect, among other things, that the
6	that is separate from this centralized log	6	data they work with will not be destroyed or
7	monitoring system. The log monitoring system	7	modified either intentionally or accidentally.
8	actually ties into the servers that back up	8	A. Yes.
9	this information and the intent of this is to	9	Q. And you're saying that this project will
10	provide a centralized mechanism to ensure that	10	provide the assurances that this will not
11	the information is backed up and that there's	11	happen. So how does that work?
12	no security breaches with regard to that	12	A. Well basically, the inference of what that
13	information.	13	means is that we are monitoring the security
14	Q. Yes. I understand the intent is directed	14	features of the services, of the various
15	toward security issues but I mean if you are	15	servers, of the tape back-up units to ensure
16	going to prevent the accidental or intentional	16	that the back-ups are carried out and executed
17	destruction or modification of data, do you	17	in a timely basis and that unauthorized
18	have some way of doing that without backing up	18	personnel do not get access to these
19	all the data on the system?	19	particular pieces of infrastructure.
20	A. Can you repeat that?	20	Q. No, the unauthorized access is a separate
21	Q. If, as the document says, the intent is to	21	issue from the accidental or intentional
22	prevent either the intentional or accidental	22	destruction or modification of data, okay. I
23	destruction or modification of data, how can	23	mean it may be that somebody will attempt to
24	you do that without backing up all the data on	24	get unauthorized access for the purpose of
25	the system?	25	destroying data but let's talk about
	Page 19		Page 20
1	accidental destruction of data. This system	1	lotus notes e-mail system is backed up, the
2	you tell us is going to prevent accidental	2	server infrastructure that carries all of the
3	destruction of data.	3	files, file information is backed up.
4	A. That's not whatwhat I said, the inference is	4	Q. So this system will give you the capability of
5	not that. The inference is to ensure that	5	looking at every e-mail that comes in to the
6	when the data is backed up, that it's secured	6	Hydro system.
7	and that we'll say unrestricted or that access	7	A. The intent of this system is not to go down to
8	to the information is restricted to those	8	that level. The intent of this system is -
9	having proper security clearance.	9	Q. Excuse me, my question was not directed toward
10	Q. When you say inference, do you mean intent?	10	intent, my question was directed toward your
11	A. Yes.	11	capability and does it or does it not give you
12	Q. So the intent is security.	12	the capability of looking at every e-mail that
13	A. Yes.	13	comes into Hydro place?
14	Q. What I'm asking you is how you get there. And	14	A. No.
15	I don't see any other way you can get there	15	Q. Why doesn't it do that?
16	with respect to protection against accidental	16	A. Not through this system. Basically if you
17	destruction of data unless you're backing	17	want that level of detail then what you would
18	everything up.	18	do, you would go through our security
19	A. We are backing up the information, yes.	19	procedures and the system administrator would
20	Q. All the information.	20	then go into the features within the lotus
21	A. Basically corporate information is backed up	21	notes system and get that specific
100			
22	and secured.	22	information.
22 23	Q. What do you mean by corporate information?	23	Q. So you can do that already, in other words,
1			

25

A. I can do that particular piece, yes.

energy management system is backed up, the

Page 22

Page 24

	3 - 7 = 0 00		t i = i = j = i = i = e = p = i = e = p = i = p = i = p = i = e = i = e = i =
	Page 21		Page 2
1	Q. You can access any e-mail that anyone receives	1	that when I work with a system file that if
2	within the Hydro system.	2	somebody'sif weat the moment we had all
3	A. I canwell we can access any e-mail through	3	these logs that are being generated, it is
4	existing security.	4	physically impossible for someone to go and
5	MR. HAYNES:	5	review every line entry on a log which
6	A. Could I interject if -	6	basically is thousands of lines which isthis
	HUTCHINGS, Q.C.:	7	system will help to narrow down the scope of
8	Q. Sure.	8	where suspicious activity has taken. So if
9	A. From Hydro's point of view I mean basically we	9	anybody internally or externally is trying to
10	do assure that our employees do have	10	get at some system file, then it will be
11	reasonably secure access to their e-mail and	11	flagged, picked up by the security people and
12	that basically their privacy is looked after.	12	they will be shut out, turned off, checked on
13	If it is determined that there is suspicious	13	or whatever the case was. The back-up and all
14	activity on the go or some, you know,	14	that, that all happens and we keep it for a
15	illegitimate use of the e-mail system and we	15	defined period of time before it's all
16	have reason to believe that IS&T do not have	16	relieved or kept as permanent archive.
17	the right to go and arbitrarily open someone	17	Q. So, if I'm understanding the project
18	else's e-mail. There's a process and	18	justification correctly, then the system and
19	procedure in place to ensure that's done in an	19	the application logs are already there and
20	effective manner to give people assurance that	20	this is basically an indexing or an access
21	they can work without somebody always peeping.	21	system.
22	We don't go in and look at people's e-mail	22	A. To help narrow the scope to suspicious
23	unless there's a specific defined reason.	23	activity. Right now there are literally
24	From a security point of view as a user, if I	24	thousands of logs that are generated for e-
25	could, my understanding of this project was	25	mail, for web access or whatever the case is
23	<u> </u>	23	
	Page 23		Page 2
1	and it's just not physically possible for	1	Now what do you mean when you refer to an
2	someone to go down through every line item.	2	event?
3	This is to aid that review.	3	A. Basically just a log, basically it could be
	MR. DOWNTON:	4	the fact that someone either tried to gain
5	A. Now to give you I guess a scope, you're	5	access to Hydro's network from the outside, a
6	looking at tens of thousands of events logged	6	hacker trying to get in. Or it could be the
7	on a daily basis or on a monthly basis. And	7	fact that one of the network administrators
8	this tool will help in the dissemination and	8	went in and accessed the server or it could
9	the filtering of that information so we can be	9	also be the fact that certain back-ups were or
10	proactive when it comes to security issues	10	were not executed on time. It could also
11	relating to our infrastructure.	11	indicate that certain people basically are
12	Q. So your existing system tracks user activity	12	going out through the firewall and trying to
13	and this is a tool to allow you easier access	13	make connection to external devices out
14	to specific topics or subjects that may have	14	through the firewall. These are all types of
15	been dealt with on your system, is that	15	"events" that may happen and will be monitored
16	correct?	16	by this particular system.
17	A. Currently there are logs generated across	17	Q. And you have 27,000 of these events a month,
18	multiple systems that we have and this system	18	is that what you said?
19	will consolidate all of those logs into a	19	A. Yes.

20

21

22

23

24

25

Page 21 - Page 24

Q. And from your description, I take it that each

of these events are things that should not in

A. Some of those events happen in normal course

and I guess what we are looking for are the

tools so that we can filter the normalcy

the ordinary course be happening?

centralized application and provide additional

filtering and abilities to assess, again, the

Q. I just want to understand what you're saying.

example of 27,000 alarms monthly.

A. Well basically events I should say.

Q. 27,000 alarms?

20

21

22

23

24

July	7, 2005 White	- "5"	The Hydro 2004 Capital Budget Application
	Page 25		Page 26
1	events and be proactive on the events which	1	regard as well?
2	need to be probably addressed.	1	A. We rely on a lot of research.
3	Q. Mr. Downton, if we could move now to B-69.	3	Q. My question was do you rely on Gartner
4	This is your project for peripheral	4	research?
5	infrastructure replacement. And is it fair to	5	A. We look at Gartner research but we look at
6	categorize this again as an annual allotment?	6	other information.
7	A. Yes.	7	Q. In response to IC-33, you provided a list of
8	Q. You say there's a five year replacement	8	the printers, projectors and scanners and
9	program for peripheral equipment in place,	9	other peripherals intended to be replaced
10	what year of that are we in?	10	under this project. I can't always tell from
11	A. Well basically this is a continuing cycle	11	the description what's a printer and what's
12	because most of the printer technology only	12	not, but it looks like there's about 57
13	has a useful life of five years. So,	13	printers there to be replaced.
14	typically, you were always cycling through the		A. No, basically it indicates that 57 printers
15	replacementandupgrading of	15	are basically coming out to be removed from
16	peripheral/printer type of infrastructure.	16	service, we are not replacing 57 printers.
17	Q. What has led you to the conclusion that	17	And two LCD projectors will be replaced.
18	printer technology has only a five year life?		Q. How many printers will be acquired to replace
19	A. Basically most of what we see in the industry	19	the 57 that are listed here?
20	indicates five years. Occasionally you'll get		A. We're installing a multi-functional device in
21	a little bit longer but the typically accepted	21	Bay D'Espoir. We're basically installing five
22	standard is five years. Some cases you'll get	22	HP Laser printers and two colour printers and
1	six, seven, eight years but the generally		HP plotters.
23	accepted standard is five.	23	Q. Did I understand you to say that this is all
24	•	24 25	
25	Q. And do you rely on Gartner research in that	25	what's going in Bay D'Espoir?
	Page 27		Page 28
1	A. No.	1	functional device is a printer, we're looking
2	Q. No.	2	at replacing it with eight units.
3	A. What I said, the Xerox multi-functional device		Q. Pardon me?
4	will be going in Bay D'Espoir.		A. Eight.
5	Q. Yes, okay. And when you say multi-functional		Q. Eight?
6	device, I take it that's a printer, fax,		A. Yes.
7	copier -	7	Q. And one of these is going to Bay D'Espoir.
8	A. Scanner, yes.	8	A. Yes.
9	Q. Scanner. Does it do all those things or just	9	Q. And seven are going to Hydro place?
10	two of them?	10	A. The other seven I don't have definitive
11	A. It basically, depending on what you want, you	11	locations where they will go.
12	can pick any of those functions and you can	12	Q. Do you know where most of these 57 are now?
13		1.0	
14	design it for any size of office.	13	A. Yes.
	design it for any size of office. Q. So you haven't determined what particular		A. Yes. Q. Where are they?
15	· · · · · · · · · · · · · · · · · · ·	14	
15 16	Q. So you haven't determined what particular	14	Q. Where are they?
1	Q. So you haven't determined what particular piece of equipment is going there, have you?	14 15 16	Q. Where are they? A. I don't have that detailed list but we do
16	Q. So you haven't determined what particular piece of equipment is going there, have you?A. Yes.	14 15 16	Q. Where are they?A. I don't have that detailed list but we do havethere is a list which defines that.
16 17	Q. So you haven't determined what particular piece of equipment is going there, have you?A. Yes.Q. So is it one that does all of these four or	14 15 16 17 18	Q. Where are they?A. I don't have that detailed list but we do havethere is a list which defines that.Q. Is it fair to say most of them are in Hydro
16 17 18	Q. So you haven't determined what particular piece of equipment is going there, have you?A. Yes.Q. So is it one that does all of these four or five functions?	14 15 16 17 18 19	Q. Where are they?A. I don't have that detailed list but we do havethere is a list which defines that.Q. Is it fair to say most of them are in Hydro place?
16 17 18 19	Q. So you haven't determined what particular piece of equipment is going there, have you?A. Yes.Q. So is it one that does all of these four or five functions?A. I don't know if it does every one of those	14 15 16 17 18 19	Q. Where are they?A. I don't have that detailed list but we do havethere is a list which defines that.Q. Is it fair to say most of them are in Hydro place?A. To be honest, I don't know.
16 17 18 19 20	Q. So you haven't determined what particular piece of equipment is going there, have you?A. Yes.Q. So is it one that does all of these four or five functions?A. I don't know if it does every one of those functions.	14 15 16 17 18 19 20	 Q. Where are they? A. I don't have that detailed list but we do havethere is a list which defines that. Q. Is it fair to say most of them are in Hydro place? A. To be honest, I don't know. Q. You don't know, okay. I'd like an undertaking
16 17 18 19 20 21	 Q. So you haven't determined what particular piece of equipment is going there, have you? A. Yes. Q. So is it one that does all of these four or five functions? A. I don't know if it does every one of those functions. Q. So to get back to my question, with respect to 	14 15 16 17 18 19 20 21	 Q. Where are they? A. I don't have that detailed list but we do havethere is a list which defines that. Q. Is it fair to say most of them are in Hydro place? A. To be honest, I don't know. Q. You don't know, okay. I'd like an undertaking that that list be provided as to the locations
16 17 18 19 20 21 22	 Q. So you haven't determined what particular piece of equipment is going there, have you? A. Yes. Q. So is it one that does all of these four or five functions? A. I don't know if it does every one of those functions. Q. So to get back to my question, with respect to the 57 printers that are being taken out of 	14 15 16 17 18 19 20 21 22 23	 Q. Where are they? A. I don't have that detailed list but we do havethere is a list which defines that. Q. Is it fair to say most of them are in Hydro place? A. To be honest, I don't know. Q. You don't know, okay. I'd like an undertaking that that list be provided as to the locations of these devices. (UNDERTAKING) How many of
16 17 18 19 20 21 22 23	 Q. So you haven't determined what particular piece of equipment is going there, have you? A. Yes. Q. So is it one that does all of these four or five functions? A. I don't know if it does every one of those functions. Q. So to get back to my question, with respect to the 57 printers that are being taken out of service, how many are being acquired to 	14 15 16 17 18 19 20 21 22 23	 Q. Where are they? A. I don't have that detailed list but we do havethere is a list which defines that. Q. Is it fair to say most of them are in Hydro place? A. To be honest, I don't know. Q. You don't know, okay. I'd like an undertaking that that list be provided as to the locations of these devices. (UNDERTAKING) How many of these devices have ceased to function?

July	y 9, 2003 Mult	1-Pag	e "NL Hydro 2004 Capital Budget Application
	Page 29		Page 30
1	when they either ceased to function or	1	these units from service.
2	basically because we can no longer get parts	2	Q. I notice you are replacing a number, a good
3	for them.	3	number of Hewlett Packard LaserJets that were
4	Q. Now, I had understood from your earlier answer	4	acquired in 1998, is there some problem with
5	that printers were replaced after four years,	5	these devices?
6	is that correct or not?	6	A. All I know is that it's recommended that they
7	A. What I basically indicated that the typical	7	will be replaced.
8	life cycle for a printer is five years.	8	Q. And you don't know whether or not these
9	Q. How do you make your decision as to when to	9	devices are performing their function at this
10	replace a particular printer?	10	point, do you?
11	A. We basically look at theprimarily we focus	11	A. I would assume the fact that we're
12	on the age of the unit and also we would look	12	recommending that they replace that they are
13	at if we're having significant problems with a	13	not performing their function.
14	particular printer.	14	Q. Items number 13 through 17 are all Hewlett-
15	Q. I mean some of the items that you have here	15	Packard LaserJets from IC-36, all acquired on
16	were acquired in '86, '89, '91, is there a	16	July 1, 1998?
17	particular reason why these were not replaced	17	A. Yes, that's what it says there.
18	earlier?	18	Q. Do you know of any reason why all of them
19	A. Some of these printers have been out in the	19	would stop functioning now?
20	field in place and I guess over the lastand	20	A. No.
21	a lot of them were dedicated units and since	21	Q. Do you know of any reason why all of them
22	about 2001 when we rebuilt our wide area	22	would stop functioning now?
23	networkour wide area network infrastructure	23	A. No.
24	allowed us connectivity. So basically since	24	Q. Do you know what you're paying for the LCD
25	then we've been continually removing a lot of	25	projectors? I understand you're replacing
	Page 31		Page 32
1	twoyou're acquiring two new -	1	is \$30,000.00 per unit which will give you a
2	A. The two units, approximately \$13,000.00.	2	total of \$73,000.00.
3	Q. \$13,000.00 in total?	3	Q. How many employees do you have at Bay D'Espoir
4	A. Yes, sorry, sorry, LCD projectors, is	4	now?
5	three units, \$10,000.00 total.	5 M	R. HAYNES:
6	Q. Three units, \$10,000.00 total. So, that	6	A. In the Hydro generation site at Bay D'Espoir,
7	leaves \$63,000.00 in your material supply for	7	in a group, there are a few more employees in
8	eight printing devices, is that correct?	8	that group than there are at Bay D'Espoir, but
9	A. That's the math, yes.	9	there's about 80 or so.
10	Q. Okay. Are all of these going to be these	10	Q. Eighty?
11	multi-functional devices such as you're	11	A. Eighty in the permanent employees. Actually
12	putting in Bay D'Espoir?	12	the Hydro footprint, if you will at Bay
13	A. There's one multi-functional device going in	13	D'Espoir is about 95 or 96 total, there are
14	Bay D'Espoir. There's five hp LaserJet	14	some TRO employees there as well.
1.5			
15	printers and one colour printer and one HP	15	Q. Okay. How many people would work in an office
16	plotter.	16	setting in Bay D'Espoir?
16 17	plotter. Q. Okay. And do you know what you're paying for	16 17	setting in Bay D'Espoir? A. When you say in an office setting, they all
16 17 18	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets?	16 17 18	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done
16 17 18 19	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit.	16 17 18 19	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have
16 17 18 19 20	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit. Q. \$4,000.00 per unit, okay. And do you have the	16 17 18 19 20	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have normal routine access, but there are other
16 17 18 19 20 21	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit. Q. \$4,000.00 per unit, okay. And do you have the prices on the other items that are being	16 17 18 19 20 21	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have normal routine access, but there are other areas over in the TRO section as well for work
16 17 18 19 20 21 22	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit. Q. \$4,000.00 per unit, okay. And do you have the prices on the other items that are being acquired?	16 17 18 19 20 21 22	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have normal routine access, but there are other areas over in the TRO section as well for work orders and so on.
16 17 18 19 20 21 22 23	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit. Q. \$4,000.00 per unit, okay. And do you have the prices on the other items that are being acquired? A. The estimated cost for the colour printer and	16 17 18 19 20 21 22 23	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have normal routine access, but there are other areas over in the TRO section as well for work orders and so on. Q. What other printing devices would be in Bay
16 17 18 19 20 21 22	plotter. Q. Okay. And do you know what you're paying for the hp LaserJets? A. Basically, approximately \$4,000.00 a unit. Q. \$4,000.00 per unit, okay. And do you have the prices on the other items that are being acquired?	16 17 18 19 20 21 22	setting in Bay D'Espoir? A. When you say in an office setting, they all have access, maintenance planning is done there, so probably 30 to 40 percent would have normal routine access, but there are other areas over in the TRO section as well for work orders and so on.

Ju	ly 9, 2003 Multi	-Pa	age™NL Hydro 2004 Capital Budget Application
	Page 33		Page 34
1	MR. DOWNTON:	1	A. There's probably about half a dozen or seven,
2	A. I would suspect that in the out buildings,	2	total, five or six at least.
3	what I call the out buildings, from Bay	3	Q. Could you look now at the B-77, it's the
4	D'Espoir, there would be probably an hp	4	Remote Terminal Unit for Hydro. I take it
5	LaserJet printer.	5	from the description of the operating
6	Q. So, in your principle office in Bay D'Espoir	6	experience here that these units are
7		7	continuing to function in the ordinary way as
8	A. Typically what we do with the multi-functional	8	of this date, is that correct?
9	devices, we put that as the primary unit and	9	MR. DOWNTON:
10	we always put a back-up hp LaserJet just in	10	A. They're still in service.
11	case a multi-functional device fails, there	11	Q. Okay. And there have been, according to your
12	are still print services available.	12	own information, a few failures in the
13	Q. Do you know how many secretarial or clerical	13	equipment to date?
14	staff are in Bay D'Espoir?	14	A. There's been a few failures as (inaudible -
15	A. I defer that to Mr. Haynes.	15	coughing) in operating experience.
16	MR. HAYNES:	16	Q. What do you have in inventory by way of spare
17	A. Not offhand, but there's probablythe people	17	parts for these units now?
18	who normally work in the office environment,	18	A. I would suspect that for these units, there
19	there's not only clerical staff there. There	19	are minimal spares, primarily because the
20	are maintenance planners who use these things	20	units are, well, some of them are over 20
21	on an ongoing basis.	21	years. Manufacturerwe haven't been able to
22	Q. I understand that, yes.	22	get spare parts for the Quindar remote
23	A. So, you specifically what clerk, clerical,	23	terminal units and Westonic, those companies
24	secretaries?	24	don't really exist as far as manufacturing
25	Q. Yes.	25	these devices anymore.
	Page 35		Page 36
1	(9:45 a.m.)	1	Q. Understandably when you find out that the
2	1 11 /1	2	manufacturer is not longer producing spare
3	· ·	3	parts, presumably there are other places you
4	mean, are you basically drawing that	4	can go to look for those spares parts?
5	conclusion from the fact that somebody has	5	A. I don'twell, for me, I don't know

- written down what they've written down here?
- 6 7 A. No, basically I gained that information from
- 8 the fact that, conversations with our staff.
- 9 Q. Okay. So, I just want to try to establish a level of information that's being passed up 10
- 11 through here. I mean, have you specifically discussed the availability of spares for these 12
- 13 particular units with someone within your
- staff within the past month? 14
- A. Not within the past month, no. 15
- Q. Okay, all right. What efforts has Hydro made 16 17 to acquire spares for these units?
- 18 A. As I said, these units have not been 19 manufactured for a great number of years.
- Hydro does by spare parts for the units and as 20
- 21 part of it's normal operational support for
- 22 this and from what I can remember, we did look
- 23 at this a number of years ago (inaudible -
- 24 coughing) the parts are not manufactured 25 anymore.

- specifically of other places for used spare 6 7 parts for RTUs. There may be, whether they've
- 8 gone to those particular places to look, I
- 9 don't know.
- Q. You say, whether they've gone, you mean, 10 whether somebody within the Hydro group has 11 12 gone.
- 13 A. Whether, basically, people in network services 14 (inaudible - coughing) have gone there.
- Q. And you don't know whether or not that has 15 happened? 16
- 17 A. No, not definitively.
- 18 Q. Can you describe for us the level of risk, if 19 any, that Hydro would face if these units were not replaced in 2004? 20
- 21 A. Well, yes, if I were to look at the particular 22 sites, Cat Arm, Hinds Lake and Happy Valley,
- those are--well, Cat Arm and Hinds Lake, in 23
- 24 particular are two unmanned hydro-generating
- 25 stations. Basically failure of the remote

Jui	y 9, 2005 Wint	1-F a	age NL Hydro 2004 Capital Budget Application
	Page 37		Page 38
1	terminal unit will basically incapacitate the	1	and all the generating units of which we have
2	energy control centre from being able to	2	
3	dispatch generation to those particular sites	3	man these stations. And I guess after 20
4	or not being able to control the water within	4	
5	the various structures at those particular	5	risk of failure of any of these, ifit would
6	sites. If you look at Cat Arm, in particular,	6	not take long and if you go down to doa
7	especially in the winter, that is a very	7	detailed risk analysis has not been done.
8	difficult site to gain access to. So, what	8	This is a judgment based on, you know, 30
9	you would be looking at is the risk of	9	years of operating history with the RTU and
10	incurring significant outages and incurring, I	10	the personnel that we really need to change
11	guess, other than outages, having to man the	11	this to ensure that we can meet the needs of
12	plant, that requirement was there for an	12	our customers, all customers. The other
13	extended period of time.	13	option is to man the stations and that's an
14	MR. HAYNES:	14	extreme from this here.
15	A. Could I add to that comment. On the RTUs,	15	Q. I understand what you're saying. I mean, are
16	basically Hydro only has three manned	16	these single point of failure units?
17	installations, Bay D'Espoir, Holyrood and	17	A. Single point of failure units, I'm not sure
18	Energy Control Centre. The RTUs are the	18	how much -
19	lifeline connection to allow us to operate	19 1	MR. DOWNTON:
20	these system without having people there 24	20	A. Yes, basically they're they single point of
21	hours a day. None of our terminal stations	21	failure units. If the processor goes down,
22	are manned, there's RTUs in each and ever	22	the unit is lost. They're not dual process or
23	installation. And what Hydro has been doing	23	based units.
24	is trying to be proacted to ensure that we	24	Q. And there is one unit for each plant or each -
25	have control over all the terminal stations	25 1	MR. HAYNES:
	Page 39		Page 40
1	A. Terminal station. There may be multiple	1	of the analog input devices are time limited
2	depending on the size of the plant or the	2	and from what I understand, there's no repair
3	terminal station. It depends on how many	3	capability for these units because the
4	control points are there.	4	components on them have been long since
5	MR. DOWNTON:	5	manufacturer discontinued.
6	A. Yeah, basically as far as I know, Cat Arm,	6	Q. Is there any reason to think that all three of
7	Hinds Lake, Long Harbour and Happy Valley,	7	these units are going to fail at one time?
8	there is one unit.	8	A. They've all agreed, they're not all going to
9	Q. One unit in each location.	9	fail at exactly the same time, but when you
10	A. Yes.	10	consider that all of the components have been
11	Q. And when was the last failure of one of these	11	active for 24 hours a day, seven days a week
12	units?	12	for twenty something years.
13	A. I do not have that specific piece of	13	Q. That's what they're designed to do though,
14	information.	14	isn't it?
15	Q. Okay. Have you considered the possibility of	15	e
16	replacing one of these units and using the	16	3 3
17	unit that was taken out of service as a spare	17	1 1
18	for the others?	18	· · · · · · · · · · · · · · · · · · ·
19	A. No, and the reason being is that basically,	19	
20	the Quindar remote terminal units, all of them	20	1 1
21	have been in service for the same period of	21	
22	time and basically, in particular with regards	22	
1			
23	to the relaying systems and the analog and	23	
1	to the relaying systems and the analog and status, muxing systems onall of them have aged and degraded at the same rate. And some	23 24 25	failures has been seven years?

	Page 41		Page 42
1	Q. That's what your operating experience has	1	utilizes. You speak here of a wide area
2	been.	2	network communications structure. What
3	A. Yes.	3	elements does that include?
4	Q. And essentially you're telling the Board that	4	A. I guess in a wide area network infrastructure
5	a judgment has been made that you can't get	5	is series of components that, in very simple,
6	another year out of any one of these units, is	6	terms, takes voice and data streams at various
7	that correct?	7	points in the infrastructureI'll try to give
8	A. What I'm telling the Board is based on, I	8	an example. Say, at Stony Brook Terminal
9	guess, our experience with the technology. We	9	station, we basically have an RTU there and we
10	are recommending for these units that they be	10	basically have, say, operational voice and
11	replaced. And in particular, when you look at	11	probably other operational data requirements.
12	the sensitivity of sites that these systems	12	A piece of wide area network equipment would
13	are going to be installed, yes, I am	13	basically allow that information, those
14	recommending that they be replaced.	14	different streams to be consolidated into one
15	Q. And you have laid out your experience with the	15	stream and sent down the network to, say, the
16	history of these units in this document at	16	energy control centre. And on the energy
17	page B77?	17	control centre end, there will be another
18	A. Yes.	18	device which would take that one stream and
19	Q. Okay. If we can turn now for a moment to page	19	then break it back out to the original
20	B79. This is the phase 2 of your replacement	20	components that entered, say, Stony Brook.
21	of the operational data and voice network.	21	And then you would have multiple devices like
22	And I guess we can harkin back a little bit to	22	this across this system at all of our stations
23	some discussion we had yesterday about the	23	and area offices. So, that, in an overview,
24	terminology that you used to describe the	24	is what a wide area network is.
25	communications and data systems that Hydro	25	Q. When we were discussing one of your project
	Page 43		Page 44
1		l	
1	yesterday, we talked about what you called	1	Q. Do you have any others?
2	Hydro's intranet, Hydro's internet and Hydro's	2	A. Yes, we have them in Happy Valley, Wabush,
l	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network	2 3	A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay
2 3 4	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is	2 3 4	A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds
2 3 4 5	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire	2 3 4 5	A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake.
2 3 4 5 6	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd	2 3 4 5 6	A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake.Q. Okay.
2 3 4 5 6 7	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full	2 3 4 5 6 7	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism
2 3 4 5 6 7 8	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure?	2 3 4 5 6 7 8	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And
2 3 4 5 6 7 8 9	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of	2 3 4 5 6 7 8 9	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure
2 3 4 5 6 7 8 9	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about	2 3 4 5 6 7 8 9	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components
2 3 4 5 6 7 8 9 10	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a	2 3 4 5 6 7 8 9 10	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area.
2 3 4 5 6 7 8 9 10 11	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within	2 3 4 5 6 7 8 9 10 11	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were
2 3 4 5 6 7 8 9 10 11 12	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network.	2 3 4 5 6 7 8 9 10 11 12	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet
2 3 4 5 6 7 8 9 10 11 12 13 14	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then -	2 3 4 5 6 7 8 9 10 11 12 13 14	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in?
2 3 4 5 6 7 8 9 10 11 12 13 14	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within	2 3 4 5 6 7 8 9 10 11 12 13 14	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network at	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network at Hydro Place and another one somewhere else.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network or is there a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area network connects all of these sites together.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very simple terms what an intranet (inaudible -
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area network connects all of these sites together. Q. Okay. So, you would say you have a local area	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very simple terms what an intranet (inaudible - coughing).
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network or is there a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area network connects all of these sites together. Q. Okay. So, you would say you have a local area network in Bay D'Espoir?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very simple terms what an intranet (inaudible -coughing). Q. I'm trying to, you know, relate this
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network or is there a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area network connects all of these sites together. Q. Okay. So, you would say you have a local area network in Bay D'Espoir? A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very simple terms what an intranet (inaudible -coughing). Q. I'm trying to, you know, relate this specifically to Hydro now because some of the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Hydro's intranet, Hydro's internet and Hydro's network, is this wide area network communications infrastructure? I mean, is that what you regard as being Hydro's entire network or are there other things that we'd have to add on in order to get to your full structure? A. Let me just try to add a little bit of additional clarification. When we talk about local area network, we typically talk about a network within a particular site. So, within Hydro, there would be a local area network. Then - Q. Okay. Just so I'm clear, do you mean within the entire company there is a local area network or is there a local area network at Hydro Place and another one somewhere else. A. Right on. And then basically the wide area network connects all of these sites together. Q. Okay. So, you would say you have a local area network in Bay D'Espoir?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. Yes, we have them in Happy Valley, Wabush, Port Saunders, St. Anthony, Stephenville, Bay D'Espoir, Bishop Falls. We have them in Hinds Lake. Q. Okay. A. Basically, local area network is a mechanism whereby you connect devices to a network. And then your wide area network infrastructure allows you to connect all of these components together over the geographical area. Q. In that context, where does what we were talking about yesterday as Hydro's intranet fit in? A. The intranet basically is aI'm just trying to think. The intranet would information on server within Hydro's network that's accessible by a browser or a web, a web type browser. That's basically, I guess, in very simple terms what an intranet (inaudible -coughing). Q. I'm trying to, you know, relate this

	171410		c 112 Hydro 2001 Supital Bauget Application
	Page 45		Page 46
1	understand what you're trying to convey to us.	1	access, is that fair?
2	So, what you refer to as your intranet is	2	A. No, I think that's an overstatement of the
3	anything that anyone on the wide area network	3	intranet and, I mean, again if you just go
4	can access?	4	back to the HR intranet site, it's a server
5	A. Yes.	5	running an internet type application that is
6	Q. Okay.	6	HR specific, if you want to call it that, that
7	A. I'll give an example if you want.	7	allows people across the organization to look
8	Q. Sure.	8	at, I guess, specific information on the HR
9	(10:00 a.m.)	9	site. As a for instance, you could end up
10	A. One of the things that's on our intranet are,	10	with environment also having an intranet site,
11	say, we have a site called HR, an HR site and	11	but, I mean, those are only what I consider to
12	what it basically does, it allows any user	12	be drops off Hydro's main network, I mean, the
13	across the organization with their end user	13	energy management system is really not related
14	device to go through the our network using a	14	to the "intranet".
15	browser to gain access to information. That's	15	Q. I mean, you're diesel technician in Port
16	an example.	16	Saunders has no reason to access the EMS,
17	Q. Okay, that's fine. So, what do you have by	17	correct? So, that wouldn't be on an intranet
18	way of communications infrastructure that's	18	type of site?
19	outside of your intranet?	19	A. The diesel, well if the diesel technician has,
20	A. We havethe bulk of Hydro's network really is	20	if he's on the network in Port Saunders, and
21	outside of the intranet. The intranet is only	21	he has an end user device, then he can gain
22	a small portion of Hydro's overall network	22	access to it.
23	infrastructure.	23	Q. To any part of the Hydro system?
24	Q. So, what you're saying is that you define the	24	A. No.
25	intranet to be what people generally can	25	Q. No.
	1 1 6 7	1	
1	Page 47		Page 48
	Page 47 A To only specific parts of the network that	1	Page 48 O Well ves I mean you have you know your VHE
1 2	A. To only specific parts of the network that	1 2	Q. Well yes, I mean, you have, you know, your VHF
2	A. To only specific parts of the network that he's given permission to access.	2	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications
2 3	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet	2 3	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but
2 3 4	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such	2 3 4	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of
2 3 4 5	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally	2 3 4 5	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an
2 3 4 5 6	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area	2 3 4 5 6	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and
2 3 4 5 6 7	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct?	2 3 4 5 6 7	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not?
2 3 4 5 6 7 8	A. To only specific parts of the network that he's given permission to access.Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct?A. Could you repeat that?	2 3 4 5 6 7 8	Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No.
2 3 4 5 6 7 8 9	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a 	2 3 4 5 6 7 8	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not?
2 3 4 5 6 7 8 9 10	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, 	2 3 4 5 6 7 8 9	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one
2 3 4 5 6 7 8 9 10 11	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your 	2 3 4 5 6 7 8 9 10	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate
2 3 4 5 6 7 8 9 10 11 12	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? 	2 3 4 5 6 7 8 9 10 11	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the
2 3 4 5 6 7 8 9 10 11 12 13	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an 	2 3 4 5 6 7 8 9 10 11 12 13	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network.
2 3 4 5 6 7 8 9 10 11 12 13 14	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. 	2 3 4 5 6 7 8 9 10 11 12 13 14	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define
2 3 4 5 6 7 8 9 10 11 12 13 14 15	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. 	2 3 4 5 6 7 8 9 10 11 12 13 14 15	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet".
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. Q. Okay, but I mean, on that broad definition it 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet". Q. But if a diesel technician had access to that,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. Q. Okay, but I mean, on that broad definition it basically includes your entire wide are 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet". Q. But if a diesel technician had access to that, he could, in Port Saunders, he could get it if
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. Q. Okay, but I mean, on that broad definition it basically includes your entire wide are network and your whole system, other than your 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet". Q. But if a diesel technician had access to that, he could, in Port Saunders, he could get it if he was authorized?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. Q. Okay, but I mean, on that broad definition it basically includes your entire wide are network and your whole system, other than your website, which is outside? 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet". Q. But if a diesel technician had access to that, he could, in Port Saunders, he could get it if he was authorized? A. He can't, no. He can't gain access to the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. To only specific parts of the network that he's given permission to access. Q. Yes, okay. So, your use of the word intranet basically encompasses the various sites such as the HR intranet that are generally accessible to everyone on your wide area network, is that correct? A. Could you repeat that? Q. Your definition of intranet is basically a series of sites such as your HR internet site, intranet site that people generally, on your wide area network can access? A. The proper definition for an intranet is an internal internet. Q. Yes, okay. A. So if you have information put into a web enable type of application, then people with-internal to the organization can gain access to that information. Q. Okay, but I mean, on that broad definition it basically includes your entire wide are network and your whole system, other than your 	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 Q. Well yes, I mean, you have, you know, your VHF system and all sorts of other communications stuff outside of your wide area network, but effectively on the broadest definition of intranet, your wide area network is an intranet, it's an internal Newfoundland and Labrador Hydro system, is it not? A. No. Q. Why not? A. Because basically the intranet is only one component that makes up the overall corporate infrastructure and is supported through the wide area network. Q. So what's not on the intranet, as you define it? A. Again basically the energy management system, all the data that's carried between the stations and the energy control centre is not on "corporate intranet". Q. But if a diesel technician had access to that, he could, in Port Saunders, he could get it if he was authorized?

July 9, 2003	Multi-Page	NL Hydro 2004 Capital Budget Application
	Page 49	Page 50
the energy management system, we	do have an 1	go down through, and the diesel technician in
2 intranet site where we download		Port Saunders could go into that particular
3 information from the energy manager	ment system 3	site, if he has access, and saybecause don't
4 to the internet site to all people to g	-	necessarily know when the last time the diesel
5 access to that particular pieces		ran because that may be turned on or off by
6 information. And again, it's on a		ECC and he could find that out, or if it
7 required basis.	7	tripped, he could go in and look at the alarms
8 Q. But if Mr. Haynes, for instance, foun	d himself 8	that came up.
9 in Port Saunders some day and wante). Yes.
the energy management system, co		A. But he's not in the ENS per se.
11 that?		Q. Okay. The project at B-79 talks about an
12 MR. HAYNES:	12	upgraded communications network to support all
13 A. I could only access the specific infor	rmation 13	applications and devices that have a standard
that's fed toI cannot get access to	the 14	protocol IP centre, I mean, is that
energy management system per se. 1	I can get 15	essentially where you're going with your IT
access to the information, selec	eted 16	structure?
information that is fed out to the syste	em. I 17 A	A. That's what we are proposing and that's where
can do a query as to when, you know	, a 24-hour 18	industry is going.
history of a certain generating station		2. And essentially all of your data transmission,
20 terminal station, but that's not in the	EMS, 20	including energy management system data is
21 that's data that's published by EMS t	hrough 21	intended to utilize that sort of protocol, is
thisI don't know the name of the sy	stem, but 22	that correct?
23 it's outside EMS. The information	n is 23 A	A. The new release of energy management system
collected and there's a host of data pu	it there 24	can support IP protocol.
to help engineers and operators and s	so on to	2. So ultimately the only restriction really is
	Page 51	Page 52
the restriction that you choose to imp		A. Yes.
2 terms of who can access particular da		Q. So this really had nothing to do with the GDC
3 the system, is that correct?	3	system, did it?
4 A. No.	4 A	A. No.
5 Q. Why is that not correct?	5 C). No.
6 A. Because you're oversimplifying a ver	ry complex 6 A	A. And basically I talked to the team lead in the
7 situation, basically data fromdata	· -	network centre and I brought that to his
8 energy management system has certa	ain latency 8	attention and he indicated that when the
9 restrictions that you cannot tolerate o	r that 9	ticket was cut, he thought it was a problem
you can tolerate in a voice system, yo	ou cannot 10	with the GDC equipment and what happens at
tolerate in an energy manage	ment 11	sometimes is not reclassified after it's
infrastructure. Also the SCADA data	has a 12	closed.
higher priority than voice or any other	er type 13 Q	2. So that one should be subtracted from the
of data, so those are all consideration	s that 14	total you've given us for the instant reports
15 you have to look at when you des	ign an 15	involving the system itself?
infrastructure.	16 A	A. Yes.
Q. I want to move on to IC-35 which tall	ks about 17 Q	Q. Okay. Page 3 seems to be something to do with
the incident reports that were general		the GDC node and what puzzled me a little bit
connection with the system described	l by B-79.	on this one is the notation there for time
These are the reports from 2002 and 2	2003. On 20	worked which was zero hours and zero minutes.
page 237 these documents note that the	here's an 21	Can you explain how the problem gets fixed if
alarm and the issue resolution here ap	oparently 22	nobody does anything?
23 indicates that the outage occurred w	hen the 23 A	A. Well basically we are, for some of these there
24 microwave system between SBH and	GBPH failed. 24	were just no recorded time against, it doesn't
25 Do you see that?	25	mean that it fixed itself in no time

mean that it fixed itself in no time.

Do you see that?

Page 53 Page 54 Q. Okay. The--at page 4, the issue resolution the operator. It indicates that the system 1 reads "no problem found". Does that did not perform as expected in terms of 2 2 constitute a failure on the part of the GDC failing automatically to its backup, I 3 3 system? believe, just from glancing through the 4 4 description there. So a system optimization A. Well the fact that there was no problem found 5 5 was performed. I suspect once the--no, the 6 does not mean that there was no problem, so 6 7 will remain as an active ticket. system optimization was performed in an 7 Q. We basically don't know whether this was attempt to force the system to use its backup 8 8 something to do with GDC or something to do circuits, which it should have done 9 9 10 with some other part of the system, is that 10 automatically. Q. Okay. But essentially there's no explanation correct? 11 11 for why the problem occurred initially. A. Basically we don't know if it's a GDC problem 12 12 or not, so we basically leave it as an active A. I believe the initial problem stated it failed 13 13 due to microwave problems. Not having our GDC problem. 14 14 Q. Okay, but on page 79 you've classified it as a system map in front of me, I can only quote 15 15 16 GDC problem? 16 from memory, but I believe what should have happened is that it should have used a backup A. Yeah. 17 17 route, which it did not do at the time. Q. Page 5 and I'm not going to go through all of 18 18 these, you have--the issue resolution says O. Okay. So the root cause here was the 19 19 "performed system optimization and service was 20 microwave and not the GDC? 20 restored". What's a system optimization? 21 A. No. The GDC did not perform correctly insofar 21 A. I'd like to defer that to Mr. Dunphy. 22 22 as -23 23 MR. DUNPHY: Q. No, I understand that, but -A. System optimization refers to a manual A. But the root cause of the failure was a 24 24 intervention that's required on the part of microwave problem; however, the GDC did not 25 25 Page 55 Page 56 perform correctly. something to do with Aliant. 1 Q. Okay. Just look quickly at page 7 of 37, that 2 2 MR. DUNPHY: 3 seems to be a problem with Newtel and that was A. Excuse me, if I could address that. The issue 3 GDC? The problem found to be with Newtel resolution states "circuit checked out fine". 4 4 5 peers? 5 That indicates that it was suspected that the cause was Aliant, however, that turned out to A. That appears to be correct, yes. 6 6 Q. Yes, okay. Can you just look briefly at page 7 7 be not the case. In this case, again, it's an 9 of 37. From my reading of this, it just intermittent fault or I would presume it would 8 8 9 seems to record the fact that a piece of cable 9 be an intermittent fault for which no actual was moved from once place to another. I mean, problem was detected. 10 10 was just actually a problem? 11 11 Q. An intermittent fault on what system? 12 (10:15 a.m.) 12 A. On the GDC equipment. Q. Okay. The work history that refers to an 13 MR. DOWNTON: 13 A. Well I guess the way an incident is classified Aliant ticket? 14 14 is any disruption in service, so basically it 15 15 A. Yes, so Aliant was contacted and requested to means that something has got to be changed to check the circuit. 16 16 put something back in service and that's the 17 17 Q. And all we know is that there was no dial classical definition that we use for our backup on the circuit? 18 18 19 incident management process. So I guess your 19 A. Well that's an observation. What we know is question is was this a GDC problem? And the that the circuit failed and we were unable to 20 20 answer is no, not in that respect, it just 21 21 determine the cause. indicates that an incident was identified 22 22 Q. Okay. But overall, looking to page B-79, is it fair to say that not all of the incidents where cabling had to be removed. 23 23 Q. And equally on pages 10 and 11 there's no reported in this table at the bottom relate to 24 24

25

failures of GDC?

25

fault found, apparently, and these were

	Page 57		Page 58
1 N	IR. DOWNTON:	1	as part of the Granite Canal project.
2	A. I guess based on my addition, we've subtracted	2	
3	possibly three off, for sure.	3	
4	Q. I haven't gone through the 37, but my question	4	capital project?
5	was solely directed toward not all these 19	5	
6	and 16 are in fact failures of the GDC?	6	
7	A. No.	7	additional sites will be built within those
8	Q. Okay. I think we can move now to a few	8	
9	general questions on the subject of the VHF	9	Q. So to move then to the VHF system generally,
10	radio system and we'll continue with those	10	
11	after the break. Perhaps the best thing is	11	the difference between what your reports refer
12	for me to try and get a couple of factual	12	
13	clarifications initially in respect of the	13	system?
14	presentation that was made at the beginning of	14	•
15	the evidence. Mr. Downton, you noted in the	15	•
16	course of your evidence that the project	16	
17	proposed involved no new sites for repeaters?		MR. DUNPHY:
18	A. Yes.	18	
19	Q. Okay, what of the Granite Canal site, was	19	
20	there a tower there previously to -		
21	A. The tower exists at Granite Canal.	20 21	Q. Okay.
22	Q. Okay, and whose tower is that?	22	•
23	A. That's Hydro's tower.	23	channels at the repeater in a more effective
	•		-
24	Q. Okay, and when was that put there?	24	manner when multiple channels are involved. Q. So does a conventional system necessarily
25	A. That was put there probably about a year ago	25	<u>`</u>
	Page 59		Page 60
1	imply a single channel at a repeater site?	1	mobile and the call is directed to a remote
2	A. No.	2	, & & 1 ,
3	Q. No. So you may have multiple channels at a	3	possibly through a connection to a central
4	given repeater site and yet you would not	4	switch, possibly to another connection, again
5	describe it as a trunked system?	5	r
6	A. No.	6	•
7	Q. So the trunkedis it fair to say that it's a	7	
8	trunked system depending upon how it is in	8	<i>5</i>
9	fact used? You can have the same hardware and	9	
10	either use it as a conventional system or not	10	, ,
11	use it as a conventional system?	11	through one repeater through a central switch
12	A. I believe that is true in some instances,	12	
13	however, generally speaking I believe systems	13	1
14	are either conventional or trunk in terms of	14	<i>E</i> 3
15	their overall design.	15	A. No, absolutely not.
16	Q. Okay. Can you just briefly describe how a	16	3,
17	conventional system operates in terms of where	17	conventional system, only one call could be
18	the signals go and how they're dealt with,	18	•
19	leaving out any notion of trunking?	19	
20	A. If I understand your question correctly,	20	•
21	you're referring to a call between a mobile	21	system?
22	and a base station or -	22	
23	Q. Uh-hm.	23	
	A. Depending on the distance, a call would	23 24	site, multiple calls can be processed
23			site, multiple calls can be processed

), 2002 171dit	- Luge	112 Hydro 2001 Capital Badget Application
	Page 61		Page 62
1	Q. Okay. So in terms of Hydro's existing system,	1	system are typically found in trunked systems
2	how many channels are available at the	2	and not in some conventional systems.
3	repeater sites?	3 (Q. Okay, and what features are you referring to?
4	A. We have one channel available at each repeater	4	A. One that comes to mind is a certain amount of
5	site.	5	remote repeater management, such that from a
6	Q. There is only one channel at each site?	6	central location you can determine status of
7	A. Yes.	7	repeaters and do some monitoring and testing
8	Q. Okay.	8	on repeaters. Another would beI'm just
9 N	IR. DOWNTON:	9	trying to give this some thought nowthere
10	A. However, in the proposed system, we are	10	are several, I know, that we've discussed in
11	looking for additional capacity in certain	11	our document, none come to mind right now, I
12	areas where we have access issues, not in	12	have to apologize.
13	particular, in the consultant's report notes	13	Q. Okay. And of this monitoring and testing and
14	the Great Northern Peninsula in particular.	14	so on, that doesn't require any more than one
15	Q. No, I understand. In terms of the existing	15	channel, obviously?
16	system is the implication of your answer that	16	A. No, that has nothing to do with the number of
17	each repeater can only handle one call at one	17	radio channels.
18	time?	18	Q. I mean, presumably this is a communication's
19	A. Yes.	19	function though, I mean from the switch to the
20	Q. In answer to Mr. Alteen's questions earlier,	20	repeater in order to determine its status?
21	your system was described as a hybrid, as		A. Yes.
22	between a trunked and a conventional system.		Q. Okay, all right. Now just soI'm going to
23	What makes it a hybrid?	23	try to understand how the current system
24	A. In my opinion what makes it a hybrid is that	24	operates, you have, for instance, a repeater
25	some of the features that are found in the	25	site at Codroy Pond, right down in the
		-	
1	Page 63		Page 6/
	Page 63		Page 64
1 2	southwest coast. When a call is made from a	1	you would, to Appendix C to the Business Case
2	southwest coast. When a call is made from a mobile in that area which goes to that	1 2	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is
2 3	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from	1 2 3	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report.
2 3 4	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander?	1 2 3 4	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes.
2 3 4 5	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a	1 2 3 4 5	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the
2 3 4 5 6	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog	1 2 3 4 5 6	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well
2 3 4 5 6 7	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility.	1 2 3 4 5 6 7	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this
2 3 4 5 6 7 8	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm.	1 2 3 4 5 6 7 8	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line.
2 3 4 5 6 7 8	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from	1 2 3 4 4 5 6 6 7 8 9 CH.	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN:
2 3 4 5 6 7 8 9	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased	1 2 3 4 4 5 6 7 8 9 CH. 10 (0)	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in
2 3 4 5 6 7 8 9 10	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier.	1 2 3 4 4 5 6 7 8 9 CH. 10 (11	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes.
2 3 4 5 6 7 8 9 10 11 12	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume?	1 2 3 4 4 5 6 7 8 9 CH. 10 0 11 12 MR	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes.
2 3 4 5 6 7 8 9 10 11 12 13	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know	1 2 3 4 4 5 6 7 8 9 CH. 10 (11 12 MR. 13 (1)	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17,
2 3 4 5 6 7 8 9 10 11 12 13	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends	1 2 3 4 4 5 6 7 8 9 CH. 10 6 11 12 MR 13 6 14	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure
2 3 4 5 6 7 8 9 10 11 12 13 14 15	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I	1 2 3 4 4 5 6 7 8 9 CH. 10 (11 12 MR. 13 (14 15)	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea.	1 2 3 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 14 15 16 4	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. L. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay.	1 2 3 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 14 15 16 4 17 0 17	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to	1 2 3 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 0 14 15 16 4 17 0 18 CH.	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time.	1 2 3 4 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 0 14 15 16 4 17 0 18 CH. 19 0 0	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time. Q. So it could be a telephone line.	1 2 3 4 4 5 6 7 8 9 CH. 10 (11 12 MR 13 (14 15 16 4 17 (19 (19 18 CH. 19	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19. E. KENNEDY:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time. Q. So it could be a telephone line. A. Yes, it could be a telephone line, and again,	1 2 3 4 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 0 14 15 16 4 17 0 18 CH. 19 0 20 MR 21 0 0	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19. E. KENNEDY: Q. That's correct. Okay, thank you Mr. Kennedy.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time. Q. So it could be a telephone line. A. Yes, it could be a telephone line, and again, a telephone line could be microwave, it could	1 2 3 4 4 4 5 6 7 8 9 CH. 10 0 11 12 MR. 13 0 14 15 16 4 17 0 18 CH. 19 0 20 MR. 21 0 22 MR.	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19. E. KENNEDY: Q. That's correct. Okay, thank you Mr. Kennedy. E. KENNEDY:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time. Q. So it could be a telephone line. A. Yes, it could be a telephone line, and again, a telephone line could be microwave, it could be fibre optic, it could be a variety of	1 2 3 4 4 4 5 6 7 8 9 CH. 10 0 11 12 MR 13 0 14 15 16 4 17 0 18 CH. 19 0 20 MR 21 0 22 MR 23 0 0	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19. E. KENNEDY: Q. That's correct. Okay, thank you Mr. Kennedy. E. KENNEDY: Q. Thank you, Chair.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	southwest coast. When a call is made from a mobile in that area which goes to that repeater site, how does that signal get from there to the switch in Gander? A. On each one of our repeater sites there is a dedicated leased facility and leased analog facility. Q. Uh-hm. A. I'm sorry, the leased facility goes from Codroy Pond to Gander. It's a facility leased from the common carrier. Q. Okay, so that's a microwave I presume? A. It could be in the case ofwell, I don't know exactly, it starts off as copper and it ends as copper and how it gets there in between, I have no idea. Q. Okay. A. In fact, it probably changes from time to time. Q. So it could be a telephone line. A. Yes, it could be a telephone line, and again, a telephone line could be microwave, it could	1 2 3 4 4 4 5 6 7 8 9 CH. 10 0 11 12 MR. 13 0 14 15 16 4 17 0 18 CH. 19 0 20 MR. 21 0 22 MR.	you would, to Appendix C to the Business Case which is at Tab 4 of Section G. And this is the Custom System Electronic's Report. A. Yes. Q. I'm sorry, Mr. Dunphy, I think it's about the break time, Mr. Chair, so it might be as well to take it now, rather than get into this line. AIRMAN: Q. Okay, let's do that and we'll come back in fifteen minutes. E. KENNEDY: Q. Mr. Chair, I'm sorry, the undertaking No. 17, that's actually Undertaking No. 19. I'm sure this time. A. Number 6 is No. 8. Q. No, No. 6 is still No. 6. AIRMAN: Q. So it's No. 19. E. KENNEDY: Q. That's correct. Okay, thank you Mr. Kennedy. E. KENNEDY:

	Turi age 142 Hydro 2004 Capital Budget Application
Page	
1 CHAIRMAN:	1 MR. DUNPHY:
2 Q. Okay, Mr. Hutchings.	2 A. I can speculate why. There is a statement in
3 HUTCHINGS, Q.C.:	3 our system description document which states
4 Q. Thank you, Mr. Chair. Mr. Dunphy, I was about	4 that the system uses shared resources at
5 to refer you to Appendix C. I think what's on	5 repeater sites. However, my interpretation of
6 the screen now is an attachment to that, but	6 that statement is not that it is a true
7 what I'm looking at is page 13 of the report	7 trunking system, but rather that it utilizes
8 itself. It's the same document, Mr. O'Reilly,	8 the resources in, what's called in the
9 page 13 of thenot the business case, but the	9 industry, a round robin fashion.
Appendix C to the business case, the technical	Q. Okay. And what do you mean by a round robin
report. Yes, that's it. Page 13, gone past	11 fashion?
it. There. At the bottom of that page, in	12 A. Round robin refers to resources, multiple
paragraph 6.3.1, their consultant says "review	resources that are utilized in sequence rather
of the existing NLH multi-department mobile	than first in line always being used.
radio system description indicates that it is	15 Q. Okay.
a trunking system, with the exception that a	16 A. Again, that is pure speculation on my part.
single repeater is employed at each site.	Q. When you refer to multiple resources, what do
18 Although this defeats the concept of trunking,	you mean?
the system has the necessary features to	19 A. If there were multiple channels at a single
operate with a central switch and to perform	site, they would be used in sequence, I
21 the necessary telephone interface functions	believe. That is my interpretation of the
22 which are available on all trunk systems being	statement.
considered as alternatives." Can you explain	23 Q. Okay. Are there or are there not multiple
24 why the description would indicate that the	channels at your existing sites?
existing one is a trunking system?	25 A. No, there are not.
Page	
1 Q. There are no sites that have multiple	to replace that system? Assuming that the
2 channels?	2 Board were to approve this proposal and you
3 A. Not at this time, no.	3 were to call for proposals to replace your VHF
4 Q. Okay. And if I understand the description of	4 system, what would you go look for?
5 the current system correctly, the existing	5 A. We would look for a system that is capable of
6 switch at Gander is not a redundant switch?	6 meeting our current and future needs, that has
7 A. No, it is not.	7 the type of reliability that we wish to
8 Q. Okay. Can you just explain for us, for the	8 maintain in our communications infrastructure,
9 record, what the redundant switch is?	9 and that meets all of the functions of the
10 A. Redundancy typically means that critical	existing system, and will be able to be
components are duplicated in such a fashion	expanded to meet any future needs and any
that should one fail, there's a back up	future applications.
component that can take over the operation of	Q. Okay. I was thinking more along the lines of
the system.	what you would put in a call for tenders to
15 Q. Okay. And your consultant's report, the	have suppliers respond to you and say "we can
technical report that we're looking at,	offer you this system."
recommended that there be a switch at Gander	A. I gave you an overview of what we anticipate.
that would be redundant? Is that correct?	18 Adetailed specification has not been
19 A. Yes.	developed at this stage and would not be
20 Q. Okay.	developed until detailed engineering was done.
21 A. I believe that is correct.	So I'm incapable of listing specifically what
22 Q. All right. Now I think we have perhaps a	22 would be in a call for tenders.
reasonable description now of the existing	Q. No, but presumably you will ask for a VHF
system as it sits. Can you just explain for	24 radio system?
25 me essentially what you're going to look for	25 A. Yes.

July	9, 2005 Mult	1-F &	age	NL Hydro 2004 Capital Budget Application
	Page 69			Page 70
1	Q. Okay, so we know that much at least?	1		consultant recommended to be offered to you or
2	A. Yes.	2		it could allow this alternative architecture
3	Q. It's not going to be UHF; it's not going to be	3		that you've discussed to be offered to you?
4	cell or satellite or anything else?	4	A.	Yes. I believe Mr. Downton already stated
5	A. No.	5		words to that effect on Monday.
6	Q. It's going to be VHF?	6	Q.	Okay. Now in your discussion with Mr. Alteen
7	A. We've established that VHF is the most	7		about the alternative architecture that you
8	beneficial frequency band.	8		mentioned, and I'm referring to the transcript
9	Q. Okay. Will the specification indicate whether	9		of July the 7th at page 114.
10	or not the system should have a central	10	CHAI	RMAN:
11	switch?	11	Q.	Page number again, Mr. Hutchings, please?
12	A. I believe it's premature to state that. We've	12	HUTC	CHINGS, Q.C.:
13	looked at some alternatives. We've	13	Q.	114, Mr. Chair. It's there on the screen. At
14	established that there's a very good	14		the top of that page, and this was your
15	alternative out there that does not require a	15		answer, according to the transcript, "I should
16	central switch. However, we've also stated	16		add to that, I guess, when Custom Systems did
17	that we intend to develop a functional	17		the technology review in 2001, the Passport
18	specification.	18		product, if we can call it that, did notwas
19	Q. Okay. So I think we're getting closer now.	19		not on the horizon as such, and I guess it's
20	So the specification will be functional one,	20		only through additional research over the last
21	rather than an equipment specific one?	21		two years in particular that basically the
22	A. Yes.	22		Passport product has come forward as a viable
23	Q. Okay. So if I'm relating that properly to	23		technology alternative." You go on then later
24	where we are now, your specification could	24		on, or further down the page, you're asked
25	allow for the type of system that your	25		whether it was not commercially available, and
	Page 71			Page 72
1	you didn't agree with that. You said "I do	1		but a Passport compliant system would be a
2	not believe it was not available. I would say	2		system that would consist of software and
3	the consultant was not aware of it." Do you	3		hardware.
4	know when this Passport system came on the	4	Q.	Yes, okay. So Passport is a trade name,
5	market?	5		correct?
6	A. No, I do not.	6	A.	Yes.
7	Q. Okay. I've been trying to find out a little	7	Q.	Yes, okay. So in order to implement this
8	bit about it. I've seen references on	8		Passport protocol, you would still have to go
9	websites to it as early as 1997. Were you	9		out and buy repeaters?
10	aware that it had been talked about back that	10	A.	Yes.
11	early?	11	Q.	Okay. And the Passport protocol, as I
12	A. I became aware of Passport in 2001.	12		understand it, would not require that you have
13	Q. Okay. And was that after this technical	13		a central switch?
14	report was done?	14	A.	No, it would not.
15	A. Yes.	15	Q.	Okay. Could the Passport protocol be used
16	Q. Okay. And how did you become aware of	16		with a central switch?
17	Passport?	17	A.	I am not aware that it can.
18	A. I believe initially it was brought to our	18		You don't know whether or not it can?
19	attention by a supplier.	19		No, I don't know whether or not.
20	Q. Okay. And can you tell us what Passport is?	20		Okay. What is the purpose of the Passport
21	A. Passport refers to, in my understanding of it,	21		protocol?
22	Passport refers to a trunked radio protocol.	22		I beg your pardon?
23	Q. So it would essentially consist then of	23		What's the purpose of the Passport protocol?
24	software and maybe some hardware?	24		What's it supposed to do for you?
25	A. The protocol itself exists as a definition,	25	A.	The purpose of a protocol in general is to
				Page 69 - Page 72

July), 2003	1-1 ag	c NL Hydro 2004 Capital Budget Application
	Page 73		Page 74
1	permit communications between devices.		R. DOWNTON:
2	Q. It's a networking tool basically, is it?	2	A. And Mr. Dunphy also did a site visit to an
3	A. Yes, I guess, in one context it is.	3	installed Passport system in the United
4	Q. Okay. I thought I understood from your	4	States.
5	answers to Mr. Alteen that you never did have	5	Q. Okay. And where was that?
6	any discussions with your consultant, Custom	6 M	R. DUNPHY:
7	Systems Electronics, about Passport, did you?	7	A. That was in southern California.
8	A. Not at the time of his report. We've since	8	Q. When you say Motorola is the supplier, is
9	had conversations. He is nowI know he is	9	Motorola the supplier of the protocol as well
10	now aware that Passport exists.	10	as the equipment?
11	Q. Okay. And so far as you were aware, he was	11	A. Protocol, as I understand it, the protocol is
12	not, prior to the filing of his report with	12	owned by a third party who right now
13	you, aware of Passport?	13	manufactures the site equipment so Motorola
14	A. I cannot speak for the gentleman, but as far	14	would be described as using the original
15	as I am aware, no, he was not.	15	manufacturer as an OEM, original equipment
16	Q. Okay. Did you ask him to evaluate Passport or	16	manufacturer, but supplying the equipment
17	give you an opinion on Passport?	17	themselves.
18	A. Not at this point, no, we have not.	18	Q. I'm sorry, you said Motorola would be
19	Q. Okay. Have you involved anyone outside of the	19	supplying the equipment themselves?
20	Hydro organization in the analysis of the	20	A. Yes. The equipment will be supplied through
21	potentials of Passport?	21	Motorola.
22	A. We've spoken to other customers. We have	22	Q. Okay. But it would come from the -
23	spoken to the manufacturer. We've spoken to	23	A. A third party manufacturer.
24	Motorola, who is the supplier, and we've	24	Q third party manufacturer. Is that Trident
25	spoken to distributors.	25	you're talking about?
	Page 75		Page 76
1	A. Yes.	1	A. There is encoding and decoding of the specific
2	Q. Okay. Trident, as I understand it, owns that	2	features of the Passport protocol that take
3	protocol, the Passport protocol?	3	place in the end user device. The radios we
4	A. Yes, that's right.	4	have, the bulk of the radios that we have were
5 (1	1:04 a.m.)	5	manufacturer discontinued by Motorola, the end
6	Q. Okay. Are you aware of what, if any, minimum	6	user equipment, many years ago, and do not
7	requirements there are for the repeaters in	7	support Passport encryption or decryption.
8	order to allow them to use the Passport	8	Q. Okay. Is the encryption and decryption a
9	protocol?	9	necessary part of the Passport protocol?
10	A. We have been informed that standard analog	10	A. Absolutely is. From what I have been told,
11	single channel radio repeaters will support	11	yes, it is. The features will not function
12	the Passport protocol, that it is transparent	12	without it.
13	to the repeater.	13	Q. Okay. Is there an issue about the performance
14	Q. Okay. And that's what you have now, isn't it?	14	of Passport, dependent upon how many channels
15	A. Yes.	15	are on your repeaters?
16	Q. Okay. So you could use the Passport protocol	16	A. I'm not aware of any.
17	on your existing system?	17	Q. Okay. So far as you're concerned, a single
18	A. Yes. We could use itI'm sorry, we could use	18	channel repeater is perfectly fine?
19	it with our existing repeaters. We could not	19	A. Yes.
20	use it with our end user equipment, our	20	Q. You don't get any benefit -
21	mobile, portable and base station radios, nor	21	A. So we've been informed.
22	could we use it with our central switch. But	22	Q. You don't get any benefit out of having a
23	we could use the repeaters themselves, yes.	23	multichannel repeater?

25

A. You do get benefits in terms of increased

traffic, as you would with any trunked radio

Q. Okay. And what is it about Passport that

would prevent your using the end user devices?

24

July	9, 2003	Mulu-Pa	ge r	NL Hydro 2004 Capital Budget Application
	I	Page 77		Page 78
1	system.	1	tl	ne components of the network will seek the
2	Q. Okay. But that's not specifically tied into	2	b	est route for traffic to get from one end to
3	Passport as such?	3	tl	ne other.
4	A. No.	4	Q. (Okay. So presumably that involves some
5	Q. No, okay. Now can you explain to us how	the 5	a	dditional software at the repeater? Is that
6	Passport system routes calls?	6	c	orrect?
7	A. How it routes calls?	7	A. P	Presumably it involves software at the
8	Q. Yes.	8	r	epeater, yes. There is intelligence and
9	A. I would certainly have to give it some	9	d	ecision making at the repeater.
10	thought. I'm not intimately familiar with the	e 10	Q. Y	Yes, okay. Looking at the proposed system as
11	details of the protocol.	11	it	is represented on page 27 of the
12	Q. No, I mean, the system that you have is	12	Τ	elecommunications Plan, each of the
13	somewhat understandable, I guess, to the	13	iı	ndications here, the red ovals and the black
14	layman in the sense that you make a call, it	14	b	oxes, represent a repeater as I understand?
15	goes to a switch and the switch tells the call	15	Α. Υ	Yes.
16	where to go and so on.	16	Q. C	Can you just explain for us how a call would
17	A. Yes.	17	n	nake its way from St. Anthony to the ECC using
18	Q. But what you're talking about, as I understa	nd 18	tl	ne Passport protocol?
19	it, with Passport, is a system that will not	19	А. Т	That would depend entirely on the
20	have a central switch?	20	c	onfiguration of the system. The final
21	A. No, that's right.	21	c	onfiguration, the final design has not been
22	Q. So what's going to do the routing?	22	d	one to that detail. In general terms, it
23	A. If I recall correctly, it is analogous to a	23	V	yould probably progress through the repeaters
24	computer network whereby once the call	is 24	O	n the Northern Peninsula and thence into
25	initiated and a destination is established,	25	I	Iydro's microwave network, but in specific
	I	Page 79		Page 80
1	terms, that's impossible to do at this stage.	1		on't have a system. Is that correct?
2	Q. Okay. So would there be a connection of so			Yes, that is true.
3	sort between the St. Anthony repeater and the	ie 3		Okay. In terms of how the new architecture
4	Southwest Brook repeater?	4	V	would work, presumably a call from St. Anthony
5	A. There may and there may not, it depends	5 5		vill either go through Blue Mountain or
6	entirely on the final design of the system.	6		outhwest Brook on its way to Mount Margaret
7	One would look at traffic patterns. One wou	I		nd down into some other part of the system.
8	look at historical usage. One would look at	8		s that fair?
9	the most cost effective way to do that.	9		That is possible. That is one scenario, yes.
10	Q. Okay. Would each repeater site have an	10		Okay. So if the system provides for that call
11	individual access to the public switch	11		o go through Southwest Brook to Mount
12	network?	12		Margaret and Southwest Brook is down, then you
13	A. No, not necessarily.	13		an't get a call from St. Anthony?
14	Q. Okay. But some of them might, or are all o			Again, not necessarily. One could have
15	them -	15		nultiple connections into St. Anthony using
16	A. Some of them might, and it would be pruder			nultiple facilities, for example. However, in
17	have some of them with connections to th			erms of the design of the system, I do not
18	public switch telephone network because th			elieve it is cost effective to have multiple
19	is a component of the existing system that is		_	oints of access to every single location. So
20	utilized.	20		is conceivable that one site, and St.
21	Q. Okay. I'm just trying to explore this notion	21		Anthony being a prime example, may not have
22	of single point of failure, which you say this			nultiple points of access.
23	architecture is designed to avoid, and I think			Yes, okay.
24	we can understand that if the Gander switch goes down in the current system, you basica			OWNTON: guess in a simplistic fashion, the way that
25				

Page 81 1 the stations or the sites will be 2 interconnected is like in a ring. So 3 basically each site connects on through in a 4 ring-type fashion and the analogy of if you 5 lose a site, then depending on where you are 6 on that side of the ring, the traffic can go back that way, 7 and I think that's basically what Mr. Dunphy 9 is trying to allude to, but in essence, it may 10 not look exactly like just a single ring. It may be a series of rings, depending on what 12 the traffic analysis and the detailed design bridge of the traffic range of the state of the rings, depending on what 12 the traffic analysis and the detailed design bridge of the traffic range of the state of the cost of putting all this in place? 10 No. DUNPHY: 11 may be a sircle of ring of if you connections to a particular site will depend on detail design. 12 Q. Would it not be correct that the number of connections to a particular site will have an impact on the cost of putting all this in place? 14 A. We haven't gotten to that level of design, no. 15 architecture?" 15 A. We have an estimate of how much the system is going to cost. 16 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 20 your proposal now? 21 diple locations. 22 Q. Okay. And does that concept form any part of your proposal now? 23 So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. 24 A. Amesh architecture, a mesh topology is generally mere connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to recircuits, I guess, to a particular to may be a series of ring depending on what the infrastructure will look and also will into the case of the cost of putting all this in place? 14 A. Che haven't gotten to that level of design, no. 15 A. We have an estimate of how much the system is going to cost. 16 A. We		
1 interconnected is like in a ring. So 1 basically each site connects on through in a 1 ring-type fashion and the analogy of if you 1 lose a site, then depending on where you are 2 on that side of the ring, the traffic can go hack that way, 3 and I think that's basically what Mr. Dunphy 4 is trying to allude to, but in essence, it may 10 not look exactly like just a single ring. It 11 may be a series of rings, depending on what 12 the traffic analysis and the detailed design 13 bring out. 14 Q. Okay. Are you familiar with the term "mesh 15 architecture?" 15 MR. DUNPIY: 16 MR. DUNPIY: 17 A. Yes. 18 Q. Okay. And can you explain to us what that is? 18 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. 26 A shan shar shirtcure will look and also will 27 impact on what the infrastructure will cost. 28 Q. Oy exp. And does that oncept form any part of 29 your proposal now? 20 A shan architecture, a mesh topology is 21 generally more complex than a ring topology. 27 The shirt is an interpolation of the detailed design and the detailed design and the design because the traffic analysis will impact tow what the infrastructure will cost. 3 So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. 4 Q. Yes. 4 La was less concented with the number of voice circuits, I guess, to a particular for voice interest of the cost of the co	Page 81	Page 82
basically each site connects on through in a firing-type fashion and the analogy of if you lose a site, then depending on where you are on that side of the ring, the traffic can go back that way, and I think that's basically what Mr. Dunphy is trying to allude to, but in essence, it may not olook exactly like just a single ring. It may be a series of rings, depending on what the traffic analysis and the detailed design bring out. 14 Q. Okay, Are you familiar with the term "mesh architecture?" 15 MR. DUNPHY: 17 A. Yes. 20 Q. Okay, And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, generally refers to multiple locations. 21 Q. Okay, And does that concept form any part of your proposal now? 22 Q. Okay, And does that concept form any part of your proposal now? 23 A. Amesh architecture, a mesh topology is generally more complex than a ring topology. 24 A. A mesh architecture will look and also will impact on what the infrastructure will cost. 25 So that's part of the detailed design, so you don't know home. It would not be done until you get into the detailed design because the traffic analysis will impact how whether we have two, that level of detail done on the cost of putting all this in place? 26 A. Aboslutely, yes. 27 Q. Yes, I was less concerned with the term "mesh architecture, in my understanding, generally more complex than a ring topology. 28 A. A mesh architecture, a mesh topology is generally more complex than a ring topology. 29 A. We put forward, within the operating costs, we've put forward digital facilities into each one of those sites and with disparation of the magnitude of the connection both to Blue Mountain and to roperating costs in the design phase. 29 Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular to go with fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, no.	the stations or the sites will be	1 Conceptually, it may make sense to implement a
4 Q. Would it not be correct that the number of 5 lose a site, then depending on where you are 6 on that side of the ring, the traffic can go 7 this way or the traffic can go back that way, 8 and I think that's basically what Mr. Dumphy 9 is trying to allude to, but in essence, it may 10 not look exactly like just a single ring. It 11 may be a series of rings, depending on what 12 the traffic analysis and the detailed design bring out. 13 bring out. 14 Q. Would it not be correct that the number of connections to a particular site will have an impact on the cost of putting all this in place? 18 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 19 A. We have an estimate of how much the system is going to cost. 10 M. DUNPTIVE Cost of the design so the system is going to cost. 11 M. DUNPTIVE Cost of the design so to cost of the stream of the design so to cost of the stream of the design so to cost. 12 A. We have an estimate of how much the system is going to cost. 13 M. We've put forward, within the operating costs, we've put forward digital facilities into cach one of the design so t	2 interconnected is like in a ring. So	2 mesh between certain points in the network,
1	basically each site connects on through in a	but again, that will depend on detail design.
1	4 ring-type fashion and the analogy of if you	4 Q. Would it not be correct that the number of
on that side of the ring, the traffic can go and I think that's basically what Mr. Dunphy si trying to allude to, but in essence, it may not look exactly like just a single ring. It may be a series of rings, depending on what the traffic analysis and the detailed design by bright the traffic analysis and the detailed design brig	5 lose a site, then depending on where you are	5 connections to a particular site will have an
this way or the traffic can go back that way, and I think that's basically what Mr. Dunphy is trying to allude to, but in essence, it may not look exactly like just a single ring. It may be a series of rings, depending on what the traffic analysis and the detailed design bring out. Q Okay. Are you familiar with the term "mesh architecture?" A Yes. Q Okay. And can you explain to us what that is? A Mesh architecture, in my understanding, generally refers to multiple contact points to multiple locations. Q Okay. And does that concept form any part of your proposal now? A A mesh architecture, a mesh topology is generally more complex than a ring topology. Page 83 the infrastructure will look and also will migact on what the infrastructure will look and also will migact on what the infrastructure will look and also will migact on what the infrastructure will look and also will coperating costs in the design phase. Q Oyes, I was less concerned with the number of voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, telephone network, and	1	_
and I think that's basically what Mr. Dunphy is trying to allude to, but in essence, it may no not look exactly like just a single ring. It may be a series of rings, depending on what 12 the traffic analysis and the detailed design bring out. 10 Okay. Are you familiar with the term "mesh 15 architecture?" 11 A. Yes. 12 Q. Okay. And can you explain to us what that is? 13 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 14 Q. Okay. And does that concept form any part of 22 your proposal now? 15 generally more complex than a ring topology. 16 The infrastructure will look and also will 2 impact on what the infrastructure will cost. 17 A. Yes. I was less concerned with the number of 4 voic circuits, I guess, to a particular solution, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to correction both to Blue Mountain and to correction both to Blue Mountain and to correction both to the Blue Mountain and to correction both to Blue Mountain and to correction both to the flue public switch telephone network, and whether there's one, it was a material per unit cost decreases. 17 Q. Yes. 18 A. In certain locations, yes, it will. 10 which, if any of these shirt,-five sites, will in necd a multiple connection? 12 A. We haven't gotten to that level of design, no. 13 Q. So you don't know how much the system is going to cost. 14 A. Yes. 15 A. We have an estimate of how much the system is going to cost. 15 MR. DOWNTOS: 18 A. We've put forward, within the operating costs, we've put forward digital facilities into each one of these sites, and with digital facilities into these sites and with digital facilities int	1	
19 is trying to allude to, but in essence, it may not look easely like just a single ring. It may be a series of rings, depending on what the traffic analysis and the detailed design bring out. 12 the traffic analysis and the detailed design bring out. 13 Dring out. 14 O. Okay. Are you familiar with the term "mesh architecture?" 15 A. We have an estimate of how much the system is going to cost. 17 M. DOWNINS: 18 O. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, og generally refers to multiple contact points to your proposal now? 20 generally refers to multiple contact points to generally refers to multiple locations. 21 O. Okay. And does that concept form any part of your proposal now? 22 A. A mesh architecture, a mesh topology is generally more complex than a ring topology. 23 The infrastructure will look and also will impact on what the infrastructure will cost. 24 A. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. 25 O. Yes, I was less concerned with the number of voice circuits, I guess, to a particular so of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question of, in	1	_
not look exactly like just a single ring. It may be a series of rings, depending on what the traffic analysis and the detailed design bring out. 10	1	
the traffic analysis and the detailed design the traffic analysis and the detailed design the traffic analysis and the detailed design to the traffic analysis and the detailed design architecture?" 15	1	
the traffic analysis and the detailed design bring out. 13	, , , , ,	
bring out. Q. Okay. Are you familiar with the term "mesh 15 architecture?" 16 MR. DUNPHY: 17 A. Yes. 8 Q. Okay. And can you explain to us what that is? 18 A. Mesh architecture, in my understanding, 20 generally refers to multiple locations. 21 multiple locations. 22 Q. Okay. And does that concept form any part of 21 your proposal now? 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. 25 year and the infrastructure will look and also will 26 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 4 Q. Yes, I was less concerned with the number of 4 voice circuits, I guess, to a particular 8 location, as to the question of, in the case of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to toost. 17 Q. Yes. 18 A. We have an estimate of how much the system is going to cost. 17 MR. DOWNTON: 18 A. We've put forward, within the operating costs, we've put forward, within the operating costs, we've put forward, within the operating costs inc. 2 guess whether we have one of those sites. I guess whether we have one of those sites. I guess whether we have two, that level of of detail has not been design of the facilities into the detailed design because the traffic analysis will impact how the detailed facilities into these sites and with digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. 6 Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular the result of the design of the facilities into these sites, and that we are looking at fractional T1 facilities and that we are looking at fractional T1 facilities		
14 O. Okay. Are you familiar with the term "mesh architecture?" 15 A. Yes. 16 A. Yes. 17 MR. DOWNTON: 18 O. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 21 Q. Okay. And does that concept form any part of 22 your proposal now? 22 Q. Okay. And does that concept form any part of 23 your proposal now? 23 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. 24 A. Amesh architecture will look and also will 2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 5 operating costs in the design phase. 6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 MR. DUNPHY: 15 MR. DUNPHY: 15 MR. DUNPHY: 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 17 Q. Pes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, 22 tire? 20 A. Yes. 21 Q. And that would allow for how many points of exchange?	· · · · · · · · · · · · · · · · · · ·	
15 A. We have an estimate of how much the system is 16 MR. DUNPHY: 18 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. Page 83 1 the infrastructure will look and also will 2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 5 Q. Yes, I was less concerned with the number of 6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 TMR. DUNPHY: 14 A. Absolutely, yes. 15 A. We have an estimate of how much the system is 16 going to cost. 17 MR. DOWNTON: 18 A. We've put forward, within the operating costs, 19 we've put forward digital facilities into each one, we'l call, voice circuit in there or for one channel or whether we have 20 one we'l tall, voice circuit in there or for one channel or whether we have two, that level 23 of detail has not been done. It would not be 24 done until you get into the detailed design because the traffic analysis will impact how 25 because the traffic analysis will impact how 26 digital facilities into tese sites and with 27 digital facilities into these sites and with 28 digital facilities into these sites and with 29 digital facilities, as being the worst case 30 option, as you increase the number of 4 Anthony or we need three into St. Anthony, 5 But we have not got into we need two into St. 4 Anthony or we need three into St. Anthony, 5 But we have not got into we need two into St. 4 Anthony for instance, will there b	1	
16 MR. DUNPHY: 17 A. Yes. 18 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. 26 The infrastructure will look and also will 27 impact on what the infrastructure will cost. 28 So that's part of the detailed design, so you 29 want to minimize both your capital and 20 your, so the question of, in the case 20 of detail has not been done. It would not be 21 digital facilities into the detailed design option, as you increase the number of voice circuits, I guess, to a particular 29 two, Fresh and whether there's one, 10 Country of those is going to two, three or four of those is going to two, three or four of those is going to 20 one of those sites. I guess whether we have one of those sites. I guess whether we have one of those sites. I guess whether we have one one of those sites. I guess whether we have one one of those sites. I guess whether we have one of those is so. I guess whether we have one one of those sites. I guess whether we have one one of those sites. I guess whether we have one of those sites. I guess whether we have one of those sites. I guess whether we have one of those is so. I guess whether we have one of those sites and with digital facilities into the detailed design option, as you increase the number of the channels, the actual per unit cost decreases. 10 Southwest Brook and/or the public switch to go with fractional T1 facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give use two, three or four of those is going to the detailed design, we may not find that we need to go with fractional T1 facilities into the detailed design, we may not find that we need to go with fractional T1 facilities into the detailed design, we may not find that we n	1	
17 MR. DOWNTON: 18 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. Page 83 1		
18 Q. Okay. And can you explain to us what that is? 19 A. Mesh architecture, in my understanding, 20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. 26 Page 83 1 the infrastructure will look and also will 2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 A. Absolutely, yes. 15 Q. Yes. 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 23 one of those sites. I guess whether we have 24 one, we'll call, voice circuit in there or for 25 one channel or whether we have thave device ircuit in there or for 26 one channel or whether we have that exicult and one until you get into the detailed design 27 because the traffic analysis will impact how 28 done until you get into the detailed design 29 because the traffic analysis will impact how 20 one thannel or whether we have two, that level of detail has not been done. It would not be done until you get into the detailed design 29 because the traffic analysis will impact how 20 one thannel or whether we have two, detailed design 20 one thannel or whether we have two, that level of detail has not been done until and digital facilities into these sites and with 20 digital facilities into these sites and with 21 digital fa		
19 A. Mesh architecture, in my understanding, generally refers to multiple contact points to 20 one of those sites. I guess whether we have multiple locations. 21 one, we'll call, voice circuit in there or for 22 one channel or whether we have two, that level 23 of detail has not been done. It would not be 24 done until you get into the detailed design 25 because the traffic analysis will impact how 25 perating costs in the design phase. 26 Q. Yes, I was less concerned with the number of 29 of St. Anthony, for instance, will there be a 20 of St. Anthony, for instance, will there be a 21 telephone network, and whether there's one, 21 telephone network, and whether there's one, 21 two, three or four of those is going to 22 three or four connections from a particular 20 one of those sites. I guess whether we have one of those methor one, wo, 22 one, we'll call, voice circuit in there or four one channel or whether we have two, that level 23 of detail has not been done. It would not be 24 done until you get into the detailed design because the traffic analysis will impact how 25 because the traffic analysis will impact how 25 done until you get into the detailed design because the traffic analysis will impact how 25 done until you get into the detailed design because the traffic analysis will impact how 26 done until you get into the detailed design because that fish and with impact how 27 done until you get into the detailed design because that fish and the worst case 30 of that 's part of the detailed design, as being the worst case 30 option, as you increase the number of 4 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. Anthony, 50 because that's, from our perspective, we've 30 assumed what we consider to be a worst case 30 southwest Brook and/or the public switch 31 that we are looking at fractional T1 facilities into these sites, which will give 4 to 50 go with fractional T1 facilities and that 4 will indeed reduce our costs. 17 Q. So your present plan has digital		
20 generally refers to multiple contact points to 21 multiple locations. 22 Q. Okay. And does that concept form any part of 23 your proposal now? 24 A. Amesh architecture, a mesh topology is 25 generally more complex than a ring topology. Page 83 1 the infrastructure will look and also will 2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 5 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 20 one of those sites. I guess whether we have one, deficil all, voice circuit in there of for 21 one channel or whether we have two, that level of detail has not been explored. 22 one channel or whether we have two, that level of detail has not been for 20 one channel or whether we have two chanled or heat alian sone been done. It would not be detail has not been done. It would not be done until you get into the detailed design because the traffic analysis will impact how Page 84 1 digital facilities into these sites and with digital facilities, as being the worst case 4 blue into these sites and with digital facilities, as being the worst case set so that might be involved with one two. 4 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. 6 Anthony or we need three into St. Anthony, 7 because that's, from our perspective, we've 8 assumed what we consider to be a worst case 9 of St. Anthony, for instance, will there be a connection both to Blue Mountain and to 10 facilities into each one of these sites, which will give 11 that we are looking at fractiona	1	
multiple locations. Q. Okay. And does that concept form any part of your proposal now? A. Amesh architecture, a mesh topology is generally more complex than a ring topology. Page 83 the infrastructure will look and also will impact on what the infrastructure will cost. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Q. Yes, I was less concerned with the number of connection both to Blue Mountain and to connection both to Blue Mountain and to telephone network, and whether there's one, telephone network, and whether there's one, to consection both to the public switch telephone network, and whether there's one, to consection both to many and to the costs that might be involved with one, two, three or four connections from a particular costs that might be involved with one, two, three or four connections from a particular site? 21 one, we'll call, voice circuit in there or for one channel or whether we have two, that level of detail has not been explored. 22 one channel or whether we have two, that level of detail has not been explored. 22 one channel or whether we have two, that level of detail has not been explored. 21 one channel or whether we have two, that level on detail detail has not been explored. 22 one channel or whether we have two, that level of detail has not been explored. 21 one channel or whether we have two, that level detailed design because the traffic analysis will impact how doen until you get into the detailed design and with digital facilities into these sites and with digital facilities into these sites and with digital facilities into these of the traffic analysis will impact how digital facilities into these sites and with channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. Anthony, for on	•	
22 Q. Okay. And does that concept form any part of your proposal now? 23 A. Amesh architecture, a mesh topology is generally more complex than a ring topology. 25 generally more complex than a ring topology. 26 Page 83 1 the infrastructure will look and also will impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. 4 Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? 10 A. Absolutely, yes. 11 That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, tire? 22 one channel or whether we have two, that level dote and in a not been done. It would not be detailed design and denutil you get into the detailed design and to done until you get into the detailed design because the traffic analysis will impact how Page 84 digital facilities into these sites and with digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. But we have not got into we need three into St. Anthony, or we need three into St. Anthony, or because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that wa are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need three into St. Anthony, or instance, will there be a scenario, as far as the design of the facilities into each one of these sites, which will give us maximum flexibility. When we		_
your proposal now? A. Amesh architecture, a mesh topology is generally more complex than a ring topology. Page 83 the infrastructure will look and also will impact on what the infrastructure will cost. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, terperating two, three or four of these is going to Q. Yes. A. Absolutely, yes. Characterists are site for a particular optone date of the costs that might be involved with one, two, three or four connections from a particular site? Page 83 Page 84 Page 84 Page 84 Charling analysis will impact how Page 84 digital facilities into these sites and with digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular of the detailed design, we may not find that would allow for how many points of exchange?	1	
A. Amesh architecture, a mesh topology is generally more complex than a ring topology. Page 83 the infrastructure will look and also will impact on what the infrastructure will cost. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a location, as to the question both to Blue Mountain and to location both to Blue Mountain and to location two, three or four of those is going to location is MR. DUNPHY: MR. DUNPHY: A. Absolutely, yes. A. That level of detail has not been explored. Location is marked and location is given because the traffic analysis will impact how because the traffic analysis will impact how Page 84 I digital facilities into these sites and with digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular particular site? Yes done until you get into the detailed design will indeed reduce our costs. D. A yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. Yes. Q. And that would allow for how many points of excha	_ :	
Page 83 the infrastructure will look and also will simpact on what the infrastructure will cost. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Operating costs in the design phase. Operating costs in the design phase. Operating costs in the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to MR. DUNPHY: A. Absolutely, yes. Operating complex than a ring topology. Page 83 I digital facilities into these sites and with digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into these sites, and that we are looking at fractional T1 that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular D. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular D. A Yes. And that would allow for how many points of exchange?		
Page 83 1 the infrastructure will look and also will 2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 5 O. Yes, I was less concerned with the number of 6 Ves, I was less concerned with the number of 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 That level of detail has not been explored. 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? Page 84 digital facilities into these sites and with digital facilities, as being the worst case digital facilities, as being the worst case digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case secnario, as far as the design of the facilities into each one of these sites, and 11 that we are looking at fractional T1 that we are looking at fractional T1 that we are looking at fractional T1 to go with fractional T1 facilities and that will indeed reduce our costs. 17 Q. So your present plan has digital equipment at every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	1	
the infrastructure will look and also will impact on what the infrastructure will cost. So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Q. Yes, I was less concerned with the number of location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to A. Absolutely, yes. M. DUNPHY: A. That level of detail has not been explored. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular costs that might be involved with one, two, three or four connections from a particular costs that might be involved with one, two, three or four connections from a particular costs that might be involved with one, two, three or four connections from a particular costs that might be involved with one, two, time or four connections from a particular costs that might be involved with one, two, cost circuits, I guess, so you charls facilities, as being the worst case digital facilities, as being the worst case option, as you increase the number of channels, the actual per unit cost decreases. But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 contact the design of the will indeed reduce our costs. Contact the contact the observation of the magnitude of the costs tha		
2 impact on what the infrastructure will cost. 3 So that's part of the detailed design, so you 4 want to minimize both your capital and 5 operating costs in the design phase. 6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 digital facilities, as being the worst case 9 option, as you increase the number of 4 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. 6 Anthony or we need three into St. Anthony, 7 because that's, from our perspective, we've 8 assumed what we consider to be a worst case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 detailed design, we may not find that we need 15 MR. DUNPHY: 15 to go with fractional T1 facilities and that 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 2 digital facilities, as being the worst case option, as you increase the number of 4 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case 9 of St. Anthony, or ened three into St. Anthony, 17 because that's, from our perspective, we've assumed what we consider to be a worst case 10 facilities into each one of these sites, which will give 11 that we are looking at fractional T1 12 telephone network, and whether there's one, 12 facil		
So that's part of the detailed design, so you want to minimize both your capital and operating costs in the design phase. Operating costs that mumber of Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case operating cost into we need two into St. Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case operation of the esting, and In that we are looking at fractional T1 operation at we form on the were dead one of these sites, which will give us maximum flexibility. When w		
4 want to minimize both your capital and 5 operating costs in the design phase. 6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. 6 Anthony or we need three into St. Anthony, 7 because that's, from our perspective, we've 8 assumed what we consider to be a worst case 9 scenario, as far as the design of the 10 facilities into each one of these sites, and 11 that we are looking at fractional T1 12 telephone network, and whether there's one, 13 us maximum flexibility. When we get into the 14 represent an additional cost, is it not? 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 24 channels, the actual per unit cost decreases. 5 But we have not got into we need two into St. Anthony or we need three into St. Anthony, 26 Anthony or we need three into St. Anthony, 26 Anthony or we need three into St. Anthony, 26 Anthony or we need three into St. Anthony, 27 because that's, from our perspective, we've 28 assumed what we consider to be a worst case 29 scenario, as far as the design of the 20 assumed what we consider to be a worst case 30 assumed what we consider to be a worst case 41 assumed what we consider to be a worst case 42 assumed what we consider to be a worst case 43 assumed what we consider to be a worst case 44 assumed what we consider to be a worst case 45 assumed what we consider to be a worst case 46 assumed what we consider to be a worst case 47 because that's, from our perspective, we've 48 ass	1	
operating costs in the design phase. Q. Yes, I was less concerned with the number of voice circuits, I guess, to a particular because that's, from our perspective, we've location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to location be a secnario, as far as the design of the facilities into each one of these sites, and location at location beaution beau	1	1
6 Q. Yes, I was less concerned with the number of 7 voice circuits, I guess, to a particular 8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 represent an additional cost, is it not? 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 6 Anthony or we need three into St. Anthony, 7 because that's, from our perspective, we've 8 assumed what we consider to be a worst case 9 scenario, as far as the design of the 10 facilities into each one of these sites, and 11 that we are looking at fractional T1 12 facilities into these sites, which will give 13 us maximum flexibility. When we get into the 14 detailed design, we may not find that we need 15 to go with fractional T1 facilities and that 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	_	_
voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. A. That level of detail has not been explored. Do you have any notion of the magnitude of the Connection both to Blue Mountain and to 10 facilities into each one of these sites, and 11 that we are looking at fractional T1 12 facilities into these sites, which will give 13 us maximum flexibility. When we get into the 14 detailed design, we may not find that we need 15 to go with fractional T1 facilities and that 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 Costs that might be involved with one, two, 21 three or four connections from a particular 22 site? On because that's, from our perspective, we've 8 assumed what we consider to be a worst case 9 scenario, as far as the design of the 10 facilities into each one of these sites, and 11 that we are looking at fractional T1 12 facilities into these sites, which will give 13 us maximum flexibility. When we get into the 14 detailed design, we may not find that we need 15 to go with fractional T1 facilities and that 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	1 0 1	Dut was been not not into our mond two into Ct
8 location, as to the question of, in the case 9 of St. Anthony, for instance, will there be a 10 connection both to Blue Mountain and to 11 Southwest Brook and/or the public switch 12 telephone network, and whether there's one, 13 two, three or four of those is going to 14 represent an additional cost, is it not? 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 8 assumed what we consider to be a worst case 9 scenario, as far as the design of the 10 facilities into each one of these sites, and 11 that we are looking at fractional T1 12 telephone network, and whether there's one, 13 us maximum flexibility. When we get into the 14 detailed design, we may not find that we need 15 to go with fractional T1 facilities and that 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?		
of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to two, three or four of those is going to the represent an additional cost, is it not? The public switch telephone network, and whether there's one, two, three or four of those is going to the represent an additional cost, is it not? The public switch the represent an additional cost, is it not? The public switch the represent an additional cost, is it not? The public switch the represent an additional cost, is it not? The public switch that we are looking at fractional T1 facilities into these sites, which will give the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The public switch the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The public switch the design of the facilities into each one of these sites, and that we are looking at fractional T1 to go with fractional T1 facilities into these sites, which will give the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The public switch into these sites, which will give the detailed design, we may not find that we need to go with fractional T1 facilities into each one of these sites, and that we are looking at fractional T1 that we are looking at fractional T1 to go with fractional T1 facilities into these sites, which will give the facilities into these sites, which will give the facilities into these sites, and that we are looking at fractional T1 facilities into these sites, and the submitted in that we are looking at fractional T1 that we are looking at fractional T1 facilities into these sites, which will give the submitted in the public switch in the facilities into these sites, which will give the facilities into these sites, which		6 Anthony or we need three into St. Anthony,
connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to two, three or four of those is going to R. DUNPHY: A. Absolutely, yes. A. That level of detail has not been explored. A. That level of detail has not been explored. A. That level of detail has not been explored. D. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site? In that we are looking at fractional T1 facilities into these sites, and that we are looking at fractional T1 facilities into these sites, which will give the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. The detailed design we may not find that we need to go with fractional T1 facilities and that will indeed reduce our	7 voice circuits, I guess, to a particular	Anthony or we need three into St. Anthony, because that's, from our perspective, we've
Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular telephone network, and whether there's one, facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY: MR. DUNPHY: A. That level of detail has not been explored. MR. DUNPHY: A. Yes. Q. And that would allow for how many points of exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case
telephone network, and whether there's one, two, three or four of those is going to trepresent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site? In two, three or four of those is going to the two, two, three or four costs, is it not? It is facilities into these sites, which will give the auximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. If Q. So your present plan has digital equipment at every single one of these thirty-five sites? If MR. DUNPHY: A. Yes. If Q. And that would allow for how many points of exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the
two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site? Is will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? P. MR. DUNPHY: A. That level of detail has not been explored. Is every single one of these thirty-five sites? P. MR. DUNPHY: A. Yes.	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and
represent an additional cost, is it not? 14 detailed design, we may not find that we need 15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 14 detailed design, we may not find that we need 15 to go with fractional T1 facilities and that 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1
15 MR. DUNPHY: 16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 15 to go with fractional T1 facilities and that will indeed reduce our costs. 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at every single one of these thirty-five sites? 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one,	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give
16 A. Absolutely, yes. 17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 16 will indeed reduce our costs. 17 Q. So your present plan has digital equipment at every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the
17 Q. Yes. 18 A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 17 Q. So your present plan has digital equipment at 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the
A. That level of detail has not been explored. 19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 18 every single one of these thirty-five sites? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not?	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need
19 Q. Do you have any notion of the magnitude of the 20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 19 MR. DUNPHY: 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY:	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that
20 costs that might be involved with one, two, 21 three or four connections from a particular 22 site? 20 A. Yes. 21 Q. And that would allow for how many points of 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes.	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs.
three or four connections from a particular 21 Q. And that would allow for how many points of 22 site? 21 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes.	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at
22 site? 22 exchange?	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored.	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites?
	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites?
[voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Do you have any notion of the magnitude of the costs that might be involved with one, two,	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY:
23 A. You mean - 23 A. It could allow for up to twenty-four. We	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY: A. Yes. A. Yes.
24 MR. DOWNTON: 24 don't anticipate that we need those sorts of	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site?	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY: A. Yes. A. Yes.
1	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site? A. You mean -	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY: A. Yes. Q. And that would allow for how many points of exchange? A. It could allow for up to twenty-four. We
125 A. In the operating costs, we've nut forward the 125 numbers. The preliminary estimates that we've 1	voice circuits, I guess, to a particular location, as to the question of, in the case of St. Anthony, for instance, will there be a connection both to Blue Mountain and to Southwest Brook and/or the public switch telephone network, and whether there's one, two, three or four of those is going to represent an additional cost, is it not? MR. DUNPHY: A. Absolutely, yes. Q. Yes. A. That level of detail has not been explored. Q. Do you have any notion of the magnitude of the costs that might be involved with one, two, three or four connections from a particular site? A. You mean -	Anthony or we need three into St. Anthony, because that's, from our perspective, we've assumed what we consider to be a worst case scenario, as far as the design of the facilities into each one of these sites, and that we are looking at fractional T1 facilities into these sites, which will give us maximum flexibility. When we get into the detailed design, we may not find that we need to go with fractional T1 facilities and that will indeed reduce our costs. Q. So your present plan has digital equipment at every single one of these thirty-five sites? MR. DUNPHY: A. Yes. Q. And that would allow for how many points of exchange? A. It could allow for up to twenty-four. We

Page 85 Page 86 Q. So if you decide to go Passport, you have to obtained assume one, two or three to most 1 1 go digital? 2 locations. 2 A. Yes. That's not to say we can't use a less Q. So you're building to accommodate twenty-four, 3 3 expensive type of digital technology, for 4 4 instance, voice over IP, but it would be a 5 A. No, no, no. 5 6 Q. - you feel that you could really only need digital connection. 6 7 7 Q. And what's the price differential between the A. No, that is not true. The equipment that is analog and the digital system? 8 8 used is referred to in the industry as T1. A. I'm not exactly sure right now. If you refer 9 10 It's capable of twenty-four voice channels. 10 to the cost benefit that was done in the business case, there were some preliminary o. Yes. 11 11 A. So when the supplier installs one of these estimates for analog facilities for a 12 12 shells, it is capable of twenty-four channels. conventional system versus digital facilities 13 13 If we use one channel, we pay for one channel. for a trunked system. So if we scroll to 14 14 If we use for two, we pay for two. As we use Appendix A4, Mr. O'Reilly. 15 15 16 more, generally speaking, in the pricing 16 Q. Is that Attachment A4? structure, the price goes down. A. No, Appendix A4 of the business case, A.4. 17 17 Q. Yes, I understand that once you have your 18 MR. DOWNTON: 18 digital equipment in there, but what's the 19 A. Appendix A, sheet 4. alternative to the digital equipment? 20 MR. DUNPHY: 20 A. For this particular system, there is no A. Appendix A. So herein, we have what we 21 21 alternative to digital equipment. 22 22 consider to be worst case costs for trunked Q. And why is that? versus conventional and you can see that, 23 23 A. The Passport equipment requires a digital based on the assumptions that were used in 24 24 connection between sites. here, the trunk facilities were shown to be 25 25 Page 87 Page 88 more expensive on an annual operating basis. conventional radio system? 1 1 2 Q. And then annual operating basis, you mean your A. Yes. 2 O & M costs? 3 Q. Okay. I want to get back to those operating 3 costs later, but the question for this time is 4 (11:19 a.m.) 4 5 A. Yes, the O & M costs that are shown here, 5 what is the analog alternative to the Passport system? I mean, if you did not go with the basically, leased facility costs and I believe 6 6 Passport system, which would necessarily 7 it also includes an allocation for 7 require that you go digital -8 accommodation in leased sites. 8 9 Q. Yes, okay. We do need to get into that, but 9 A. Yes. you're suggesting then that the conventional Q. - what is the analog alternative? Is there a 10 10 trunked radio analog alternative? 11 radio system that you're presenting here is an 11 A. I'm not entirely certain. I know there are analog system? 12 12 A. It would use--the assumption made is that it several other trunked radio systems out there 13 13 would use analog facilities between locations. and whether they use analog or digital 14 14 Q. Okay. Is your answer here directed at the 15 15 facilities, I can't say. notion that there is not a significant Q. Have you looked at any other system that does 16 16 not use a central switch, other than Passport? difference in costs between the analog and 17 17 digital systems? A. No, I'm not aware of any other. 18 18 19 A. No, my answer here is that under the column O 19 Q. You're not aware of any?

20

21

22

23

24

25

A. No.

customers.

- & M costs, we can see that for the assumed 20
- 21 configuration here, the digital facilities are 22
 - slightly more expensive, are somewhat more expensive than the analog facilities.
- 23 Q. Yes, okay. From a capital point of view, 24
- you're showing a higher cost for the 25

Q. Have you ever heard of the radio access

A. Yes, I have. We have--we consulted with

Zetron and actually met with one of their

control system produced by Zetron?

July	9, 2003 Mult	i-Pa	age [™] NL Hydro 2004 Capital Budget Application
	Page 89		Page 90
1 (CHAIRMAN:	1	repeaters, I'm sorry?
2	Q. Mr. Hutchings, could you spell Zetron for the	2	A. Yes, we did.
3	purpose of the record?	3	Q. And what conclusion, if any, did you reach?
4 F	IUTCHINGS, Q.C.:	4	A. The conclusion we reached is that, which is
5	Q. Yes, sir. It's Z-E-T-R-O-N. And what was the	5	demonstrated in the Supplementary Evidence
6	purpose of your meeting with Zetron?	6	that we filed last week, we did not feel it is
7	A. It was to determine if they had a product that	7	cost effective to try and extend the life of
8	met our needs.	8	the existing repeaters, which I assume is what
9	Q. Did you make a determination about that?	9	you're referring to.
10	A. Yes, when we met with Zetron and their	10	Q. No, I didn't -
11	customer, it was felt that the Zetron racks		MR. DOWNTON:
12	was not sufficient for our requirements.	12	A. However, the Passport product can support the
13	Q. In what particulars?	13	existing repeaters, and that's what was shown
14	A. I would have to refer back to the	14	in the Schedule 1, page 1 of 2.
15	conversations we had and the notes we kept and	15	Q. Okay. Well, let me understand what Schedule 1
16	talked to the other team members, but it was	16	is intended to show then.
17	eliminated as a viable alternative at the		MR. DUNPHY:
18	time.	18	A. What Schedule 1 is intended to show is that
19	Q. Can you find out for me why that was	19	cost estimate for delaying the replacement of
20	eliminated as a viable alternative?	20	the repeaters, what our engineering staff did
21	(UNDERTAKING)	21	was look at the original budget, subtract a
22	A. Yes.	22	portion for repeater replacement and allocate
23	Q. Okay, thank you. Have you explored the	23	that over three years.
24	possibility of using your existing switches	24	Q. Okay.
25	with Passport protocol, your existing	25	A. 2007, 2008 and 2009, I believe.
	Page 91		Page 92
1	Q. Okay, but is this Schedule 1 based upon the	1	A. Yes.
2	implementation of the Passport protocol?	2	Q. I understood you to tell me that the Passport
3	A. This Schedule 1 is based upon the Capital	3	system did not involve a central switch.
4	Budget that we submitted.		MR. DOWNTON:
5	Q. Which is not based upon the Passport protocol,	5	A. Basically, the words that it's saying is that
6	correct?	6	the switch will be replaced. It does not
7	A. I beg your pardon?	7	necessarily mean that the switch will be
8	Q. Is the Capital Budget item that you've	8	replaced with a switch. We will replace it
9	submitted now based upon utilization of the	9	with whatever architecture is appropriate at
10	Passport protocol?	10	the time of tender. So whether we replace it
11	A. Yes.	11	with a switch or replace it with a distributor
12	Q. Does it say that anywhere?	12	architecture, that degree would not be defined
13	A. No, it does not.	13	until such time you evaluate your tenders.
14	Q. So the business case doesn't refer to the	14	Q. Okay. Just so I'm clear, I really do want to
15	Passport protocol?	15	understand what you're saying, Mr. Downton.
16	A. No, it does not.	16	So when you use the words here, replacement of
17	Q. And your consultant didn'tapparently didn't	17	a central switch, you mean taking out the
18	know about it at the time he did his report?	18	central switch and not putting one back?
19	A. Apparently didn't, no.	19	A. That could possibly be, depending on what the
20	Q. Okay. In B71, this item in the project	20	vendor proposals come back with.
21	description, in the third line, says that the	21	Q. No, what I'm asking is what you meant when
22	replacement existing systems involves	22	these words were put in.
23	replacing equipment at twenty-nine repeater	23	A. When those words were put in, the intent was
24	sites, as well as the replacement of the	24	that we have an existing system whereby the
25	central switch located in Gander	25	switch is obsolete and we have to replace that

25

switch is obsolete and we have to replace that

central switch located in Gander.

	Page 93		Page 94
1	switch with an infrastructure that provides	1	pages that are there, doesn't refer to the
2	the same functionality.	2	fact that there's not going to be or may not
3	Q. Your project description, in the	3	well be a central switch?
4	justification, refers to the business case	4	MR. DOWNTON:
5	analysis, correct?	5	A. Not for any particular reason. I guess, it's
6	MR. DUNPHY:	6	just that the proposal was to replace the
7	A. Yes.	7	existing system, and it will be replaced with
8	Q. Okay. And the business case analysis, at page	8	whatever technology will meet the functional
9	3, under Item 2.4, with the scope and major	9	requirements, and I guess, as part of the
10	deliverables, includes, in the first bullet,	10	costing since 2001, we did look at another
11	"a trunked MRS infrastructure, including, but	11	product called Passport product, and I guess,
12	not limited to, standards based switching	12	what I'dand in that regard, as much as we
13	equipment, site controller equipment and	13	
14	system management hardware and software."	14	
15	A. Yes.	15	• • • • • • • • • • • • • • • • • • • •
16	Q. So you're saying that the project described in	16	
17	B71 isn't intended to provide for a central	17	get there. The heading is "mobile system
18	switch, but the business case that you say	18	
19	supports it, talks about one of the major	19	
20	deliverables being switching equipment?	20	
21	A. Yes, switching equipment could consist of a	21	the best estimates at this stage, the writer
22	central switch or equally the distributed	22	_
23	architecture could be considered switching	23	
24	equipment. It performs the same function.	24	-
25	Q. Is there a reason why B71 or B72, the two	25	
1	Page 95		Page 96
1	Page 95 competition in the trunk radio market." And I	1	Page 96 A. Yes.
1 2	Page 95 competition in the trunk radio market." And I guess all the consultant is indicating here	1 2	A. Yes.
1	competition in the trunk radio market." And I guess all the consultant is indicating here		A. Yes. Q. Okay. Now these are not the cost estimates on
2	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio	2	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is
2 3	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies	2 3	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct?
2 3 4	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio	2 3 4	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct?A. That is correct. We basically still looked at
2 3 4 5	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender,	2 3 4 5	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct?A. That is correct. We basically still looked at those cost estimates and basically did a
2 3 4 5 6	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not	2 3 4 5 6	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct?A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we
2 3 4 5 6 7	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with	2 3 4 5 6 7	A. Yes.Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct?A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another
2 3 4 5 6 7 8	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life	2 3 4 5 6 7 8	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified.
2 3 4 5 6 7 8	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what	2 3 4 5 6 7 8 9	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology?
2 3 4 5 6 7 8 9	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are	2 3 4 5 6 7 8 9	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes.
2 3 4 5 6 7 8 9 10	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004	2 3 4 5 6 7 8 9 10	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost
2 3 4 5 6 7 8 9 10 11 12	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of	2 3 4 5 6 7 8 9 10 11 12	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a
2 3 4 5 6 7 8 9 10 11 12 13	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when	2 3 4 5 6 7 8 9 10 11 12 13	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5?
2 3 4 5 6 7 8 9 10 11 12 13 14	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost	2 3 4 5 6 7 8 9 10 11 12 13 14 15	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5?
2 3 4 5 6 7 8 9 10 11 12 13 14 15	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the	2 3 4 5 6 7 8 9 10 11 12 13 14 15	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our requirements and also met our present and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes. Q. I'd like an undertaking that it be produced.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our requirements and also met our present and future requirements as well, and offered us a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes. Q. I'd like an undertaking that it be produced. (UNDERTAKING) I take it that pricing was all
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our requirements and also met our present and future requirements as well, and offered us a very viable alternative.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes. Q. I'd like an undertaking that it be produced. (UNDERTAKING) I take it that pricing was all done in-house, was it?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our requirements and also met our present and future requirements as well, and offered us a very viable alternative. Q. At the time that the technical report was	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes. Q. I'd like an undertaking that it be produced. (UNDERTAKING) I take it that pricing was all done in-house, was it?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	competition in the trunk radio market." And I guess all the consultant is indicating here that the technologies in the trunk radio market are ever changing and what technologies existed at the time of writing may indeed not exist at such time when we go out for tender, and these are unfortunately the fact of life dealing with the technology areas, and with regards to replacing the system, again, we are proposing that the system be replaced and what the exact technology will look like in 2004 will be best evaluated at the time of evaluation of the tender responses. But when we get our pricing to put forward a cost estimate, we had to base it on something, and we felt that, at that point in time, the Passport product, based on our analysis, offered a functionality which met our requirements and also met our present and future requirements as well, and offered us a very viable alternative. Q. At the time that the technical report was prepared, you asked your consultant to come up	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 A. Yes. Q. Okay. Now these are not the cost estimates on which you're relying at the present time? Is that correct? A. That is correct. We basically still looked at those cost estimates and basically did a refresh on those, and I guess, what we did, we looked at a cost estimate for another technology that he had not identified. Q. That was the Passport technology? A. Yes. Q. Okay. So where is the breakdown for the cost with respect to the Passport technology in a form similar to that in Attachment 5? A. Do you want to speak to that, Gerard? MR. DUNPHY: A. We haven't submitted that. Q. Do you have it available? A. It has been done, yes. Q. I'd like an undertaking that it be produced. (UNDERTAKING) I take it that pricing was all done in-house, was it? A. Yes. (11:34 a.m.)

Page 97 1	July	9, 2005 Muli	1-га	ge	NL Hydro 2004 Capital Budget Application
2 A. It was done in consultation with our supplier. 3 Q. Yes, okay. So you say 'your supplier' 1 5 speaking of? 6 A. Yes. 7 Q. Okay. Do you know how many suppliers are in 8 the market that could respond to a proposal along the lines of the one you're thinking about? 1 A. No. I do not. 1 A. No. I do not. 1 Q. Okay. Do you know if there is more than one? 1 A. No. I do not. 1 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater site? Is that correct? 1 A. I nour preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain site on the Northern Peninsula, could be met by simply replacing the repeaters on the Northern Peninsula, could be met by simply replacing the repeaters on the Northern Peninsula, could be met by simply replacing the repeaters on the Northern Peninsula, could be met by simply replacing the repeater site? I shade and user radios have to be replaced. 2 Q. Pes. 3 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could be met by simply replacing the repeater son the Northern Peninsula, could be met by simply replacing the repeater son the Northern Peninsula, could be met by simply replacing the repeater son the Northern Peninsula, could be met by simply replacing the repeater son the Northern Peninsula, could be met by simply replacing the repeater son the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replacing the repeater on the Northern Peninsula, could be met by simply replac		Page 97	,		Page 98
3 O, Yes, okay. So you say 'your supplier'. I 5 speaking of? 6 A Yes. 7 O, Okay. Do you know how many suppliers are in the market that could respond to a proposal along the lines of the one you're thinking about? 11 A No, I do not. 12 O, Okay. Do you know if there is more than one? 13 A No, I do not. 14 O, Okay. Do you know if there is more than one? 15 A No, I do not. 16 the present time, you're still just looking at a single channel per repeater site? Is that correct? 18 A In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. 20 O, Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 15 Northern Peninsula, could you not? 16 A. Five replace the central switch, then you could accommodate multiple channels on the Software in the central switch and the site controllers - 18 O, Yes. 20 O, Okay. Do you know how many suppliers are in the market that could respond to a proposal along the repeaters on the Northern Peninsula, could you not? 21 A No. I do not. 22 O, Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater site? Is that the repeaters on the Northern Peninsula, could you not? 23 O, Okay. I take it that your desire to have multiple channels at certain sites on the Northern Peninsula, could you not? 24 Northern Peninsula, could you not? 25 Northern Peninsula, could you not? 26 A. Five replace the central switch, then you could accommodate multiple channels on the system. 27 A No. If wor preliminary estimates, we have assumed the system. 28 O, Yes. 39 O, But if you replace the central switch, then you could accommodate multiple channels on the controllers. 39 O, Yes. 30 O, But if you replace the central switch, then you could accommodate multiple channels on the controllers. 31 O, Thur's not what I understood was the answer	1	in doing that pricing?	1		Peninsula?
3 O, Yes, okay. So you say 'your supplier'. I take it that is one potential supplier you're speaking of? 6 A Yes. 7 O, Okay. Do you know how many suppliers are in the market that could respond to a proposal along the lines of the one you're thinking about? 11 A No, I do not. 12 O, Okay. Do you know if there is more than one? 13 A No, I do not. 14 A No, I do not. 15 A No, I do not. 16 the present time, you're still just looking at a single channel per repeater site? Is that correct? 18 A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. 20 O, Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 19 Preclude us from being able to expand the system. 20 O, But if you replace the central switch, then you could accommodate multiple channels on the controllers - work the case of the controllers with the central switch and the site controllers - work with an an also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch and continue on with the existing and ouser adios have to be replaced. 20 O, Chay. The outper with the central switch and the site of the case? 3 O, Distrif you replace the central switch and the site controllers - work and ouser adios which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios which based on our information, cannot. So what it basically means is that central switch is controllers and continue on with the existing switch and continue on with the existing system. Are you telling me now that that's not the case? 20 A Life where an	2	A. It was done in consultation with our supplier.	2 N	MR.	DOWNTON:
take it that is one potential supplier you're speaking of? 6 A Yes. 7 Q. Okay. Do you know how many suppliers are in the market that could respond to a proposal along the lines of the one you're thinking about? 10 A No, I do not. 12 Q. Okay. Do you know if there is more than one? 13 A No, I do not. 14 Q. Okay. So whatever system you do go for, at 15 the present time, you're still just looking at 16 a single channel per repeater site? Is that 17 correct? 18 A In our preliminary estimates, we have assumed 19 that there will be, if I recall correctly, 20 there will be multiple channels at certain 21 sites on the Northern Peninsula, 22 Q. Okay. I take it that your desire to have 23 multiple channels at particular sites on the 24 Northern Peninsula could be met by simply 25 replacing the repeater so n the Northern 26 preclude us from being able to expand the 27 system. 28 Q. Fus. 29 A - then you could accommodate multiple channels on the 30 Sut if you replace the central switch, then 41 you could accommodate multiple channels on the 52 Northern Peninsula, could you nor? 53 A No, Mr. Downton? 54 NR. DOWNTON: 55 A ARre you referring to the current system.? 56 Q. That's sone has even the sure of the current system. 56 NR. DOWNTON: 57 A. No. Mr. Downton? 58 NR. DOWNTON: 59 A I basically said no. 60 Q. Yes, I asked you why not. 61 A. Whon, because the repeaters have to be interfaced to a site controller asite controller asite one-those parts are no 61 to a correct? 61 C. The current system. 62 Q. Nes., I asked you why not. 63 NR. DOWNTON: 64 A. I do not. 65 NR. DOWNTON: 65 NR. DOWnton? 65 NR. Down	3	Q. Yes, okay. So you say 'your supplier'. I	3	A.	No.
5 speaking of? 6 A. Yes. 7 (O. Oxay. Do you know how many suppliers are in the market that could respond to a proposal alour? 11 A. No, I do not. 12 (O. Oxay. Do you know if there is more than one? 13 A. No, I do not. 14 (O. Oxay. Do you know if there is more than one? 15 A. No, I do not. 16 (O. Oxay. Do you know if there is more than one? 17 (O. Oxay. Do you know if there is more than one? 18 A. No, I do not. 19 (O. Oxay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater site? Is that course that there will be, if I recall correctly. 18 A. In our preliminary estimates, we have assumed that there will be, if I recall correctly. 19 there will be multiple channels a certain sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 20 Page 99 21 preclude us from being able to expand the system. 22 Q. Oxay. To you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 23 A. The you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 24 controllers - 25 Q. Oxay. So whatever system you do go for, at the transcript will the well provided that the reward time, you're still just looking at a single channel so replaced to a secondate an additional repeater and that so that stee problem with the central switch and was the analysis of the expanded due to no manufacturer support. 26 A. If we replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 27 A. No. If the creating the repeaters on the Northern Peninsula, could you not? 28 A. The you replace the central switch and the site controllers. 29 A. Then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically and the clear impression that you could replace the central switch would work with	4		4 N	MR.	DUNPHY:
7 Q. Okay. Do you know how many suppliers are in the market that could respond to a proposal along the lines of the one you're thinking about? 1 A. No, I do not. 2 Q. Okay. Do you know if there is more than one? 3 A. No, I do not. 4 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater site? I sthat correct? 3 A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. 2 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 3 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula. could you not? 4 A. Thous face you why not. 4 Why not, because the repeaters have to be interfaced to a site controller manufactured by ATI and there's no-those parts are no learn the central switch would also have to be upgraded to accommodate an additional repeater and that basically capability is not there. So the system, as it exists right now, cannot be expanded due to no manufacture support. 2 Q. Okay. All take it that your desire to have multiple channels at particular sites on the Northern Peninsula. could you not? 4 Page 99 1 preclude us from being able to expand the site controllers - 5 Q. Wes. 5 Q. Wes. 6 Q. Wes. 7 Q. Ves. 8 Q. Ves. 9 A then you could do that, assuming that the technology that you put in can also support the existing fifteen-year-old radios, that would have to be determined. 9 Q. Ves. 10 Q. Okay. Tand there's no-those parts are no leave dove. Such and there will be site or central switch, the central switch, the central switch and continue on with the existing and end user radios have to be replaced. 10 Q. That's no-those parts are no leave the repeater form Motorola and interface it to the existing site controller, so what we residue to	5		5	A.	Are you referring to the current system?
7 Q. Okay. Do you know how many suppliers are in the market that could respond to a proposal along the lines of the one you're thinking about? 10 A. No. I do not. 11 A. No. I do not. 12 Q. Okay. Do you know if there is more than one? 13 A. No. I do not. 14 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeaters is? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater to still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater sic? I sthat the present time, you're still just looking at a single channel per repeater to st. All the problem with the central switch the under the problem with the central switch in the central switch in the problem with the c	6	* *	6		•
along the lines of the one you're thinking about? A. No, I do not. O. Okay. Do you know if there is more than one? A. No, I do not. O. Okay. So whatever system you do go for, at the present time, you're still just looking at a sigle channel per repeater site? Is that correct? A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. O. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 preclude us from being able to expand the system. O. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - so what we have the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically ameans is that central switch hased on our information, cannot. So what it basically in means is that central switch, shased on our given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the thereshology that you ould replace the central switch and continue on with the existing on the case? A. I didn'twhat I basically,-in speaking to the Passport product, basically and Mr. Dunphy 12 and distributers. We contacted Tait who	7	Q. Okay. Do you know how many suppliers are in	7		
along the lines of the one you're thinking about? A. No, I do not. O. Okay. Do you know if there is more than one? A. No, I do not. O. Okay. So whatever system you do go for, at the present time, you're still just looking at a sigle channel per repeater site? Is that correct? A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. O. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 preclude us from being able to expand the system. O. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - so what we have the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically ameans is that central switch hased on our information, cannot. So what it basically in means is that central switch, shased on our given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the thereshology that you ould replace the central switch and continue on with the existing on the case? A. I didn'twhat I basically,-in speaking to the Passport product, basically and Mr. Dunphy 12 and distributers. We contacted Tait who	8	the market that could respond to a proposal	8 N	MR.	DOWNTON:
about? 1 A. No, I do not. 1 Q. Okay. Do you know if there is more than one? 2 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel server. 3 A. No, I do not. 4 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel server. 4 A. In our preliminary estimates, we have assumed that there will be multiple channels at certain sites on the Northern Peninsula. 2 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 2 preclude us from being able to expand the system. 3 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 4 A. then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically in the existing given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I ladestood was the answer impression that you could replace the central switch dear impression that you could replace the central switch existing site controllers and end user radios have to be replaced. 4 A. In understood was the answer in the central switch and the site of the case? 5 Q. Yes. 5 Q. That's not what I understood was the answer impression that you could replace the central switch and continue on with the existing impression that you could replace the central switch and continue on with the existing impression that you could replace the central switch and continue on with the existing impression that you could replace the central switch would also have to be determined. 5 Q. That's not what I understood was the answer impression that you could replace the central switch and continue on with the existing impression that you could replace the central switch and continue on with the exis	9		9	A.	I basically said no.
2 O.	10	about?	10	Q.	Yes, I asked you why not.
2 O.	11	A. No, I do not.	11	A.	Why not, because the repeaters have to be
14 Q. Okay. So whatever system you do go for, at the present time, you're still just looking at a single channel per repeater site? Is that correct? 18 A. In our preliminary estimates, we have assumed that there will be multiple channels at certain sites on the Northern Peninsula. 20 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 21 System. 22 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 23 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 24 A. I five replace the central switch and on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. 25 That is not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could deplace the central switch and continue on with the existing and minerface it to the existing site controller, yes. 26 A. I didn'twhat I basically, and Mr. Dunphy 18 A. In our preliminary estimates, we have assumed to accommodate an additional repeater and that to accommedate and tito accommedate and distonact to accommedate and distonact to accommedate and distonact bot accommodate an additional repeater and that basically and Mr. Dunphy 19 Expanded due to no manufacturer support. 20 A. I didn't what i your desire to have expanded due to no manufacture switch, the central switch, the central switch, the central switch, the central switch typically comes with an intelligent site controller. So what we're saying is that both of those technology issues 21 Passport product, it will not support the existing fifteen-year-old radios, that would have to be determined	12	Q. Okay. Do you know if there is more than one?	12		
the present time, you're still just looking at a single channel per repeater site? Is that correct? A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, that there will be, if I recall correctly, that there will be, if I recall correctly, that there will be mittiple channels at certain sites on the Northern Peninsula. 20. O. O. O. O. A. O. Take it that your desire to have multiple channels at particular sites on the northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replaced us from being able to expand the system. Page 99 Page 99 Page 90 Page 100 Passport product, it will not support the end user devices. Q. No, I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. Ves. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not there are the properties of the case? A. I didn'twhat I basically, and Mr. Dunphy basically capability is not three. So the saxistic exists right now, cannot be expanded due to no manufacturer switch and control the case it problem with the central switch the controller. So what we're saying is that both of those technology could suser devices. Q. No	13	A. No, I do not.	13		by ATI and there's nothose parts are no
a single channel per repeater site? Is that correct? A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula could be met by simply replacing the repeaters on the Northern peninsula. Page 99 1	14	Q. Okay. So whatever system you do go for, at	14		longer available and the software in the
17 correct? 18 A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, 19 there will be multiple channels at certain 20 there will be multiple channels at certain 21 sites on the Northern Peninsula. 22 Q. Okay. I take it that your desire to have 22 multiple channels at particular sites on the Northern Peninsula could be met by simply 24 mountiple channels at particular sites on the Northern Peninsula could be met by simply 25 replacing the repeaters on the Northern 26 saystem. 28 Q. But if you replace the central switch, then 29 you could accommodate multiple channels on the 30 Northern Peninsula, could you not? 30 A. If we replace the central switch and the site 40 technology that you put in can also support 41 the existing radios, which, based on our 42 information, cannot. So what it basically 43 means is that central switch and continue on with the existing 51 the transcript, but I was left with the clear 44 impression that you could replace the central switch that 25 yes mot the case? 45 A. In our preliminary, cannot be expanded due to no manufacturer support. 40 A. All that's the problem with the central switch typically comes with an anyway, isn't it? 20 A. And tha's the problem with the central switch, the 21 anyway, isn't it? 22 A. Well, when we talk about central switch, the 22 anyway, isn't it? 23 A. In our preliminary estimates, can the 23 anyway, isn't it? 24 A. Well, when we talk about central switch, the 24 anyway, isn't it? 25 A. In due to no manufacturer support. 26 A. Well, when we talk about central switch, the 25 anyway, isn't it? 27 A. Well, when we talk about central switch typically comes with an intelligent site controller. So what w're saying is that both of those technology issues 24 anyway, isn't it? 28 A. In our prelimical cut on with the cextant switch typically ownes with an intelligent site controller. So what w're 24 anyway, isn't it? 29 A. I diam'tender on the Morthern Peninsula, could you not? 20 A. If use of the existing fifteen-ye	15	the present time, you're still just looking at	15		central switch would also have to be upgraded
A. In our preliminary estimates, we have assumed that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. 20 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern 23 Northern Peninsula could be met by simply replacing the repeaters on the Northern 24 Northern Peninsula could be met by simply replacing the repeaters on the Northern 25 Page 99 1 Page 99 1 Passport product, it will not support the end suser devices. 3 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 6 A. If we replace the central switch and the site controllers - 8 Q. Yes. 9 A then you could do that, assuming that the texhology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically man and end user radios have to be replaced. 9 C. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basically-in speaking to the Passport product, basically, and Mr. Dunphy 18 Mell, when we talk about central switch, the central switch the central switc	16	a single channel per repeater site? Is that	16		to accommodate an additional repeater and that
that there will be, if I recall correctly, there will be multiple channels at certain sites on the Northern Peninsula. 2 Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 preclude us from being able to expand the system. 3 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 4 A. If we replace the central switch and the site controllers - Q. Ves. 9 A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our lift information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I'din'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 19 expanded due to no manufacturer switch anyway, isn't it? A. Well, when we talk about central switch, the central switch typically comes with an intelligent site controller. So what we're saying is that both of those technology is the user devices. Q. No, I understand that. 4 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 4 D. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 10 the case of the case of the central switch site controllers and end user radios h	17	correct?	17		basically capability is not there. So the
there will be multiple channels at certain sites on the Northern Peninsula. Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 Page 99 Page 100 Page 99 Page 100 Page 99 Page 100 Page 99 Page 100 Pa	18	A. In our preliminary estimates, we have assumed	18		system, as it exists right now, cannot be
sites on the Northern Peninsula. Q. Okay. I take it that your desire to have multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 preclude us from being able to expand the system. Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our the existing radios, which, based on our the existing radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basically, and Mr. Dunphy and interface it to the existing site controllers. A. Well, when we talk about central switch, the central switch typically comes with an intelligent site controller. So what we're saying is that both of those technology issues Page 100 Passport product, it will not support the end user devices. Q. No. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. A. If we loat at the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing end user devices? A. Yes. A. Yes. A. Yes. A. Yes. A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy	19	that there will be, if I recall correctly,	19		expanded due to no manufacturer support.
22 Q. Okay. I take it that your desire to have 23 multiple channels at particular sites on the 24 Northern Peninsula could be met by simply 25 replacing the repeaters on the Northern 26 Page 99 1 preclude us from being able to expand the 2 system. 27 Q. But if you replace the central switch, then 28 you could accommodate multiple channels on the 29 Northern Peninsula, could you not? 20 A. If we replace the central switch and the site 20 Yes. 21 Q. Yes. 22 A. Well, when we talk about central switch, the 23 central switch typically comes with an 24 intelligent site controller. So what we're 25 saying is that both of those technology issues 26 Page 99 27 Page 100 28 Passport product, it will not support the end 29 user devices. 30 Q. No. I understand that. 41 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 42 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 43 A. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 43 A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. 44 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 45 Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 45 In the transcript, but I was left with the clear in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. 46 A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing en	20	there will be multiple channels at certain	20	Q.	And that's the problem with the central switch
multiple channels at particular sites on the Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 reclude us from being able to expand the system. Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. A then you could do that, assuming that the information, cannot. So what it basically means is that central switch and to the repeated. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the the transcript, but I was left with the clear impression that you could replace the central switch typically comes with an intelligent site controller. So what we're saying is that both of those technology is that both of those technology is saying is that both of t	21	sites on the Northern Peninsula.	21		anyway, isn't it?
24 Northern Peninsula could be met by simply replacing the repeaters on the Northern Page 99 1 preclude us from being able to expand the system. 2 Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? 4 A. I we replace the central switch and the site controllers - Q. Yes. 9 A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. 15 Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the tetranscript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? 24 intelligent site controller. So what we're saying is that both of those technology is auses Page 99 1 Passport product, it will not support the end user devices. Q. No, I understand that. 4 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 7 Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we look a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we look a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we look a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we look a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we look a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing end user devices? Q. Yes, okay. So asid	22	Q. Okay. I take it that your desire to have	22	A.	Well, when we talk about central switch, the
Page 99 1 preclude us from being able to expand the system. 2 Q. But if you replace the central switch, then you could accommodate multiple channels on the Controllers Q. Yes. 2 Q. Yes. 3 Q. Fresting radios, which, based on our life existing radios, which, based on our life existing radios have to be replaced. 4 Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the switch and continue on with the existing impression that you could replace the central switch the Northern Peninsula, could you not? 4 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 5 Northern Peninsula, could you not? 5 support the existing fifteen-year-old radios, that would have to be determined. 6 Q. Yes. 7 Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 10 the existing radios, which, based on our life the existing radios have to be replaced. 11 Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing 20 yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? 12 MR. DUNPHY: 13 A. I didn'twhat I basically, and Mr. Dunphy 14 Day and Mr. Dunphy 15 Passport product, basically, and Mr. Dunphy 16 Passport product, it will not support the educes. 17 Passport product, it will not support the educes. 2 Q. No, I understand that. 2 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 2 A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing end user devices? 2 MR. DUNPHY: 2 A. I didn'twhat	23	multiple channels at particular sites on the	23		central switch typically comes with an
Page 99 1 preclude us from being able to expand the system. 2 Q. But if you replace the central switch, then 4 you could accommodate multiple channels on the 5 Northern Peninsula, could you not? 6 A. If we replace the central switch and the site 6 that would have to be determined. 7 controllers - 7 Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 10 the existing radios, which, based on our 11 information, cannot. So what it basically 12 information, cannot. So what it basically 13 means is that central switch site controllers 14 and end user radios have to be replaced. 15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the other day. I'm looking for the reference in 17 the transcript, but I was left with the clear 18 the transcript, but I was left with the existing 21 system. Are you telling me now that that's 12 not the case? 22 MR. DUNPHY: 24 A. I didn'twhat I basically, and Mr. Dunphy 24 and distributers. We contacted Tait who	24	Northern Peninsula could be met by simply	24		intelligent site controller. So what we're
preclude us from being able to expand the system. Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. Q. Yes. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our the existing radios, which, based on our and end user radios have to be replaced. That's not what I understood was the answer given to Mr. Alteen in his questioning the the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. In you replace the central switch, then you could accommodate multiple channels on the A. I guess whether another technology could A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understood that the repeaters, if they were found to be a problem, could be replaced rom a different vendor and you would still have a compatible system? A.	25	replacing the repeaters on the Northern	25		saying is that both of those technology issues
preclude us from being able to expand the system. Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. Q. Yes. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our the existing radios, which, based on our and end user radios have to be replaced. That's not what I understood was the answer given to Mr. Alteen in his questioning the the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. In you replace the central switch, then you could accommodate multiple channels on the A. I guess whether another technology could A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understand that. A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understood that the repeaters, if they were found to be a problem, could be replaced rom a different vendor and you would still have a compatible system? A.		Page 99)		Page 100
2 user devices. 3 Q. But if you replace the central switch, then 4 you could accommodate multiple channels on the 5 Northern Peninsula, could you not? 6 A. If we replace the central switch and the site 7 controllers - 8 Q. Yes. 9 A then you could do that, assuming that the 10 technology that you put in can also support 11 the existing radios, which, based on our 12 information, cannot. So what it basically 13 means is that central switch site controllers 14 and end user radios have to be replaced. 15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the 17 other day. I'm looking for the reference in 18 the transcript, but I was left with the clear 19 impression that you could replace the central 20 switch and continue on with the existing 21 system. Are you telling me now that that's 22 not the case? 24 MR. DUNPHY: 25 A. I didn'twhat I basically, and Mr. Dunphy 26 user devices. 3 Q. No, I understand that. 4 A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. 6 Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? 10 compatible system? 11 A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. 16 Q. Okay. And it would work with your existing end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? 2 MR. DUNPHY: 2 MR. DUNPHY: 2 A. I didn'twhat I basically, and Mr. Dunphy	1	•			2
Q. But if you replace the central switch, then you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing the transcript, but I was left with the clear switch and continue on with the existing system. Are you telling me now that that's not the case? A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. Q. Okay. And it would work with your existing end user devices? A. Yes. Q. Yes, A. Yes. Yes, A. Yes. Yes, A. Yes, A. Yes. A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy	2		2		
you could accommodate multiple channels on the Northern Peninsula, could you not? A. If we replace the central switch and the site controllers - Q. Yes. A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I guess whether another technology could support the existing fifteen-year-old radios, that would have to be determined. Q. I understood that the repeaters, if they were found to be a problem, could be replaced from a different vendor and you would still have a compatible system? In A. If we lost a repeater now, basically if we had to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. Q. Okay. And it would work with your existing end user devices? A. Yes. Yes, Q. Yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? MR. DUNPHY: A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy	3	Q. But if you replace the central switch, then	3	Q.	No, I understand that.
6 A. If we replace the central switch and the site 7 controllers - 8 Q. Yes. 9 A then you could do that, assuming that the 10 technology that you put in can also support 11 the existing radios, which, based on our 12 information, cannot. So what it basically 13 means is that central switch site controllers 14 and end user radios have to be replaced. 15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the 17 other day. I'm looking for the reference in 18 the transcript, but I was left with the clear 19 impression that you could replace the central 20 switch and continue on with the existing 21 system. Are you telling me now that that's 22 not the case? 23 A. I didn'twhat I basically, and Mr. Dunphy 16 that would have to be determined. 7 Q. I understood that the repeaters, if they were 6 found to be a problem, could be replaced from 9 a different vendor and you would still have a 10 compatible system? 11 A. If we lost a repeater now, basically if we had 12 to replace a repeater at St. Anthony hilltop, 13 we could buy another repeater from Motorola 14 and interface it to the existing site 15 controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	4		4	A.	I guess whether another technology could
7 Controllers - 8 Q. Yes. 9 A then you could do that, assuming that the 10 technology that you put in can also support 11 the existing radios, which, based on our 12 information, cannot. So what it basically 13 means is that central switch site controllers 14 and end user radios have to be replaced. 15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the 17 other day. I'm looking for the reference in 18 the transcript, but I was left with the clear 19 impression that you could replace the central 20 switch and continue on with the existing 21 system. Are you telling me now that that's 22 not the case? 23 A. I didn'twhat I basically, and Mr. Dunphy 24 a different vendor and you would still have a 26 compatible system? 27 A. I understood that the repeaters, if they were 28 found to be a problem, could be replaced from 29 a different vendor and you would still have a 20 compatible system? 21 A. If we lost a repeater now, basically if we had 21 to replace a repeater at St. Anthony hilltop, 22 we could buy another repeater from Motorola 23 and interface it to the existing site 24 Controller, yes. 25 A. Yes. 26 Q. Okay. And it would work with your existing 26 end user devices? 27 MR. DUNPHY: 28 A. I didn'twhat I basicallyin speaking to the 29 Passport product, basically, and Mr. Dunphy 3 different vendor and you would still have a 4 different vendor and you would still have a 5 different vendor and you would still have a 5 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 different vendor and you would still have a 6 diff	5	Northern Peninsula, could you not?	5		support the existing fifteen-year-old radios,
8 Q. Yes. 9 A then you could do that, assuming that the 10 technology that you put in can also support 11 the existing radios, which, based on our 12 information, cannot. So what it basically 13 means is that central switch site controllers 14 and end user radios have to be replaced. 15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the 17 other day. I'm looking for the reference in 18 the transcript, but I was left with the clear 19 impression that you could replace the central 20 switch and continue on with the existing 21 system. Are you telling me now that that's 22 not the case? 23 A. I didn'twhat I basically, and Mr. Dunphy 8 found to be a problem, could be replaced from 9 a different vendor and you would still have a 10 compatible system? 11 A. If we lost a repeater now, basically if we had 12 to replace a repeater at St. Anthony hilltop, 13 we could buy another repeater from Motorola 14 and interface it to the existing site 15 controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy	6	A. If we replace the central switch and the site	6		that would have to be determined.
A then you could do that, assuming that the technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basically, and Mr. Dunphy a different vendor and you would still have a compatible system? 11 A. If we lost a repeater now, basically if we had 12 to replace a repeater at St. Anthony hilltop, 13 we could buy another repeater from Motorola 14 and interface it to the existing site 15 controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 24 and distributers. We contacted Tait who	7	controllers -	7	Q.	I understood that the repeaters, if they were
technology that you put in can also support the existing radios, which, based on our information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. Output That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 10 compatible system? 11 A. If we lost a repeater now, basically if we had 12 to replace a repeater at St. Anthony hilltop, 13 we could buy another repeater from Motorola 14 and interface it to the existing site 15 controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 25 Dunphy 26 Compatible system? 27 A. I didn'twhat I basically and Mr. Dunphy 27 A. I didn'twhat I basicallyin speaking to the 28 A. I didn'twhat I basicallyin speaking to the 29 A. I didn'twhat I basicallyin speaking to the 20 A. I didn'twhat I basicallyin speaking to the 21 A. In 2001, we contacted several manufacturers 22 A. In 2001, we contacted Tait who	8	Q. Yes.	8		found to be a problem, could be replaced from
the existing radios, which, based on our information, cannot. So what it basically it be replaced a repeater now, basically if we had it to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. 15	9	A then you could do that, assuming that the	9		a different vendor and you would still have a
information, cannot. So what it basically means is that central switch site controllers and end user radios have to be replaced. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 12 to replace a repeater at St. Anthony hilltop, we could buy another repeater from Motorola and interface it to the existing site controller, yes. 16 Q. Okay. And it would work with your existing rend user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 Passport product, basically, and Mr. Dunphy	10	technology that you put in can also support	10		compatible system?
means is that central switch site controllers and end user radios have to be replaced. 15 Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? 13 we could buy another repeater from Motorola and interface it to the existing site controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 24 A. In 2001, we contacted several manufacturers 25 and distributers. We contacted Tait who	11	the existing radios, which, based on our	11	A.	If we lost a repeater now, basically if we had
and end user radios have to be replaced. Q. That's not what I understood was the answer given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 14 and interface it to the existing site controller, yes. 15 Q. Okay. And it would work with your existing end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? 20 MR. DUNPHY: 21 A. In 2001, we contacted several manufacturers and distributers. We contacted Tait who	12	information, cannot. So what it basically	12		to replace a repeater at St. Anthony hilltop,
15 Q. That's not what I understood was the answer 16 given to Mr. Alteen in his questioning the 17 other day. I'm looking for the reference in 18 the transcript, but I was left with the clear 19 impression that you could replace the central 20 switch and continue on with the existing 21 system. Are you telling me now that that's 22 not the case? 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 25 controller, yes. 16 Q. Okay. And it would work with your existing 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	13	means is that central switch site controllers	13		we could buy another repeater from Motorola
given to Mr. Alteen in his questioning the other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 16 Q. Okay. And it would work with your existing end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	14	and end user radios have to be replaced.	14		and interface it to the existing site
other day. I'm looking for the reference in the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 17 end user devices? 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any 21 other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	15	Q. That's not what I understood was the answer	15		controller, yes.
the transcript, but I was left with the clear impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 18 A. Yes. 19 Q. Yes, okay. So aside from Passport and the 20 racks system of Zetron, have you looked at any other alternatives? 21 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	16	given to Mr. Alteen in his questioning the	16	Q.	Okay. And it would work with your existing
impression that you could replace the central switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 20 Yes, okay. So aside from Passport and the racks system of Zetron, have you looked at any other alternatives? 21 Other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	17	other day. I'm looking for the reference in	17		end user devices?
switch and continue on with the existing system. Are you telling me now that that's not the case? A. I didn'twhat I basicallyin speaking to the Passport product, basically, and Mr. Dunphy 20 racks system of Zetron, have you looked at any other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	18	the transcript, but I was left with the clear	18	A.	Yes.
21 system. Are you telling me now that that's 22 not the case? 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 21 other alternatives? 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	19	impression that you could replace the central	19	Q.	Yes, okay. So aside from Passport and the
not the case? 22 MR. DUNPHY: 23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 22 MR. DUNPHY: 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	20	switch and continue on with the existing	20		racks system of Zetron, have you looked at any
23 A. I didn'twhat I basicallyin speaking to the 24 Passport product, basically, and Mr. Dunphy 23 A. In 2001, we contacted several manufacturers 24 and distributers. We contacted Tait who	21	system. Are you telling me now that that's	21		other alternatives?
Passport product, basically, and Mr. Dunphy 24 and distributers. We contacted Tait who	22	not the case?	22 N	MR.	DUNPHY:
	23	· · · · · · · · · · · · · · · · · · ·	23	A.	
25 reiterated that, with implementation of the 25 supplies -	24		24		
	25	reiterated that, with implementation of the	25		supplies -

July	7 9, 2005 William	i-rag	e NL nyaro 2004 Capitai Buaget Application
	Page 101		Page 102
1	Q. Tait, you say?	1	Q. Okay. Now, just coming back to Schedule 1,
2	A. Tait, T-A-I-T, they supply an MPT 1327 system.	2	page 1 of 2 of the supplementary evidence for
3	We also spoke with Motorola with respect to	3	a moment. The first note here says that the
4	their smart zone and Comnet Erricsson with	4	trunked radio system estimate based on figures
5	respect to their EDACS. And I think as Mr.	5	used in the Capital Budget proposal and it
6	Downton has already pointed out, those were	6	says, same functionality as present system.
7	quickly eliminated because of the cost of the	7	If I'm understanding your answers correctly,
8	systems because they're public safety systems	8	the figures usedwhen you refer to figures
9	and higher cost as a result.	9	used in the Capital Budget proposal, you're
10	Q. So, these are the systems that are mentioned	10	talking about a system using a Passport
11	in the technical report?	11	protocol, is that correct?
12	A. Yes, those are two of the systems. We	12	A. Well, the estimate was confirmed using
13	attempted to contact ER Johnson with respect	13	Passport, so you could infer that, yes.
14	to their LTR system and were unsuccessful.	14	Q. Well, where did the estimate come from
15	And I believe Mr. Cook pointed out that Tetra	15	originally then?
16	was only available in the UHF bands, so that	16	A. Well, the original estimate, I would guess, in
17	was excluded for the reason.	17	2001 was the one we used from Mr. Cook's
18	Q. Did you approach anyone with another similar	18	report. We subsequently confirmed that that
19	protocol to Passport other than the Racks	19	was an acceptable estimate for a Passport
20	people?	20	system.
21	A. No, not aware of anyone with a similar	21	Q. Okay. The language you used in speaking to
22	protocol. As I said, we did approach EF	22	Mr. Alteen about that was that it was an order
23	Johnson about their LTR net which I understand	23	of magnitude estimate, is that correct?
24	is somewhat similar to Passport, but were	24	A. Yes.
25	unsuccessful in getting a response from them.	25	Q. What does order of magnitude mean to you?
	Page 103		Page 104
1	A. Well, in a strict mathematical sense, I	1	Aliant on existing system.
2	believe it refers to a power of 10.	2	Q. They do do the maintenance though on -
3	Q. Yes.	3	A. They do maintenance, but it's on time and
4	A. But in my interpretation it refers to an	4	materials basis only.
5	estimate that is reasonable within an	5	Q. Okay. And are these numbers, that you've
6	acceptable percentage.	6	shown for the \$569.000.00 consistent with what
7 N	MR. DOWNTON:	7	you're paying Aliant now?
8	A. An acceptable percentage we use for our	8	A. The cost that we pay Aliant now are broken
9	Capital Budgets is plus or minus 10 percent.	9	down into two pieces, or a couple of pieces
10	Q. So, that's something different than the	10	and those are actual trunking costs. Our
11	ordinary meaning of the words order of	11	facilities to connect repeaters and also site
12	magnitude.	12	and accommodation charges and those are the
	MR. DUNPHY:	13	two primary areas there because any actual
14	A. The strict mathematical definition, yes.	14	maintenance costs would be common across the
15	Q. Okay.	15	two sets of infrastructure from actual
1	MR. DOWNTON:	16	maintenance perspective, so. And Mr. Dunphy,
17	A. But when we prepare our Capital Budgets, we	17	you can correct me if I'm wrong, but my
18	prepare it to that plus or minus 10 percent.	18	understanding of what's in O&M is the
19	Q. The operation and maintenance cost shown on	19	interfacilities trunking charges to connect
20	Schedule 1, page 1 of 2, said, are assumed to	20	these repeaters to a network and also what we
21	be fixed for a 15 year contract with a third	21	call site and accommodation charges that we
22	party supplier. Am I correct in understanding	22	would typically pay Aliant to have our
23	that you have such a contract with Aliant at	23	equipment at their site, is that correct?
24	this point?	24 3 5	IR. DUNPHY:

A. I believe in this estimate actually, when the

25

A. Basically no, there's no "contract" with

	7,200	Tuge 1(L Hydro 2001 Capital Bauget Tipplicati	
	Page 105	Page 1	106
1	individual did this, the common costs for	and space and trunking facility charges.	
2	accommodations were probably not included and	2 Q. So, what you're telling me is on Schedule 2	
3	was just concentrated on the facility costs.	under the 14 Hydro owned sites O&M costs,	
4	Q. When you say common costs for accommodations,	4 there are no tower power and space costs?	
5	you mean, basically rental of space?	5 A. I believe that's correct, I'd have to confirm	
6	A. What's referred to as tower power and space.	6 that, but I believe it's correct.	
7	Q. Okay. Now, just before you leave that answer,	7 Q. And under five Hydro owned sites there are	
8	if you look at Schedule 2, page 1 of 2, the	8 tower power and space costs for -	
9	O&M costs for the alternative with 14 Hydro	9 A. For the nine sites in addition tofor the	
10	owned sites are given the same number as the	nine sites which represent the difference	
11	O&M costs for the trunked radio system on	between the 14 and 5.	
12	Schedule 1.	Q. When you're trying to compare the cost of	
13	A. Yes.	moving from one to another, is there a reason	
14	Q. Are you telling me that the Schedule 2 costs	why you leave out those costs in one the -	
15	don't include the accommodation costs either?	15 A. I believe common costs can be left out and not	
16	A. Just looking at the number, I don't believe	affect the analysis.	
17	they do, no.	Q. So, the five Hydro owned sites has tower power	
18	Q. Isn't that what Schedule 2 is supposed to be	and space for nine sites.	
19	doing a comparison of?	19 A. Yes.	
20	A. Schedule 2, if you look at the O&M costs, the	20 Q. And the 14 Hydro owned sites doesn't have	
21	additional O&M costs reflects the additional	tower power and space for any?	
22	leasing charges if we did not move to those 9	22 A. it doesn't have tower power and space for any,	
23	Hydro owned sites. So, it would include a	23 no.	
24	component for the nine sites. It would	Q. All right. Let's get back to where we were.	
25	include a component consisting of tower power	On Schedule 1, the O&M costs then don't have	
	Page 107	Page 1	108
1		1 Q. Yes, okay.	
1 2	tower power and space costs, so all that's in	1 Q. Yes, okay. 2 (11:49 a.m.)	
		T	
2	tower power and space costs, so all that's in there is the trunking costs?	2 (11:49 a.m.)	
2 3	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes.	2 (11:49 a.m.) 3 MR. DOWNTON:	
2 3 4	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs?	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to	
2 3 4 5	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common 	
2 3 4 5 6	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs.	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 	
2 3 4 5 6 7	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 	
2 3 4 5 6 7 8	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it?	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are 	
2 3 4 5 6 7 8	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes.	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are 9 assumed to be identical. 	
2 3 4 5 6 7 8 9	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system)
2 3 4 5 6 7 8 9 10	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years,)
2 3 4 5 6 7 8 9 10 11	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007,)
2 3 4 5 6 7 8 9 10 11 12	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs?)
2 3 4 5 6 7 8 9 10 11 12 13 14	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that)
2 3 4 5 6 7 8 9 10 11 12 13 14 15	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract.	 2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes.	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A. 3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show up here at all?	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering and labour costs as well as the associated)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show up here at all? A. If you are referring to maintenance of the system - Q. Yes.	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering and labour costs as well as the associated overheads. 20 Q. The total capital cost under the trunked radio system with repeater replacement over five)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show up here at all? A. If you are referring to maintenance of the system - Q. Yes. A then I believe that costs does not appear	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering and labour costs as well as the associated overheads. 20 Q. The total capital cost under the trunked radio system with repeater replacement over five years according to my calculations, 9.228)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show up here at all? A. If you are referring to maintenance of the system - Q. Yes. A then I believe that costs does not appear there. However, leasing costs certainly fall	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering and labour costs as well as the associated overheads. 20 Q. The total capital cost under the trunked radio system with repeater replacement over five years according to my calculations, 9.228 million?)
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	tower power and space costs, so all that's in there is the trunking costs? A. I believe that is true, yes. Q. And it doesn't include your maintenance costs? A. It doesn't include internal maintenance, no it doesn't include maintenance costs. Q. Okay. I mean, the maintenance is done a time basis by Aliant, isn't it? A. On the current system, yes. Q. Okay. So, your note that says operations and maintenance costs are assumed to be fixed for a 15 year contract with a third party supplier. All that really is, is trunking costs are assumed to be fixed for a 15 year contract. A. I believe so, yes. Q. And operation and maintenance costs don't show up here at all? A. If you are referring to maintenance of the system - Q. Yes. A then I believe that costs does not appear	2 (11:49 a.m.) 3 MR. DOWNTON: 4 A. But the maintenance costs would be common to both units as well, so really there are common costs. 7 MR. DUNPHY: 8 A3, I guess, states that maintenance costs are assumed to be identical. 10 Q. Okay. Under the heading, trunked radio system with repeater replacement after five years, where do you come up with the number of 2007, 2008 and 2009 for capital costs? 14 A. Our engineers did an estimate assuming that that was a separate project. So, they did an estimate for the normal things that they would estimate, the materials costs, the engineering and labour costs as well as the associated overheads. 20 Q. The total capital cost under the trunked radio system with repeater replacement over five years according to my calculations, 9.228)

	Page 109		Page 110
1	presentation are just 8.85 million?	1	testing and commissioning.
2	A. Yes.	2	Q. So, what you're doing is to visit all the
3	Q. Can you explain to me how it is that it costs	3	sites anyway in 2004.
4	an extra \$400,000.00 to defer this expenditure	4	A. Yes.
5	to 2007?	5	Q. The 2005 capital cost doesn't change, what's
6	A. Well, when the costs for the repeaters were	6	included in that 5.8 million?
7	deducted from the original capital cost	7	A. The 5.8 million would include the component of
8	estimate of 8.85 million, an allowance was	8	the contract, it would include installation,
9	taken out there for the reduction in	9	engineering. As well, I believe the way the
10	engineering time and installation time.	10	system calculates these costs that the
11	However, when they redid the calculations, it	11	contingency and corporate overheads show up in
12	was recognized that there would be additional	12	the second year or a multi-year project. The
13	engineering, installation and travel times	13	reason that they don't change, well, without
14	caused by multiple trips to the sites that	14	looking at the exact estimate, I can't really
15	would be required in order to install a new	15	state the reason that they don't change.
16	system in one year and then replace the	16 1	MR. DOWNTON:
17	repeaters in subsequent years.	17	A. If you refer to B71, what we're talking about,
18	Q. Well, if you don't replace the repeater in	18	the second year costs which is approximately
19	Corner Brook in 2004, then you don't have to	19	5.802 million, that basically covers all costs
20	go to Corner Brook, do you?	20	associated with that particular year including
21	A. Oh, absolutely you do, if you're putting in a	21	internal, contract and basically all corporate
22	new site controller and even if you don't put	22	overheads, escalation and contingencies. So,
23	in a new site controller, you will still be	23	basically what cash flow showed is a total all
24	required to go there to check the equipment,	24	up cost of 8.85 million dollars over those two
25	to check the existing equipment and to do	25	years in 2004/2005.
	Page 111		Page 112
1	Q. Essentially what you're suggesting to us is	1	overall, if that's what you want. The
2	that the 23 repeaters to be replaced from 2006	2	approximate cost overall would be about
3	to 2008 were all going to be done in 2004?	3	\$14,400.00 a month.
4	A. Terry, could you go back to the previous	4	Q. And that covers how many sites?
5	slide? Are you referring to this particular -	5	A. That covers the existing 26 sites.
6	Q. Yes.	6	Q. And in preparing the numbers on Schedule 2,
7	A. I guess what -	7	page 1 of 2 of your supplementary evidence,
8	Q. My question to Mr. Dunphy originally was why	8	what is assumed with respect to those tower
9	the 5.8 million is the same in both scenarios.	9	power and space costs for the nine sites that
10	MR. DUNPHY:	10	you would be keeping under the second
11	A. Yes.	11	scenario?
12	Q. And the difference between the two scenarios	12 1	MR. DUNPHY:
13	is that there are 23 repeaters replaced	13	A. I believe what was assumed is that it was the
14	between 2006 and 2008 in the first one.	14	cost would be an average of the existing
15	A. Yes.	15	costs. I believe what they did was take the
16	Q. And the only number in capital cost that	16	existing costs for 26 sites, divide it out and
17	changes in the second one is the 2004 number.	17	use that as an approximate cost per site.
18	A. Yes. It would appear that the person who did	18 1	MR. DOWNTON:
19	the estimate made that assumption.	19	A. Just to add in to that, just for next year,
20	Q. In respect of the tower power and space	20	when we move to next year, that 14,400 will,
21	charges that are in effect now from Aliant,	21	if you multiple that out by 12, I don't know
22	what's the approximate amount of those per	22	what the number comes out, but next year,
23	site?	23	we'll have to pay an additional \$36,000.00 a
24	MR. DOWNTON:	24	year for site and accommodation costs. What
اء	A I have to I can give you an annuarimete cost	25	via and hasiaally finding is that staying at

we are basically finding is that staying at

A. I have to--I can give you an approximate cost

	Page 113	
1	Aliant sites is becoming increasingly costly	in what you've called here, O&M costs of
2	and on average, we're finding that costs are	2 \$272,000.00 in each year, is that correct?
3	going up about 10 to 15 percent a year over	3 MR. DUNPHY:
4	the last five years.	4 A. Without having a calculator, that looks about
5	Q. Have you had discussions with Aliant about why	5 right.
6	these costs should be going up 10 to 25	6 Q. Oh no, I'm sorry, that is not the right number
7	percent a year?	because there are other differences. I was
8	A. Basically from their perspective, their costs	8 looking at the NPV comparison, it's 295,389
9	are going up and part of it is their aligning	9 I'm told, anyway, it's handy on \$300,000.00.
10	consistent costing through the Aliant	10 A. Yes.
11	organization. Again, it's a cost that we're	Q. And this deals with, as I understand your
12	not in control of.	earlier answers, solely tower power and space
13	Q. Have you indicated to Aliant your	costs for 9 nine sites, is that correct?
14	consideration of moving from those sites?	14 A. I believe so, yes. No, I'm sorry, that's not
15	A. Yes.	true. It deals with tower power and space
16	Q. And what has been their reaction to that?	16 costs as well as leased facility costs which
17	A. Basically, no reaction.	we would not incur if the repeaters were in
18	Q. They don't care?	18 our sites.
19	A. No.	19 Q. Okay. So, if they're on your sites, then
20	Q. Have you inquired as to whether or not any of	20 they're going to use your microwave or
21	these costs are subject to regulation or might	21 something else?
22	be the subject of a complaint to the CRTC?	22 A. Yes.
23	A. No, I have not.	Q. Okay. So, can you quantify for us the amounts
24	Q. Just to look at the numbers you have on	24 that relate to the trunking costs per site?
25	Schedule 2, page 1 of 2, there's a difference	25 A. Not without a calculator, no. I can go back
	Page 115	Page 116
1	to the engineer who did this and retrieve	with spare modules, trying to isolate the
2	those numbers.	2 cause of the problem. In the end the cause
3	Q. Okay. I'd like you to do that, if you can,	3 could not be isolated.
4	because the presentation of the gross figures	4 Q. And have the failures continued?
5	here doesn't really allow us to compare what's	5 A. The failures have slowed. We're not saying
6	going on from one scenario to the other.	6 the same rate of failures, but we've have two
7	(UNDERTAKING).	7 documented failures and I'm told two
8	On page B71, you're reporting VHF failure	8 undocumented failures since then.
9	statistics in the box at the bottom of the	9 Q. Since the end of February?
10	table.	10 A. Since the end of February, yes.
11	MR. DOWNTON	11 Q. Okay. And that is up to today in July?
12	A. Yes.	12 A. That is up to last week.
13	Q. Can you tell us the nature of the failures	13 Q. Okay. So, when you talk about undocumented
14	that you say have been associated with the	failures, I presume if you went and looked for
15	switch in 2003?	15 VHF failure statistics, you wouldn't find the
16	A. I'll ask Mr. Dunphy to speak to that.	undocumented ones, would you?
17	MR. DUNPHY:	17 A. That's why their undocumented.
18	A. In early 2003, the switch experienced multiple	18 Q. Okay. So, if this cable was extended and you
19	complete failures which usually required	had one column for January to February 2003
20	intervention by an Aliant personnel to bring	and another for March to July 2003, the number
21	the system back in service. They were total	21 that would be in the last column would be two.
22	catastrophic failures.	22 A. The number that would be in the switch column
- 1	-	
23	Q. Did you determine a cause for those failures?	would be two.
- 1	Q. Did you determine a cause for those failures?A. No, we did not. We did significant testing.	23 would be two. 24 (12:04 p.m.)
23	Q. Did you determine a cause for those failures?	would be two.

Page 118

Page 120

Ju			ge [™] NL Hydro 2004 Capital Budget Application
١.	Page 117		Page 1
1	· · · · · · · · · · · · · · · · · · ·	1	there is no known capacity limitation.
2		2	Q. When you say -
3		3	A. What I basically say is that if we have 350
4	r	4	units and that's what we will design the
5	determined that it was solely an Aliant	5	system to, however as part of any prudent
6	problem, it was put in that category.	6	design, we'll basically also ensure that the
7	Q. Okay. And the failure statistics under	7	system can be expanded to handle additional
8	repeaters, I take it that's a total for all	8	capacity.
9	the repeaters?	9	Q. And that leaves out, I take it, the potential
10	A. Yes.	10	for Works Services and Transportation to use
11	Q. Okay.	11	the system as well.
12	A. In addition to the two switch failures, we	12	A. Basically the way that the traffic between
13	have also had three facility and four repeater	13	Hydro and Works Services works is that, is a
14	failures since the end of February as well.	14	complimentary traffic. So, what we have found
15	Q. Okay. The existing demand on your system	15	is that for the most part, one repeater per
16	solely from Hydro's point of view, I take it,	16	site adequately supports both parties.
17	is essentially 350 units, is that right?	17	Q. Okay. When you say, for the most part, are
18	A. User units are approximately 350, yes.	18	there any sites now that have more than one
19	Q. Yes, okay. In the proposal that you're asking	19	repeaters?
20		20	A. Well, basically, we internally have an issue
21		21	with the Great Northern Peninsula because it
22		22	is a high maintenance, in particular the
23	MR. DOWNTON:	23	winters on the GNP are typically very severe.
24	A. The initial design will be to handle the	24	So, we have an internal problem with regards

cular the ery severe. with regards 25 to gaining access to the system there.

Page 119 Q. My question was, are there any sites now that have more than one repeater?

existing capacity plus be expandable. So,

3 A. No.

25

1

2

Q. You perceive there may be a need for more than 4 5 one repeater at some -

A. Based on the preliminary traffic analysis that 6 was done by the consultant, that was the 7 8 consultant's recommendation as well.

9 Q. Okay. What is the projection over the next five years for additional requirements for 10 11 Hydro users on the system?

A. None that I know of. 12

13 Q. So, as far as you're aware, there is no need for expansion for Hydro's purposes? 14

15 A. Not that I'm aware right now.

16 o. Okav.

17 A. However, if Hydro should add Island Pond as a for instance and other transmission lines. 18 19 then those requirements would have to be looked at as part of those particular 20 21 developments.

22 Q. Is the expandability an issue at all when you don't have a central switch? 23

24 MR. DUNPHY:

A. We're told by the manufacturer that it is not.

I don't recall the numbers, but the 1

manufacturer tells us that it can handle some

3 astronomical number of sites and users.

Q. But presumably if you were going with a system 4 5 with a central switch, there would be a

capacity question about that switch. 6

7 A. Every system that I'm aware of has capacity 8 limitations for switches.

A. And depending on the manufacturer and the

9 MR. DOWNTON:

2

10

21

22

11 design, the number is different. As a for instance, for some switches, once you get 12 13 beyond, say, 20, or I should say 50 repeater channels, you have to put in a new switch. 14 Other ones--the break point would be 25. 15 Another manufacturer break point would be 35. 16 17 So, if you add more than 35 repeaters, you have to add another switch. So, really the 18 19 break point changes depending on the manufacturer, as does the cost. 20

Q. Is there the possibility of adding modules to a switch to accommodate additional capacity?

A. Basically, my understanding and Gerard can 23 correct me, if I'm wrong, but I mean, if you 24 25 have a switch bay that's designed for 35

Page 121

1

4

7

16

24

25

8

19

23

25

- repeaters, if you have 20 repeaters, you can 1
- add the modules to go up to 35. Once you go 2
- beyond 35, you have to put in another switch. 3
- 4 MR. DUNPHY:
- A. That's my understanding as well, yes. 5
- Q. That is your understanding, okay. In terms of 6 your discussions with your consultant about 7
- Passport, did it cause you concern that your 8
- consultant did not raise the possibility of
- Passport or a system like that in producing 10
- his report? 11
- 12 MR. DOWNTON:
- A. No. it did not. 13
- 14 Q. Why not?
- 15 A. Primarily because, I guess, our consultant, I
- 16 guess, just referred us to what he had already
- said in the report that the trunked radio 17
- market is ever expanding and technologies are 18
- changing on a very frequent basis. So it was 19
- not unexpected, from his perspective, that 20
- there was a technology out there that he was 21
- 22 unaware of.
- Q. So he regarded this as something new that he 23
- just hadn't come across? 24
- A. Basically, it's something that he was unaware 25

- of, a manufacturer that he was unaware of.
- 2 Q. Okay. I mean, I take it from your earlier
- answer, Mr. Dunphy, that you don't know when 3

Page 122

Page 124

- Passport got up and running, do you?
- 5 MR. DUNPHY:
- A. No, I don't know when.
- Q. You visited only one site where it is running?
- A. We visited one user, yes, a multiple site 8
- system, but one user. 9
- 10 Q. Yes, okay. And do you know whether or not
- Passport has been operating long enough to be 11
- a proven technology that will be safe for 12
- Hvdro to use? 13
- A. We believe that it is. The manufacturer has 14
- told us recently that they have over seven 15
 - hundred sites in use right now. It's
- supported by Motorola, which is the largest 17
- mobile radio manufacturer, I would imagine, in 18
- the world. That indicates that Motorola 19
- certainly believes it has a future. 20
- Q. When you say seven hundred sites, you mean 21
- seven hundred customers or seven hundred 22
- 23 sites?
 - A. I believe--it was a verbal conversation, but I
 - believe it was seven hundred sites.

Page 123

- Q. Okay. So if your system were to be added,
 - that would be another thirty-five sites?
- 3 A. Yes.

1

- Q. Okay. And how large was the facility that--4
- how many sites were involved in the one that 5
- you looked at? 6
- 7 A. Sixty-six.
- Q. Just referring again to the Supplementary 8
- Evidence, you refer there to Mr. Barreca's 9
- evidence and the suggestion that there be a 10
- delay in the replacement of the repeaters. 11
- Have you done any specific study which would 12
- indicate the time frame over which the 13
- repeaters may need to be replaced? 14
- A. Well, from our point of view, the repeaters 15
- need to be replaced now. They've been 16
- manufacturer discontinued for quite some time 17
- and we're finding it increasingly difficult to 18
- obtain spare parts. 19
- 20 MR. DOWNTON:
- 21 A. Our understanding from Motorola is that the
- parts were stopped manufacturing in 2000 and 22
- the only parts available for the MSR 2000 23
- right now are what is in the system, and 24 looking at extending out the replacement of 25

- those repeaters for an additional say five 1
- 2 years, to my mind, is risk, and what I see is
- that the increased--the maintenance on those 3
- units will increase and I guess from our 4
- 5 analysis, what we've shown is going out and
- doing multiple field visits to reinstall 6
- 7 repeaters at some future point does not show
 - itself to be a cost effective alternative.
- 9 Q. The illustration that you've chosen here
- though to set out in Schedule 1 involves the 10 11
 - replacement of twelve repeaters in 2004,
- correct? 12
- 13 A. Yes, that's correct.
- Q. Okay. It doesn't delay the replacement of 14 repeaters generally for three to five years? 15
- A. Well, we decided--well, we needed six, I 16
- believe we said, six repeaters to meet the 17
- existing coverage requirements we have and 18
 - what we proposed was to relocate six sites
- from Aliant facilities to Hydro's facilities, 20
- based on the analysis that increasing costs 21
- from Aliant justify that relocation and 22 installation within our sites. And that's -
- Q. How is it that you find six sites that have to 24
 - be done in 2004, where you never had a

	Page 125		Page 126
1	repeater before?	1	Those work fairly well in most situations. We
2 N	MR. DUNPHY:	2	are having problems in foliage areas. If it's
3	A. To address the increased coverage requirement.	3	high tree areas, we have to travel to areas
4 N	MR. DOWNTON:	4	that are more open. We also have problems in
5	A. We basically have coverage issues now in Happy	5	steep valleys or side hills where we don't get
6	Valley, Southern Labrador, Granite Canal.	6	a shot of the satellite from the right-of-way
7	Granite Canal would have been added to the	7	where we're working. That's essentiallyand
8	existing system if, I guess, the mobile radio	8	of course, cell, where we can, but there are
9	proposal was approved in 2001, and so we have	9	not many of those places where we can use cell
10	outstanding coverage issues that we need to	10	in places we work, and I really can't speak
11	deal with and that's basically what we're	11	for Labrador. I don't know how they're
12	putting forward.	12	managing their problems over there in Southern
13	Q. But I mean, how are you handling those	13	Labrador.
14	coverage issues now?	14	Q. I take it, other than Granite Canal, these
15	A. I guess, if you don't mind, Ken, I'll defer	15	problems have existed for some significant
16	that a little bit to you. But I guess, bottom	16	period of time?
17	line is we are having to do (unintelligible).	17	A. That is true.
1	12:19 P.M.)	18	Q. And you've been able to get by?
1	MR. MCDONALD:	19	A. We did.
20	A. Yes. In those situations now, slow though it	20	Q. Yes, okay. Mr. Chair, I'm going to suggest
21	is, we use a relay system where we can have	21	that we break a few minutes early because I
22	workers stay on mountaintops that can relay	22	did want to review the undertaking information
23	our messages to ECC through a relay system.	23	and hopefully be able to finish up quickly
24	We also employ satellite phones. Satellite	24	after lunch.
25	phones are a recent acquirement of ours.		CHAIRMAN:
	Page 127		Page 128
1	1 420 127		
1 1		1	•
1 2	Q. That's fine, Mr. Hutchings. We'll break until	1 2 (understand everybody is fine with that order.
2	Q. That's fine, Mr. Hutchings. We'll break until 1:30.	2 (understand everybody is fine with that order. CHAIRMAN:
2 3	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS)	2 (understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr.
2 3 4	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.)	2 (3 4	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings.
2 3 4 5 0	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN:	2 (3 4 5 1	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.:
2 3 4 5 6	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I	2 G 3 4 5 1 6	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair.
2 3 4 5 6 7	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in	2 (3 4 5 1 6 7 (understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN:
2 3 4 5 6 7 8	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule.	2 (3 4 5 1 6 7 (8	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite.
2 3 4 5 6 7 8 9 M	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN:	2 (3 4 5 1 6 7 (8 9 1	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.:
2 3 4 5 6 7 8 9 N	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's	2 (3 4 5 1 6 7 (8 9 1 10	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers
2 3 4 5 6 7 8 9 10 11	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow.	2 (3 4 5 1 6 7 (8 9 1 10 11	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning.
2 3 4 5 6 7 8 9 10 11 12	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone	2 (3 4 5 1 6 7 (8 9 1 10 11 12 (understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN:
2 3 4 5 6 7 8 9 10 11 12 13	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter	2 (3 4 5 1 6 7 (8 9 1 10 11 12 (1 13	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry.
2 3 4 5 6 7 8 9 10 11 12 13 14	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule	2 (3 3 4 5 11 6 7 (8 8 9 11 10 11 12 (13 14 (14)	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.:
2 3 4 5 6 7 8 9 10 11 12 13	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with	2 (3 4 5 1 6 7 (8 9 1 10 11 12 (1 13	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing	2 (3 3 4 5 11 6 7 (8 9 11 10 11 12 (13 14 (15)	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with	2 (3 3 4 5 1 6 7 (8 9 1 10 11 12 (13 14 (15 16	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and	2 (3 4 5 1 1 6 7 (8 8 9 1 1 10 11 12 (1 13 14 (1 15 16 17	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this	2 (3 4 5 1 6 7 (8 8 9 1 10 11 12 (13 14 (15) 16 17 18	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this afternoon or tomorrow morning. In the	2 (3 4 5 1 6 7 (8 8 9 1 10 11 12 (13 14 (15) 16 17 18 19 20	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we do it at this point before Mr. Hutchings
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this afternoon or tomorrow morning. In the interests of getting Mr. Barecca finished and	2 (3 4 5 1 6 7 (8 8 9 1 10 11 12 (13 14 (15) 16 17 18 19 20	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we do it at this point before Mr. Hutchings concludes and before Mr. Kennedy commences.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this afternoon or tomorrow morning. In the interests of getting Mr. Barecca finished and also to accommodate Dave Reeves, who you'll	2 (3 3 4 5 11 6 7 (8 9 110 11 12 (13) 14 (13) 15 16 17 18 19 20 21 (22)	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we do it at this point before Mr. Hutchings concludes and before Mr. Kennedy commences. CHAIRMAN:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this afternoon or tomorrow morning. In the interests of getting Mr. Barecca finished and also to accommodate Dave Reeves, who you'll recall was out of town on a family matter,	2 (3 3 4 5 11 6 7 (8 9 110 11 12 (13) 14 (13) 15 16 17 18 19 20 21 (22)	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we do it at this point before Mr. Hutchings concludes and before Mr. Kennedy commences. CHAIRMAN: Q. Okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. That's fine, Mr. Hutchings. We'll break until 1:30. (12:20 P.M LUNCH RECESS) (RESUME - 1:31 p.m.) CHAIRMAN: Q. Good afternoon. Okay. Before we recommence I think Ms. Newman has something to say in connection with the schedule. MS. NEWMAN: Q. Yes, thank you, Mr. Chairman. The Board's calendar has now become free for tomorrow. And I have canvassed the parties and everyone is prepared to proceed with this matter tomorrow morning on the usual schedule beginning at nine and proceeding to 1:30 with two breaks. I foresee this panel finishing sometime, maybe hopefully this afternoon and then John Roberts will testify either this afternoon or tomorrow morning. In the interests of getting Mr. Barecca finished and also to accommodate Dave Reeves, who you'll recall was out of town on a family matter, we'll proceed with Mr. Barecca after John	2 (3 4 5 1 6 7 (8 8 9 1 10 11 12 (13 14 (15) 16 17 18 19 20 21 (22) 23 (13)	understand everybody is fine with that order. CHAIRMAN: Q. Okay. Good. So we're back to you, Mr. Hutchings. HUTCHINGS, Q.C.: Q. Not quite, Mr. Chair. CHAIRMAN: Q. Not quite. HUTCHINGS Q.C.: Q. And I understand Ms. Greene has some answers to undertakings from this morning. CHAIRMAN: Q. I'm sorry. GREENE, Q.C.: Q. Yes. Mr. Chairman, there were four undertakings provided this morning. And at this point in time we are in a position to respond to three. And it may be helpful if we do it at this point before Mr. Hutchings concludes and before Mr. Kennedy commences. CHAIRMAN: Q. Okay. GREENE, Q.C.:

Jui	y 7, 2005 Wint	-1 az	ge 11D Hyuro 2004 Capital Duuget Application
	Page 129		Page 130
1	Zetron was eliminated as an alternative	1	users would forget or not know when they had
2	product for the VHF mobile radio system. And,	2	roamed from one site to another one. Also, in
3	Mr. Dunphy, did you have the opportunity over	3	conversations with the manufacturer they
4	the break to review your notes with respect to	4	specifically told us that data was not
5	that?	5	recommended on the rack system because of the
6 1	MR. DUNPHY:	6	lack of privacy between radios, so that if
7	A. Yes, I did.	7	there were transmissions of data on the
8	Q. And could you please advise why Zetron was	8	system, all the users in the area would hear
9	eliminated as an alternative product?	9	it. There was no redundancy. They also did
10	A. Yes. I should begin by saying we conducted	10	mention that the Zetron could be configured,
11	extensive discussions with Zetron personnel.	11	even though the standard configuration is as a
12	In fact, we visited their factory. We also	12	small stand alone switch, it could be
13	visited a customer that they recommended to us	13	configured in a mesh topology, as Mr.
14	as being somewhat similar in application to	14	Hutchings mentioned this morning. However,
15	our needs, that was a customer in British	15	it's a very complex design and required a
16	Columbia. The British Columbia user was a	16	tremendous amount of resources. It was also,
17	relatively small system compared to our needs.	17	generally speaking, a single user system and
18	I don't recall exactly what the size of their	18	there was no site controller, which meant that
19	system was. However, their biggest complaint	19	we had no remote site visibility. So, for
20	with the Zetron rack system was that a user	20	instance, if one of our remote sites that was
21	was required, upon roaming from one site to	21	accessible only by helicopter was out of
22	another one, to re-register with the system	22	service, it would require a trip via
23	manually by keying their radio, and that was	23	helicopter to verify exactly what the problem
24	theirthat was their single biggest complaint	24	was. Those were the primary reasons why we
25	with the Zetron system, the fact that their	25	decided that the racks wasn't a suitable
	Page 131		Page 132
1	product.	1	were felt appropriate.
2	Q. The next undertaking related to providing the	2	Q. And what is the estimate indicated on U-Hydro
3	cost estimate undertaken by Hydro of the	3	No. 22 for the passport system, what's the
4	passport system. And I have copies of this	4	total?
5	estimate to distribute at this time.	5	A. You'll have to forgive me, I didn't keep the
6 (CHAIRMAN:	6	paper copy.
7	Q. Would that be U-Hydro 21?	7	Q. Oh.
8 1	MR. KENNEDY:	8	A. Thank you. The total estimate for materials
9	Q. 22, Chair.	9	is \$5,781,834.
10 I	EXHIBIT ENTERED AND MARKED U-HYDRO NO. 22.	10	Q. And this was prepared by yourself?
11 (GREENE, Q.C.:	11	A. Yes.
12	Q. Mr. Dunphy, who prepared this estimate?	12	Q. Okay. The last undertaking that we're in a
13	A. That was prepared by myself.	13	position to respond to at this time related to
14	Q. Would you please explain the estimate that	14	Schedule 2 to the supplementary evidence that
15	we've just distributed?	15	was filed on Friday past, and it related to
16	A. Yes. In 2001 we obtained a written estimate	16	what was included in the operating and
17	from Aliant on a passport system. Earlier	17	maintenance costs. Could you please look at
18	this year in preparation for our capital	18	Schedule 2, Mr. Dunphy, of the supplementary
19	budget we reviewed the costs with Aliant.	19	evidence?
20	They advised us that we should take their	20	A. Mr. O'Reilly. Thank you. Yes.
21	estimate and add 10 percent to cover increased	21	Q. And could you please indicate the answer to
22	costs. Other items that were not included in	22	the question?
23	their estimate but that either we identified	23	A. Well, as I had suspected, the estimate for-
24	internally or Mr. Cook had identified in his	24	the difference between 14 Hydro owned sites
125		25	

and 5 Hydro owned sites can be explained by

report were included in the relative sums that

July	7 9, 2005 Iviuiu	i-r age	The Hydro 2004 Capital Budget Application
	Page 133		Page 134
1	taking the O and M costs, which I explained		OSS-EXAMINATION OF PANEL BY HUTCHINGS, Q.C.
2	are facility, estimated facility costs. An		JTCHINGS, Q.C.:
3	average was taken by dividing that by 21,		Q. Yes. Thank you, Mr. Chair. Mr. Dunphy, I'm
4	which is the number of sites that are leased	4	just trying to relate the numbers that you
5	in under the column 14 Hydro owned sites, to	5	just gave us, the 27,000 per site, per year,
6	work out to an average of approximately	6	plus the 5700 per site, per year to the \$1440
7	\$27,000 per site, per year. As well, the	7	per month for 26 sites that was mentioned
8	figures that were used for tower power and	8	before lunch.
9	accommodation was actually \$120,000 which	9 MI	R. DUNPHY:
10	again was divided by 21 sites to come up with	10	A. Yes.
11	an estimate of approximately \$5,700 per site,		Q. How do those numbers interact?
12	per year. Those two numbers were added and it		A. Well, they don't, really. The \$27,000 is a
13	was assumed that those averages would apply to	13	digital facility, whereas the current
14	the nine extra sites. So if you add those two	14	facilities are analog under an older contract.
15	numbers, multiply by nine, you'll see the	15	Also, the tower power and accommodation, I
16	difference between the two O and M costs.	16	believe Mr. Downton mentioned the cost for
17	Q. Okay. Thank you. That concludes the three	17	tower power and accommodation wasI'm sorry.
18	undertakings we're in a position to respond	18	If you can refresh my memory; I don't remember
19	to. There's one outstanding which is a	19	the exact number, but it was slightly higher
20	schedule outlining the location of printers	20	than the number that was used in this estimate
21	that are to be replaced. And that hopefully	21	to give a ball park figure. The assumption
22	will be available before we conclude this	22	was that tower power and accommodation was
23	afternoon. Thank you.	23	approximately \$120,000 a year, which is
	CHAIRMAN:	24	actually a number that's a couple of years
25	Q. Thank you, Ms. Greene. Now, Mr. Hutchings.	25	old.
	Page 135		Page 136
1	Q. I understood that the tower power and	1	column, there's a subtraction there, so if
2	accommodation was the 14,400 per month. Is	2	there are common costs, they would be
3	that not correct?	3	subtracted out.
1	MR. DOWNTON:		Q. No, the last column is just the difference in
5	A. That was the number that I got from, I guess,	5	the cumulative present worth?
6	the team lead on the networks group.		A. Yes.
	MR. DUNPHY:		Q. It has nothing to do with the common costs?
8	A. When this was done, the number was assumed to	8	So what you're saying is that the common-
9	be assumed to be \$10,000 a month.	9	these would be common costs -
10	Q. When Schedule 2 was done, you mean?		A. If there's a common O and M cost -
11	A. Yes.		Q from both sides?
12	Q. All right. I'm just trying to puzzle through.	1	A. If there is a common O and M cost that is
13	So the towerokay, the tower power and	13	consistent every year throughout the entire
14	accommodation that you used for the purpose of	14	life of the system, then it is my
15	Schedule 2 was 10,000 a month, and in	15	understanding that that is not necessary
16	actuality it's fourteen four a month?	16	because it's subtracted one from the other.
17	A. Yes.		Q. Yes, that's right, that if they would be an
18	Q. Okay. And tower power and accommodation in	18	addition to both -
19	respect of all of the sites in question are		A. Right.
1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	

21

22

23

24

25

Q. - comparative numbers then they simply wash

out. That's fine. So what you're telling me

is that in the 14 Hydro owned sites--no, in the five Hydro owned sites number you have an

additional 10,000 per month for nine sites?

A. An additional 10,000 per month for nine sites?

included in both sides of this schedule?

the five Hydro owned sites scenario.

A. No, they're not, because they're only included

for the extra sites that would be added under

A. Because I understand--if you look at the last

20

21

22

23

24

25

Q. Okay.

July	7 9, 2003 Multi	-Pa	age "NL Hydro 2004 Capital Budget Application
	Page 137		Page 138
1	No. We have an additional 5700 -	1	MR. DOWNTON:
2	Q. Okay. Yeah, your 10,000 -	2	A. Yes, I believe I said that in my evidence. I
3	A per site.	3	
4	Q. Your 10,000 is for thefor all 21 sites?	4	Q. I wasn't referring to the tower power and
5	A. 10,000 is foryes.	5	space now. I'm talking about the
6	Q. 10,000 a month is the total for all 21 sites?	6	
7	A. Yes.	7	A. Tower power and space is accommodation charge.
8	Q. Okay. So you put in an extra 5700 per site,	8	Q. That includesokay.
9	per year in the schedule, okay. So that's	9	A. Now, that's what's referred to as
10	51,000 of the difference?	10	accommodation charge is power, tower and
11	A. Yes.	11	space.
12	Q. And the balance of the 240 odd thousand?	12	Q. And the additional charge you were talking
13	A. Is the leasing ofthe assuming leasing charge	13	
14	of 569,250 divided by 21, multiplied by nine.	14	A. Yes.
15	Q. Okay. And that has been escalated because	15	Q. Okay. And that was the 36,000 per year?
16	we're talking about digital equipment rather	16	A. No. What I indicated was that based on
17	than analog equipment?	17	discussions we had with Aliant, that the
18	A. Yes.	18	accommodation charge, which is power, tower
19	Q. Okay. And what was the amount for analog	19	and space will possibly increase by an
20	equipment?	20	additional \$36,000 next year for Aliant sites.
21	A. I do not know, sir. This particular scenario	21	Q. Okay. All right. We'll have another look at
22	was only done for digital equipment.	22	those numbers and if there's anything that we
23	Q. Okay. And I thought Mr. Downton had told me	23	need to follow-up on, we can do that. In
24	this morning what those site costs were	24	respect of U-Hydro 22, this estimate, I
25	currently?	25	presume, involves replacing all the existing
	3		presume, inverves replacing an une emissing
	Page 139		Page 140
1	<u> </u>	1	
1 2	Page 139		Page 140 the system.
2	Page 139 repeaters and adding six new ones. Is that	1	Page 140 the system. Q. I mean, how do the repeaters communicate with
2	Page 139 repeaters and adding six new ones. Is that correct?	1 2	Page 140 the system. Q. I mean, how do the repeaters communicate with one another?
2 3 N	Page 139 repeaters and adding six new ones. Is that correct? IR. DUNPHY:	1 2 3	Page 140 the system. Q. I mean, how do the repeaters communicate with one another?
2 3 N	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters?	1 2 3 4	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of
2 3 N 4 5	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of,	1 2 3 4 5	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies.
2 3 N 4 5 6	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites	1 2 3 4 5 6	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with
2 3 N 4 5 6 7	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels.	1 2 3 4 5 6 7	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with
2 3 N 4 5 6 7 8	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay.	1 2 3 4 5 6 7 8	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters?
2 3 N 4 5 6 7 8	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six.	1 2 3 4 5 6 7 8 9 10	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some -
2 3 N 4 5 6 7 8 9	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended	1 2 3 4 5 6 7 8 9 10	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON:
2 3 N 4 5 6 7 8 9 10 11	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue?	1 2 3 4 5 6 7 8 9 10 11 12 13	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can -
2 3 N 4 5 6 7 8 9 10 11 12	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes.	1 2 3 4 5 6 7 8 9 10 11 12 13 14	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY:
2 3 M 4 5 6 7 8 9 10 11 12 13 14 15	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure.
2 3 M 4 5 6 7 8 9 10 11 12 13 14 15 16	Page 139 repeaters and adding six new ones. Is that correct? RR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON:
2 3 M 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically,
2 3 M 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to
2 3 N 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 139 repeaters and adding six new ones. Is that correct? RR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr.
2 3 N 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Page 139 repeaters and adding six new ones. Is that correct? MR. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with single channel repeaters?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr. Dunphy described earlier, I basically key up
2 3 M 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Page 139 repeaters and adding six new ones. Is that correct? R. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with single channel repeaters? A. The two are completely independent of one	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr. Dunphy described earlier, I basically key up the radio which talks to the repeater. The
2 3 N 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	repeaters and adding six new ones. Is that correct? 4R. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with single channel repeaters? A. The two are completely independent of one another. The ring architecture refers to the	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr. Dunphy described earlier, I basically key up the radio which talks to the repeater. The repeater will then talk to the site
2 3 N 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	repeaters and adding six new ones. Is that correct? 4R. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with single channel repeaters? A. The two are completely independent of one another. The ring architecture refers to the facility links between passport sites, whereas	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr. Dunphy described earlier, I basically key up the radio which talks to the repeater. The repeater will then talk to the site controller, the site controller will then talk
2 3 N 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	repeaters and adding six new ones. Is that correct? 4R. DUNPHY: A. Yes. Q. Okay. And these are all single channel repeaters? A. The original proposal included an estimate of, I think, six sitesa small number of sites that would have two channels. Q. Okay. A. I believe it was six. Q. And was the addition of the channels intended to deal with a capacity issue? A. Yes. Q. It wasn't for the purpose of accommodating a ring architecture? A. No, the channels have nothing to do with the ring architecture. Q. How can you make a ring architecture work with single channel repeaters? A. The two are completely independent of one another. The ring architecture refers to the	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 140 the system. Q. I mean, how do the repeaters communicate with one another? A. They communicate with one another via digital facilities which can be radio, they can be leased facilities, they can be a variety of technologies. Q. Okay. And you're contemplating repeaters with alternative methods of communicating with other repeaters? A. There will be some - MR. DOWNTON: A. Maybe I can - MR. DUNPHY: A sure. MR. DOWNTON: A. Okay. Maybe I can help clarify. Basically, if I'm in a mobile vehicle and I want to communicate to, say, someone else whereas Mr. Dunphy described earlier, I basically key up the radio which talks to the repeater. The repeater will then talk to the site controller, the site controller will then talk to a switch, if a switch exists, if one

	j >, 2000	$\overline{}$	c 112 Hydro 2001 Capital Baaget Hyphication
	Page 141		Page 142
1	to the repeater equipment, then out to the	1	A. Yes.
2	mobile, the other mobile person. So that's	2	Q. Okay. Is it intended that there be more than
3	basically how it communicates. So if there's	3	one line with respect to the new system?
4	any digital facilities required or any	4	A. In most instances there probably will be more
5	required, the digital facilities are on the	5	than one line, yes.
6	site controller's side facing towards a switch	6	Q. Okay. So most of the 35 repeaters will have
7	or facing towards another site. The actual	7	at least two lines coming out of them?
8	connections do not face towards the end user.	8	A. Yes. And again, this is what we discussed
9	So what Mr. Dunphy said is correct, the	9	this morning. We're getting into details of
10	repeaters and the site controllers are	10	design which are, you know, far beyond the
11	somewhat independent and you don't see the	11	scope of what we've done so far. But that is
12	digital facilities through to the end user.	12	the intent.
13	Q. Okay. So, your ring architecture basically	13	Q. But the site equipment that you've budgeted
14	relates to the connections between the	14	here can accommodate how many lines coming
15	repeaters and these are digital leased	15	out?
16	facilities or whatever, is that correct?	16	A. Most of these can accommodate two. And in
17	A. To the repeater sites, yes.	17	fact, two is the default number. By
1	MR. DUNPHY:	18	accommodating one, you accommodate two by
19	A. Yeah.	19	default.
20	Q. Okay. As I understand your current system,	20	Q. Okay. So these 35 repeaters we're talking
21	you would have one line coming out from each	21	about here are not identical, some of them
1	•		have more functionality -
22	repeater? MR. DOWNTON:	22	A. Included in there would be a few extra
		23	
24	A. Yes.	24	repeater radios, yes.
25	MR. DUNPHY:	25	Q. Repeater radios?
	Page 143		Page 144
1	A. Yeah. The repeaters we talked about.	1	cost?
1 2	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is		cost? A. Yes.
1	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is 35?	1	cost? A. Yes. Q. Okay. Is that taken into account in Schedule
2	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is	1 2	cost? A. Yes.
2 3	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is 35?	1 2 3	cost? A. Yes. Q. Okay. Is that taken into account in Schedule
2 3 4	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is 35?A. Yes. There are 35 sites and includedit's	1 2 3 4	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence?
2 3 4 5	A. Yeah. The repeaters we talked about.Q. Yes. But, I mean, the quantity that's here is 35?A. Yes. There are 35 sites and includedit's not broken down but there are actually, I	1 2 3 4 5	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is.
2 3 4 5 6	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that 	1 2 3 4 5 6	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up?
2 3 4 5 6 7	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. 	1 2 3 4 5 6 7	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs.
2 3 4 5 6 7 8	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two 	1 2 3 4 5 6 7 8	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs?
2 3 4 5 6 7 8 9	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? 	1 2 3 4 5 6 7 8	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is.
2 3 4 5 6 7 8 9	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times 	1 2 3 4 5 6 7 8 9	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same.
2 3 4 5 6 7 8 9 10	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues 	1 2 3 4 5 6 7 8 9 10	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five
2 3 4 5 6 7 8 9 10 11 12	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra 	1 2 3 4 5 6 7 8 9 10 11 12	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to
2 3 4 5 6 7 8 9 10 11 12 13	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. 	1 2 3 4 5 6 7 8 9 10 11 12 13	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly.
2 3 4 5 6 7 8 9 10 11 12 13	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those 	1 2 3 4 5 6 7 8 9 10 11 12 13 14	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. Q. Item 11 talks about antenna wave guide and 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no. Q. Okay. So that's an additional cost that you haven't taken into account?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. Q. Item 11 talks about antenna wave guide and accessories? A. Yes. 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no. Q. Okay. So that's an additional cost that you haven't taken into account? A. No. That is true. However, the cumulative
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. Q. Item 11 talks about antenna wave guide and accessories? A. Yes. Q. Where does that requirement arise? 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no. Q. Okay. So that's an additional cost that you haven't taken into account? A. No. That is true. However, the cumulative present worth over 15 years of \$2.4 million
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. Q. Item 11 talks about antenna wave guide and accessories? A. Yes. Q. Where does that requirement arise? A. That requirement arises in moving from leased 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no. Q. Okay. So that's an additional cost that you haven't taken into account? A. No. That is true. However, the cumulative present worth over 15 years of \$2.4 million will not be significantly affected.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 A. Yeah. The repeaters we talked about. Q. Yes. But, I mean, the quantity that's here is 35? A. Yes. There are 35 sites and includedit's not broken down but there are actually, I believe, 41 repeater radios included in that estimate. Q. So you're considering six sites with two repeaters? A. Yes. We've mentioned a couple of times already the fact that there are traffic issues on the Northern Peninsula so there are extra repeater radios in there to address those traffic issues. Q. And this project calls for the replacement of all of the mobile radios and portable radios, as well? A. Yes. Q. Item 11 talks about antenna wave guide and accessories? A. Yes. Q. Where does that requirement arise? 	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	cost? A. Yes. Q. Okay. Is that taken into account in Schedule 2 of your supplementary evidence? A. I believe it is. Q. And where does that show up? A. That would show up in the capital costs. Q. Capital costs? A. In fact, I'm sure it is. Q. Capitals costs in both are the same. A. Yes. But we've deducted fromin the five Hydro owned sitesokay. Could you go to Schedule 1, please, Mr. O'Reilly. Q. Schedule 2. A. Schedule 2. Could you go to Schedule 2 again? No, the \$50,000 does not appear to be deducted from the overall capital budget of 8.85 million, no. Q. Okay. So that's an additional cost that you haven't taken into account? A. No. That is true. However, the cumulative present worth over 15 years of \$2.4 million

July	y 7, 2005 Winter	-1 agc	The Hydro 2004 Capital Budget Application
	Page 145		Page 146
1	almost identical, wouldn't they?	1	the same capital program, so the capital costs
2	A. I'm sorry, which numbers?	2	will be, you know, identical except for the
3	Q. 13.1 and 15.5, you take ten percent off one	3	small error not including antenna wave guide.
4	and put ten percent on the other, you've very	4	If it's plus ten percent on one side of the
5	close, aren't you?	5	equation, it's plus ten percent on the other.
6	A. Could you repeat that?	6	Q. That may or may not follow.
7	Q. If you add ten percent to 13,122,000, you're	7	A. Oh, I think it certainly does.
8	up at 14.4 million? Right?	8	Q. When was it that you visited British Columbia
9	A. Okay, yes.	9	to check out the Zetron system?
10	Q. If you take ten percent off 15.5 million,	10	A. 2001.
11	you're down around 14 million?	11	Q. In 2001?
12	A. Yes.	12	A. Yes.
13	Q. So at ten percent plus or minus this analysis	13	Q. And I take it from your reference to Aliant in
14	is not statistically significant?	14	connection with U-Hydro 22 that when you refer
15	A. Oh, if it's ten percent plus or minus, it is	15	to your supplier this morning, you were
16	ten percent plus or minus on both sides of the	16	talking about Aliant, is that right?
17	equation. It is notit's the same system, so	17	A. For the passport estimate, yes.
18	it's not ten percent plus on one and ten	18	Q. Yeah, okay. Now, you told us this morning
19	percent minus on the other.	19	that the passport system is actually a
20	Q. Ten percent plus or minus can go either way on	20	protocol. What actual equipment are we
21	either number, correct?	21	talking about here?
22	A. Well, no, I don't think so. We're talking	22	A. In the estimate?
23	about the same capital. You can argue that	23	Q. Yes.
24	the least costs may be different by plus or	24	A. The site equipment would include a site
25	minus ten percents, but we're talking about	25	controller, it's calledthe product name is
	Page 147		Page 148
1	NTS.	1	to a little over \$400,000, I believe, where
2	Q. Um-hm.	2	you had told us there was roughly 70 odd of
3	A. It would also include repeater radios.	3	each of these three items. You know, you can
4	Q. Okay.	4	play with one or two, I guess, but it comes
5	A. The repeaters themselves.	5	out whichever way you do it probably around
6	Q. Okay. Are they NTS items, as well?	6	between 405 and 425,000 dollars for those end
7	A. No. They would be Motorola radios.	7	user devices. Would you agree with that?
8	Q. Okay. And if you were to go with the system,	8	A. Oh, well, you were doing the calculations.
9	I mean, would you deal with a single supplier	9	Q. No, I mean, all we've done is take 73 thin
10	or wouldwho would acquire this equipment,	10	clients at 1200, 74 desktops atno, 74
11	then put it together for you, or would you	11	laptops at 2800 and 73 desktops at 1600 and we
12	deal with individual providers?	12	come up with \$411,000.
13	A. We would issue a turn key contract.	13	A. Okay.
14	Q. It would be a turn key contract?	14	Q. What's the balance of the 2.4 million for?
15	A. Yes.	15	A. The balance of 2.4 million iswhat you've
16 N	MR. DOWNTON:	16	only looked at there is a small component.
17	A. We would go to tender and basically the intent	17	Like I said, there is four programs within the
18	of the intent of the tender would be the	18	End User Infrastructure Evergreen capital job
19	vendor of choice would provide system to meet	19	cost. The desktop Evergreen portion, and
20	Hydro's requirements.	20	that's all you really asked about, basically,
21	Q. Okay. You gave us some information this	21	your estimate is a little bit low, but what's
22	morning in connection with the End User and	22	included there is installation costs to
١٠٠			
23	Server Evergreen Program B-66. Rough figures	23	actually install all of those 220 units across
23		23 24	actually install all of those 220 units across the system. I also mentioned that there is a

Page 149 Page 150 A. Our estimated number is approximately \$95,000. cost of 130,000. 1 Q. That's just the install, I take it, 95,000? 2 Q. Okay. Can I just stop you for a moment? The 2 B-66 shows a material supply amount of 2.4 Because we've got \$400,000 odd worth of units. 3 3 million. Are you telling me that some part of A. Yes, yes, just install. 4 4 that is actually labour? Q. Yeah, okay. No, my question was supply and 5 5 install. So if I add the 411 odd or--do you 6 A. This is supplier install. 6 7 Q. Okay. And what--the numbers that you gave me have a better number for that? 7 for the individual units, I take it that A. Well, basically the desktop evergreen program 8 8 to supply and install basically the units is doesn't include the cost of installation of 9 9 approximately \$700,000. Because what you 10 them? 10 didn't ask, which I'll basically offer, is the A. No. 11 11 fact that the Citrix thin clients require a 12 Q. And is that done by your supplier? 12 A. That will be done by our supplier. server to support those, so basically there 13 13 Q. Okay. has to be a server behind the thin clients and 14 14 A. Actually, it will be done--yes, it will be 15 then basically once you look at the total thin 15 16 done by a supplier, yes. 16 client environment and your desktop and Q. Okay. And what does he charge you for that? laptops, that basically will--and installation 17 17 A. He has a per unit cost for installation. And will come out to \$700,000. 18 18 if there's any applications over and above Q. Is there a reason why you didn't tell me that 19 19 what fits on the corporate image, then those earlier? 20 20 applications have a per unit cost additional. 21 GREENE, Q.C.: 21 Q. Okay. 22 22 Q. Actually, if you refer to the transcript from July 7th starting on page 48 the details of 23 A. Our -23 the four components of this project was Q. So what's the number, then, for the supply and 24 24 install of the end user units? provided in direct evidence. 25 25 Page 151 Page 152 A. Just the Neoware boxes? 1 HUTCHINGS, Q.C.: 1 Q. I understand that. But the numbers that I 2 o. Yeah. have asked for were not provided and I'm -A. Basically that would be 73 times the number 3 3 that I gave you this morning. 4 GREENE, O.C.: 4 Q. That's 73 times 1200? Q. They were provided, what you asked for. 5 A. You're talking about the Neoware boxes? 6 HUTCHINGS, Q.C.: 6 Q. I'm finding difficulty in relating the numbers 7 7 I now have to the questions that I asked. So A. I guess the question is are you asking for the 8 8 9 9 servers -A. Mr. Hutchings, I gave you the information that Q. No, but I will. 10 10 11 you requested. 11 A. - that have to go behind that? Q. I'll get there. The Neoware boxes themselves 12 GREENE, O.C.: 12 Q. We also gave you the total breakdown of the total \$87,600? 13 13 project, as I say, starting on page 48 of the A. That is the math, yes. 14 14 Q. Assuming the math is correct, 73 times 1200. transcript of July 7th. 15 15 The desktop devices, you gave me a figure of 16 HUTCHINGS, O.C.: 16 \$1600 for each device. How many devices are 17 Q. So the cost to install these thin client--17 these end user devices and these include the there? 18 18 thin client devices, the desktop devices and 19 19 A. Can you repeat the question? How many the laptop devices is \$95,000, is that desktops? 20 20

21

22

23

24

25

Q. How many desktops are you buying?

Q. Approximately 73, okay. And that would be

A. I guess whatever those two totals are,

\$116,800. How many laptops are you buying?

A. Approximately 73.

Page 149 - Page 152

themselves, just the Neoware?

Q. Okay. What is your figure for the total cost

of acquisition of thin client devices

21

22

23

24

25

correct?

A. Yes.

	7,200		ge 112 Hydro 2001 Capital Dauget Hyprication
	Page 153		Page 154
1	subtract it from 220. We're buying 220 units.	1	A. Yes.
2	Q. Okay. That should leave us 74?	2	Q. Okay. So is the entire balance of the
3	A. Yeah.	3	\$193,400 for the Citrix servers?
4	Q. At \$2800, which is \$207,200, which gives us	4	A. For Citrix servers and the licensing costs for
5	the \$411,600 that we spoke of earlier. If we	5	the Citrix servers.
6	add that to the \$95,000 installation cost, we	6	Q. Where, physically, are the Citrix servers
7	have a total of \$506,000. Now, can you	7	installed?
8	explain to us what you get for the additional	8	A. The Citrix servers will be installed in St.
9	\$193,400 to bring you up to 700,000?	9	John's.
10	A. Could you repeat what makes up the 600 in your	10	Q. At Hydro Place?
11	calculations?	11	A. Yes.
12	Q. No, there is no 600. There is 506,600.	12	Q. How many end-user devices are being retired as
13	A. 500.	13	a result of these 220 new acquisitions, if
14	Q. That includes 73 Neoware devices, 73 desktops,	14	any?
15	73 laptops and \$95,000 to install all of that.	15 ((2:06 p.m.)
16	A. The additional costs would be for the Citrix	16	A. Basically, as I think I indicated when we
17	servers which are required to -	17	started the Evergreen Program in 2000, I
18	Q. Could you spell that for us?	18	believe, we had approximately 850 units and
19	A. C-I-T-R-I-X.	19	when we refresh this time, we'll be refreshing
20	Q. Citrix servers, yes.	20	for approximately 737 units.
21	A. And they will basically interface with the	21	Q. So when you're finished, you'll have 737
22	Neoware boxes.	22	units?
23	Q. How many of those will be acquired?	23	A. Yes.
24	A. I do not have the exact number.	24	Q. And you don't know exactly how many are in
25	Q. Can you find that out for me? (UNDERTAKING)	25	service today, do you?
		_	service today, do you.
	·		
1	Page 155		Page 156
1 2	Page 155 A. About 850.	1	Page 156 individual units of the Neoware devices, we
2	Page 155 A. About 850. Q. 850. So in respect of the installation costs,	1 2	Page 156 individual units of the Neoware devices, we have to take into account their cost
l	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the	1	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of
2 3	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware,	1 2 3 4	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well
2 3 4 5	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops?	1 2 3 4 5	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs,
2 3 4 5 6	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No.	1 2 3 4 5 6	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out?
2 3 4 5 6 7	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that?	1 2 3 4 5 6 7	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here.
2 3 4 5 6 7 8	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box	1 2 3 4 5 6 7 8	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix
2 3 4 5 6 7 8 9	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into	1 2 3 4 5 6 7 8	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or -
2 3 4 5 6 7 8 9	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of	1 2 3 4 5 6 7 8 9	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes.
2 3 4 5 6 7 8 9 10	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the	1 2 3 4 5 6 7 8 9 10	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one
2 3 4 5 6 7 8 9 10 11	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of	1 2 3 4 5 6 7 8 9 10 11 12	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware,
2 3 4 5 6 7 8 9 10 11 12 13	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I	1 2 3 4 5 6 7 8 9 10 11 12 13	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and
2 3 4 5 6 7 8 9 10 11 12 13 14	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I	1 2 3 4 5 6 7 8 9 10 11 12 13	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay. A. I'll confirm that. (UNDERTAKING)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the installation cost to those thin client
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay. A. I'll confirm that. (UNDERTAKING) Q. Yes, okay. So the Citrix servers, I take it,	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the installation cost to those thin client devices, they're coming out at an average
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay. A. I'll confirm that. (UNDERTAKING) Q. Yes, okay. So the Citrix servers, I take it, do nothing other than to serve the thin client	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the installation cost to those thin client devices, they're coming out at an average price of over \$4,000.00 per device? Is that a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay. A. I'll confirm that. (UNDERTAKING) Q. Yes, okay. So the Citrix servers, I take it, do nothing other than to serve the thin client devices, is that correct?	1 2 3 4 4 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the installation cost to those thin client devices, they're coming out at an average price of over \$4,000.00 per device? Is that a correct conclusion?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 155 A. About 850. Q. 850. So in respect of the installation costs, would it be fair to assign one third of the installation costs to each of the Neoware, desktops and laptops? A. No. Q. How would you fairly assign that? A. Basically as part of the Neoware box installation you have to take into consideration the configurational set up of the services, Citrix servers which have the support, so there's not a direct comparison of one-third, one-third, one-third. It's, I don't know what the exact breakdown is, I don't have it here. Q. But there should be more assigned to the Neoware than to the laptops, for instance? A. Yes. Q. Yes, okay. A. I'll confirm that. (UNDERTAKING) Q. Yes, okay. So the Citrix servers, I take it, do nothing other than to serve the thin client	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Page 156 individual units of the Neoware devices, we have to take into account their cost themselves, which is \$87,600.00, the cost of the Citrix servers which is \$193,000well that takes into account the licensing costs, have you broken those out? A. I don't have that detail here. Q. Is the licensing costs just for the Citrix servers or - A. Yes. Q. It is, okay, so that's all part of the one cost. So there's the 87,000 for the hardware, 193,000 for the Citrix servers themselves and something more than a third of \$95,000.00 for the installation? Is that fair? A. Well all I can say is that \$95,000.00 is the installation cost for the 220 units. Q. Okay, if we assign only a third, which your indication was is probably not enough of the installation cost to those thin client devices, they're coming out at an average price of over \$4,000.00 per device? Is that a

Page 158 220 units, I would come out to about \$3,000.00 2 a unit. 3 Q. Pardon me? 4 A. We're looking at 220 units. 5 Q. Yes. 6 A. At about, I indicated approximately 7 \$700,000.00, so that will be 220 divided into 7 700 which is approximately \$3,000.00 unit, 8 maybe a shade over. 10 Q. But I mean, that's lumping them altogether, 10 correct? I'm just talking about the thin 11 client devices now, okay. You told us that 11 the Citrix servers and the thin client devices 12 client devices. If you add up the cost of the 13 client devices. If you add up the cost of the 14 client devices. If you add up the cost of the 15 client devices themselves end up costing 16 more than the laptops, per unit? 17 the installation, part of the \$95,000.00, the 18 thin client devices themselves end up costing 19 more than the laptops, per unit? 21 can't do those calculations without the detail 22 comoving the thin client devices themselves end up costing 23 Q. Would you agree with me that the notion of 24 moving the thin client devices themselves end up costing 25 og. Would you agree with me that the notion of 26 moving the thin client devices themselves end up costing 26 moving the thin client devices themselves end up costing 27 og. Okay, this is the original. Please scroll to 28 the line towards the bottom, Mr. O'Reilly and page I I'm interest 30 in and down at line 19. 4 MR. O'Reill.Y: 5 Q. Is this the supplementary or the original? 5 Own, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page, Yes, there you go. Mr. Haynes, 9 you've identified there that there are four 9 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is indentifying capital 14 environmental regulations, the third relates 15 to ore flability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to full under one of tho	Ju	1y 7, 2003 With	-1 0	ige 14D Hydro 2004 Capital Dudget Application
a unit. 3 Q. Pardon me? 4 A. We're looking at 220 units. 5 Q. Yes. 6 A. At about, I indicated approximately 7 \$700,000.00, so that will be 220 divided into 8 700 which is approximately \$3,000.00 a unit, 9 maybe a shade over. 10 Q. But I mean, that's lumping them altogether, 11 correct? I'm just talking about the thin 12 client devices now, okay. You told us that the client devices proven the hin client devices in the client devices. If you add up the cost of the thin client devices and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices, that thin client devices are supposed to be a more Page 159		Page 157		Page 158
3 A. Yes, they are, and they are. 4 A. We're looking at 220 units. 5 Q. Yes. 6 A. At about, I indicated approximately 570,000,00, so that will be 220 divided into 7500,000,00, so that will be 220 divided into 8 700 which is approximately 53,000,00 a unit, maybe a shade over. 10 Q. But I mean, that's lumping them altogether, correct? I'm just talking about the thin 2 client devices now, day. You told us that 1 client devices now, day. You told us that 1 client devices I'm you add up the cost of the 15 Clirit's servers and the thin client devices of themselves and add an allowance for part of the installation, part of the \$95,000,00, the 18 thin client devices themselves end up costing more than the laptops, per unit? 20 A. I'd have to go back and check my numbers, I 2 can't do those calculations without the detail to determine those costs. 23 Q. Would you agree with me that the notion of 2 client devices are supposed to be a more 1 primary areas of focus in identifying capital projects and you indicate that the first was 1 safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. 2 A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 2 A. A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 2 A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 2 A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 2 A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 3 A. Generally, 2 C. And I take it generally then, capital projects are ment to fall under one of those four 2 categories? 3 A. Generally, 2 C. And I take it generally then, capital projects are me	1	220 units, I would come out to about \$3,000.00	1	economical alternative than a desktop or a
4 Q. Well, perhaps its heat that I leave it with you and you can look at the numbers and let me know why my numbers seem to be coming up showing these things being much more expensive than which is approximately \$3,000.00 a unit, maybe a shade over. 10 Q. But I mean, that's lumping them altogether, correct? I'm just talking about the thin client devices. If you add up the cost of the client devices, If you add up the cost of the client devices and all an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves end up costing more than the laptops, per unit? 20 A. I'd have to go back and check my numbers, I can't do those calculations without the detail to determine those costs. 21 Q. Would you agree with me that the notion of moving the thin client devices, that thin client devices are supposed to be a more client devices are supposed to be a more section, Mr. O'Reilly and page I I'm interest in and down at line 19. 3 MR. KO'RHILLY: 3 Q. No, this is the original. Please scroll to the the towards the bottom, Mr. O'Reilly and page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. 3 M. M. HAYNES. 3 Q. And I take it generally then, capital projects are ment to fall under one of those four categories? 3 A. Yes. 4 Q. Charl, Ido. 5 Q. Chair, I do. 9 Gentlemen, I'd like to start first, if I could with just a quick discussion about your budget process and Mr. Haynes, you will discussion about your budget process and Mr. Haynes, you will discussion about your will different types of projects. And I guess I've application, condready and the project and you indicate that the first was safety, the second is comp	2	a unit.	2	laptop?
5 Q. Yes. 6 A. At about, I indicated approximately 7 \$700,000.00, so that will be 220 divided into 8 700 which is approximately \$3,000.00 a unit, 9 maybe a shade over. 10 Q. But I mean, that's lumping them altogether, 11 correct? I'm just talking about the thin 12 client devices now, oay. You told us that 13 the Clirix servers are purely for the thin 14 client devices. If you add up the cost of the 15 Citrix servers and the thin client devices themselves and add an allowance for part of 16 the installation, part of the \$95,000.00, the 18 thin client devices themselves end up costing 19 more than the laptops, per unit? 10 Q. Would you agree with me that the notion of 10 moving the thin client devices, that thin 11 client devices are supposed to be a more 12 client devices are supposed to be a more 13 client devices are supposed to be a more 14 moving the thin client devices, that thin 15 client devices are supposed to be a more 16 Application, and that would be the production 17 section, Mr. O'Reilly and page I I'm interest 18 thin client devices are supposed to be a more 19 moving the thin client devices that thin 20 Q. No, this is the supplementary or the original? 21 MR. KENNEDY: 22 budget process and Mr. Haynes, you might be 23 describe each of those and that's what I was safety, the second is compliance with environmental regulations, the third relates 15 over on the next page is to reduce cost or improve efficiencies. 16 In the client devices of the second or improve efficiencies. 17 (NOR MILLY: 18 Q. O. No, this is the original projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates 15 over on the next page is to reduce cost or improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects are meant to fall under one of those four categories? 21 A. Generally. 22 A. Generally. 23 A. Generally. 24 C. Generally. 25 A. Generally. 26 A. Generally. 27 A. Or Shara with the device of the second provided t	3	Q. Pardon me?	3	A. Yes, they are, and they are.
A Al about, I indicated approximately 7 S700,000.00, so that will be 220 divided into 7 S700,000.00, so that will be 220 divided into 8 700,000.00, so that will be 220 divided into 7 showing these things being much more expensive 8 than anything else you're buying here. (INDERTAKING) Ifhink, Mr. Chair, subject to anythine, dient devices now, okay. You told us that 12 client devices now, okay. You told us that 13 the Citrix servers are purely for the thin 14 client devices. If you add up the cost of the 15 client devices and add an allowance for part of 16 the installation, part of the \$95,000.00, the 17 the installation, part of the \$95,000.00, the 18 thin client devices themselves and due to go back and check my numbers, I 21 can't do those calculations without the detail 22 to determine those costs. 23 Q. Would you agree with me that the notion of 24 moving the thin client devices, that thin 25 or Q. Britan and down at line 19. 29 Application, and that would be the production 2 section, Mr. O'Reilly and page 1 I'm interest in an adown at line 19. 4 MR. O'REILLY: 4 MR. O'REILLY: 4 MR. O'REILLY: 5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 6 MR. KENNEDY: 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to primary areas of focus in identifying capital projects and you indicate that the first was 3 safety, the second is compliance with 14 environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. 19 A. Yes. 19 Q. And I take it generally then, capital projects are reant to fall under one of those four 22 are meant to fall under one of those four 23 are meant to fall under one of those four 24 are meant to fall under one of those four 25 A. Generally. 24 A. Generally. 25 A. Generally. 26 A. Generally. 27 A. Generally. 27 A. Well we would have Board approval for the should be a project, you wouldn't have needed 25 A. Well we would have be overall Capital Budget, but we not have	4	A. We're looking at 220 units.	4	Q. Well, perhaps it's best that I leave it with
s 700,000.00, so, that will be 220 divided into maybe a shade over. 9 maybe a shade over. 10 Q. But I mean, that's lumping them altogether, client devices now, okay. You told us that 11 client devices now, okay. You told us that 12 client devices now, okay. You told us that 13 the Citrix servers are purely for the thin 14 client devices. If you add up the cost of the 15 Citrix servers and the thin client devices 16 themselves and add an allowance for part of the installation, part of the S05,000,00, the 18 thin client devices themselves end up costing 19 more than the laptops, per unit? 20 A. I'd have to go back and check my numbers, I 21 can't do those calculations without the detail 22 to determine those costs. 23 Q. Would you agree with me that the notion of 24 moving the thin client devices, that thin 25 client devices are supposed to be a more 26 moving the thin client devices, that thin 27 could, with just a quick discussion about your 28 section, Mr. O'Reilly and page I I'm interest 3 in and down at line 19. 4 MR. O'REILLY: 5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified ther that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 19 A. Yes. 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Can't and the would be projects, I was 25 Colon and I was wondering 26 if you could comment on those. The first one 27 improve efficiencies. 28 A. Generally. 29 A. Generally. 20 A. Generally. 20 A. Generally. 20 A. Generally. 21 A. Well we would have Board approval for the 22 categories?	5	Q. Yes.	5	you and you can look at the numbers and let me
8 700 which is approximately \$3,000.00 a unit, maybe a shade over. 9 Robert Face of the maybe as hade over. 10 Q. But I mean, that's lumping them altogether, correct? I'm just talking about the thin correct? I'm just talking about the thin client devices now, okay. You told us that the Citrix servers are purely for the thin client devices. If you add up the cost of the thin client devices and dath an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves and upcosting in more than the laptops, per unit? 10 A. I'd have to go back and check my numbers, I can't do those calculations without the detail to determine those costs. 11 Can't do those calculations without the detail to determine those costs. 12 Q. Would you agree with me that the notion of moving the thin client devices, that thin 25 client devices are supposed to be a more client devices are supposed to be a more part of the more than the section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. 11 Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. 12 Application, and the supplementary or the original? 13 The production of the undertakings, those would be a more page 159 and the first was 16 client devices. If you add up the cost of the installation, part of the \$9.00 the page 1 I'm interest in and down at line 19. 13 The production of the undertakings, those would have at this statisfaction of the undertakings, those would have at this statisfaction of the undertakings, those would have at this statisfaction of the undertakings, those would have at this statisfaction of the undertakings, those would have at this statisfaction of the undertakings, those would in the detail toff the page 159 (O. O. Now, this thank pour.	6	A. At about, I indicated approximately	6	know why my numbers seem to be coming up
maybe a shade over. Name	7	\$700,000.00, so that will be 220 divided into	7	showing these things being much more expensive
10	8	700 which is approximately \$3,000.00 a unit,	8	than anything else you're buying here.
cient devices now, okay. You told us that client devices now, okay. You told us that client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices. If you add up the cost of the client devices are superly for the thin client devices themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves end up costing more than the laptops, per unit? 20	9	maybe a shade over.	9	(UNDERTAKING) I think, Mr. Chair, subject to
12 Client devices now, okay. You told us that the Citrix servers are purely for the thin 13 time for this panel.	10	Q. But I mean, that's lumping them altogether,	10	any further questions that arise out of the
the Citrix servers are purely for the thin client devices. If you add up the cost of the Citrix servers and the thin client devices themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves end up costing the thin client devices themselves end up costing more than the laptops, per unit? 20 A. I'd have to go back and check my numbers. I 20 Q. Gentlemen, I'd like to Sart first, if I 21 can't do those calculations without the detail 21 can't do those calculations without the detail 22 moving the thin client devices, that thin 24 moving the thin client devices, that thin 25 client devices are supposed to be a more 25 budget process and Mr. Haynes, you might be 26 the person best suited to answer those questions. In the direct evice that was filled in support of the Capital Budget 29 different types of treatments afforded to the different types of projects. And I guess I've 3 gof four different approaches, if you will, 4 MR. O'REILLY: 4 daken by Hydro in putting forward a project to help describe each of those and that's what I was 2 going to go through now. And I was wondering 10 projects and you indicate that the first was 3 safety, the second is compliance with 21 cover on the next page is to reduce cost or 10 improve efficiencies. 18 Q. And I take it generally then, capital projects 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Well we would have Board approval for the capital Budget, but we not have	11	correct? I'm just talking about the thin	11	satisfaction of the undertakings, those would
14 Client devices. If you add up the cost of the Citrix servers and the thin client devices the Electron of the Client devices themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves end up costing more than the laptops, per unit? 19 CROSS-EXAMINATION OF PANEL BY MR. MARK KENNEDY: 20 A. I'd have to go back and check my numbers, I can't do those calculations without the detail 21 can't do those calculations without the detail 22 to determine those costs. 22 Q. Would you agree with me that the notion of 24 moving the thin client devices, that thin 25 client devices are supposed to be a more 24 moving the thin client devices, that thin 25 client devices are supposed to be a more 26 moving the thin client devices, that thin 27 different types of treatments afforded to the different types of projects. And I guess I've 28 different types of projects. And I guess I've 29 different types of projects. And I guess I've 20 different approaches, if you will, taken by Hydro in putting forward a project of help describe each of those and that's what I was going to go through now. And I was wondering 16 movinomental regulations, the third relates 16 over on the next page is to reduce cost or improve efficiencies. 17 movinomental regulations, the third relates 18 Q. Chair, I do. Q. Now, clearly if that, in and of itself was 2003 Capital Budget Application, correct? 2003 Capital Budget Application, correct? 21 A. Yes. 22 Q. A. That's correct. 23 A. Yes. 24 movinomental regulations, the third relates 25 over on the next page is to reduce cost or improve efficiencies. 17 over on the next page is to reduce cost or improve efficiencies. 18 MR. HAYNES: 19 Q. Now, clearly if that, in and of itself was 25 over only the projects and the thin the detail 25 over only the movinomental regulations, the third relates 25 over only the movinomen	12	client devices now, okay. You told us that	12	be all of the questions I would have at this
15 Citrix servers and the thin client devices themselves and add an allowance for part of themselves and add an allowance for part of the thin client devices themselves end up costing more than the laptops, per unit? 18 thin client devices themselves end up costing more than the laptops, per unit? 19 more than the laptops, per unit? 20 A. I'd have to go back and check my numbers, I can't do those calculations without the detail to determine those costs. 21 do an't do those calculations without the detail to determine those costs. 22 do Would you agree with me that the notion of least moving the thin client devices, that thin client devices are supposed to be a more line to devices are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line devices are supposed to be a more line to device are supposed to be a more line to device are supposed to be a more line devices are supposed to be a more line devic	13	the Citrix servers are purely for the thin	13	time for this panel.
themselves and add an allowance for part of the installation, part of the \$95,000.00, the thin client devices themselves end up costing more than the laptops, per unit? 20 A. I'd have to go back and check my numbers, I can't do those calculations without the detail conditions with with within to client devices, that thin client devices that their conditions without the detail conditions without the detail will will be prosent and that would be the production of the conditions. In the direct evidence that was glided in support of the Capital Budget Page 159 Page 159 Page 159 Page 159 Page 160 I different types of treatments afforded to the different types of projects. And I guess I've different approaches, if y	14	client devices. If you add up the cost of the	14	CHAIRMAN:
the installation, part of the \$95,000.00, the thin client devices themselves end up costing more than the laptops, per unit? A. I'd have to go back and check my numbers, I can't do those calculations without the detail to determine those costs. O. Would you agree with me that the notion of moving the thin client devices, that thin client devices are supposed to be a more Page 159 Application, and that would be the production so in and down at line 19. AMR. O'REILLY: No. No, this is the original. Please scroll to that page. Yes, there you go. Mr. Haynes, you might be different types of treatments afforded to the different types of treatments afforded to the different types of projects. And I guess I've taken by Hydro in putting forward a project of help describe each of those and that's what I was the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you might be to answer those questions. In the direct evidence that was filed in support of the Capital Budget Page 160 APplication, and that would be the production different types of projects. And I guess I've different types of projects. And I guess I've taken by Hydro in putting forward a project of for approval under it capital Budget Application, and I've used a project to help describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which its de exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its aftery, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is originally and then the four	15	Citrix servers and the thin client devices	15	Q. Okay, Mr. Hutchings, thank you. Mr. Kennedy,
thin client devices themselves end up costing more than the laptops, per unit? A I'd have to go back and check my numbers, I can't do those calculations without the detail to to determine those costs. Would you agree with me that the notion of client devices are supposed to be a more Page 159 Application, and that would be the production and down at line 19. MR. O'REILLY: I nand down at line 19. MR. ENNEDY: O No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, 10 you vie identified there that there are four projects and you indicate that the first was affery, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A Yes. Venically different speroches and Mr. Haynes, 12 dugets discussion about your could on the production dugets discussion. In the direct evidence that was questions. In the direct evidence that was questions. In the direct evidence that was duesting different types of projects. And I guess I've dif	16	themselves and add an allowance for part of	16	do you have some questions?
more than the laptops, per unit? A. I'd have to go back and check my numbers, I can't do those calculations without the detail could, with just a quick discussion about your budget process and Mr. Haynes, you might be constituted and down at line 19. Application, and that would be the production section, Mr. O'Reilly and down at line 19. AMR. O'REILLY: O. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you would reprined there that there are four you've identified there that there are four improve efficiencies. MR. HAYNES: MR.	17	the installation, part of the \$95,000.00, the	17	MR. KENNEDY:
A. I'd have to go back and check my numbers, I can't do those calculations without the detail to determine those costs. Q. Would you agree with me that the notion of moving the thin client devices, that thin client devices are supposed to be a more Page 159 Application, and that would be the production in and down at line 19. MR. O'REILLY: MR. O'REILLY: O, Is this the supplementary or the original? MR. ENNEDY: Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital primary areas of focus in identifying capital safety, the second is compliance with environmental regulations, the third relates over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Well we would have Board approval for the couldn'the fourth, which is categories? A. Well we would have Board approval for the couldn'the fourth, and couldn't have everall Capital Budget to the page 159 different types of treatments afforded to the different types of projects. And I guess I've different types of treatments afforded to the fiferent types of treatments afforded to the different	18	thin client devices themselves end up costing	18	Q. Chair, I do.
can't do those calculations without the detail to determine those costs. Q. Would you agree with me that the notion of moving the thin client devices, that thin client devices are supposed to be a more Page 159 Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? MR. KENNEDY: Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. MR. HAYNES: Amage. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. 21 could, with just a quick discussion about your bludged process and Mr. Haynes, budged there son best suited to answer those the person best suited to answer those the preson best suited to answer those different types of treatments afforded to the different types of projects. And I guess I've different types of treatments afforded to the different types of projects. And I guess I've different types of projects. And I guess I've affect theyes of treatments afforded to the different types of projects. And I guess I've affect different types of projects. And I guess I've affect different types of projects. And I guess I've ago to ur differen	19	more than the laptops, per unit?	19	CROSS-EXAMINATION OF PANEL BY MR. MARK KENNEDY
22 to determine those costs. 23 Q. Would you agree with me that the notion of 24 moving the thin client devices, that thin 25 client devices are supposed to be a more 26 moving the thin client devices, that thin 27 page 159 28 Page 159 1 Application, and that would be the production 29 section, Mr. O'Reilly and page 1 I'm interest 30 in and down at line 19. 4 MR. O'REILLY: 4 taken by Hydro in putting forward a project to help 4 MR. KENNEDY: 5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 6 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 budget process and Mr. Haynes, you might be the person best suited to answer those questions. In the direct evidence that was filed in support of the Capital Budget different types of projects. And I guess I've different types of treatments afforded to the different types of projects. And I guess I've different types of projects. And I guess I've got four different types of projects. And I guess I've different types of projects. And I guess I've got four different types of projects. And I guess I've different types of projects and I guess I've different types of projects. And I guess I've different types of projects. And I guess I've different types	20	A. I'd have to go back and check my numbers, I	20	Q. Gentlemen, I'd like to start first, if I
23 the person best suited to answer those 24 moving the thin client devices, that thin 25 client devices are supposed to be a more Page 159 Page 159 Application, and that would be the production 2 section, Mr. O'Reilly and page 1 I'm interest 3 in and down at line 19. 4 MR. O'REILLY: 5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 projects and you indicate that the first was 12 safety, the second is compliance with 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 a. Generally. 23 the person best suited to answer those questions. In the direct evidence that was filled in support of the Capital Budget Page 169 different types of projects. And I guess I've different approaches, if you will, taken by Hydro in putting forward a project for approval under its Capital Budget Application, and I've used a project to help describe each of those and that's Was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and 11 that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that 13 Hydro put forward initially as part of its 14 2003 Capital Budget Application, correct? 15 A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. 19 Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the \$50,000.00 limit, correct? 2 S.O,000.00 limit, correct? 2 A. Well we would have Board approval for the overall Capital Budget, but we not have	21	can't do those calculations without the detail	21	could, with just a quick discussion about your
respond to the finit client devices, that thin client devices are supposed to be a more Page 159 Page 160 Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects a remeant to fall under one of those four categories? A. Generally. Page 160 different types of treatments afforded to the different types of projects. And I guess I've different approaches, if you will, taken by Hydro in putting forward a project to help describe each of those and that's Capital Budget Application, and I've used a project to help describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Well we would have Board approval for the overall Capital Budget, but we not have	22	to determine those costs.	22	budget process and Mr. Haynes, you might be
Page 159 Page 159 Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of you've identified there that there are four primary areas of focus in identifying capital primary areas of focus in identifying capital safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects a Clercally. A Cenerally. Page 160 different types of treatments afforded to the different types of projects. And I guess I've different types of treatments afforded to the different types of projects. And I guess I've a taken by Hydro in putting forward a project to help describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application,	23	Q. Would you agree with me that the notion of	23	the person best suited to answer those
Page 159 Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of you've identified there that there are four primary areas of focus in identifying capital primary areas of focus in identifying capital safety, the second is compliance with environmental regulations, the third relates over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects a Rage 159 Page 160 different types of treatments afforded to the different types of projects. And I guess I've got four different approaches, if you will, taken by Hydro in putting forward a project for approval under its Capital Budget Application, and I've used a project to help describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Well we would have Board approval for the overall Capital Budget, but we not have	24	moving the thin client devices, that thin	24	questions. In the direct evidence that was
Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: OR Is this the supplementary or the original? OR Is taken by Hydro in putting forward a project to help describe each of those and that's what I was taken by Hydro in putting forward a project to help describe each of those and that's what I was taken by Hydro in putting forward a project to help describe each of those and that's what I was taken by Hydro in putting forward a project to help describe each of those and that's what I was taken by Hydro in putting forward a project to help describe each of those and that's what I was taken by Hydr	25	client devices are supposed to be a more	25	filed in support of the Capital Budget
Application, and that would be the production section, Mr. O'Reilly and page 1 I'm interest in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Ayes. Q. And I take it generally then, capital projects A. Generally. different types of projects. And I guess I've different approaches, if you will, taken by Hydro in putting forward a project to help describe each of those and that's Capital Budget to Application, and I've used a project to help describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Well we would have Board approval for the overall Capital Budget, but we not have		Page 159		Page 160
2 section, Mr. O'Reilly and page 1 I'm interest 3 in and down at line 19. 4 MR. O'REILLY: 5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 different types of projects. And I guess I've 3 got four different approaches, if you will, 4 taken by Hydro in putting forward a project 5 for approval under its Capital Budget 4 paplication, and I've used a project to help 4 describe each of those and that's what I was 8 going to go through now. And I was wondering 9 if you could comment on those. The first one 10 is one you've been examined on already and 11 that's B-5 which is the exciter for No. 7 Unit 12 at Bay D'Espoir. And this is a project that 13 Hydro put forward initially as part of its 14 2003 Capital Budget Application, correct? 15 A. That's correct. 16 Q. And you sought and obtained Board approval to 17 expend \$13,100.00 towards this project? 18 MR. HAYNES: 19 A. Yes. 19 Q. Now, clearly if that, in and of itself was 20 Considered a project, you wouldn't have needed 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was	1	Application, and that would be the production	1	different types of treatments afforded to the
in and down at line 19. MR. O'REILLY: Q. Is this the supplementary or the original? MR. KENNEDY: Q. No, this is the original. Please scroll to the line towards the bottom, Mr. O'Reilly of describe each of those and that's what I was going to go through now. And I was wondering if you could comment on those. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit that's B-5 w	2		2	· -
5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 25 for approval under its Capital Budget Application, and I've used a project to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 going to go through now. And I was wondering 5 if you could comment on those. The first one 6 is one you've been examined on already and 6 that's B-5 which is the exciter for No. 7 Unit 6 at Bay D'Espoir. And this is a project that 7 Hydro put forward initially as part of its 8 2003 Capital Budget Application, correct? 8 A. That's correct. 9 Q. And you sought and obtained Board approval to 16 expend \$13,100.00 towards this project? 18 MR. HAYNES: 19 Q. Now, clearly if that, in and of itself was 19 considered a project, you wouldn't have needed 10 are meant to fall under one of those four 11 Board approval because it doesn't hit the 12 s50,000.00 limit, correct? 13 A. Well we would have Board approval for the 14 overall Capital Budget, but we not have	3		3	7.7 7 7
5 Q. Is this the supplementary or the original? 6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 25 for approval under its Capital Budget Application, and I've used a project to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 poject to help 4 describe each of those and that's what I was 4 going to go through now. And I was wondering 5 if you could comment on those. The first one 6 is one you've been examined on already and 6 that's B-5 which is the exciter for No. 7 Unit 6 at Bay D'Espoir. And this is a project that 7 Hydro put forward initially as part of its 8 2003 Capital Budget Application, correct? 8 A. That's correct. 9 Q. And you sought and obtained Board approval to 16 expend \$13,100.00 towards this project? 18 MR. HAYNES: 19 Q. Now, clearly if that, in and of itself was 19 considered a project, you wouldn't have needed 10 are meant to fall under one of those four 11 Board approval because it doesn't hit the 12 s50,000.00 limit, correct? 13 A. Well we would have Board approval for the 14 overall Capital Budget, but we not have	4	MR. O'REILLY:	4	taken by Hydro in putting forward a project
6 MR. KENNEDY: 7 Q. No, this is the original. Please scroll to 8 the line towards the bottom, Mr. O'Reilly of 9 that page. Yes, there you go. Mr. Haynes, 10 you've identified there that there are four 11 primary areas of focus in identifying capital 12 projects and you indicate that the first was 13 safety, the second is compliance with 14 environmental regulations, the third relates 15 to reliability and then the fourth, which is 16 over on the next page is to reduce cost or 17 improve efficiencies. 18 MR. HAYNES: 19 A. Yes. 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 26 Application, and I've used a project to help 26 describe each of those and that's what I was 27 going to go through now. And I was wondering 28 going to go through now. And I was wondering 29 describe each of those and that's what I was 29 going to go through now. And I was wondering 29 discrete aproject go through now. And I was wondering 20 if you could comment on those. The first one 20 is one you've been examined on already and 21 that's B-5 which is the exciter for No. 7 Unit 21 that's B-5 which is the exciter for No. 7 Unit 22 at Bay D'Espoir. And this is a project that 23 Hydro put forward initially as part of its 24 2003 Capital Budget Application, correct? 26 Q. And you sought and obtained Board approval to 27 expend \$13,100.00 towards this project? 28 A. Yes. 29 Q. Now, clearly if that, in and of itself was 29 considered a project, you wouldn't have needed 20 Board approval because it doesn't hit the 20 categories? 21 Board approval because it doesn't hit the 22 source. 23 A. Well we would have Board approval for the 29 overall Capital Budget, but we not have	5	Q. Is this the supplementary or the original?	5	
describe each of those and that's what I was going to go through now. And I was wondering that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects and go are meant to fall under one of those four care are four provinced. The first one is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that the is at Bay D'Espoir. And this is a project that at Bay D'Espoir. And this is a project that at Bay D'Espoir. And this is a project that at Bay D'Espoir. And this is a project that at Bay D'Espoir. And this is a project that at Bay D'Espoir. And this is a	1		6	
the line towards the bottom, Mr. O'Reilly of that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. 12	7	Q. No, this is the original. Please scroll to	7	
that page. Yes, there you go. Mr. Haynes, you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. you've identified there that there are four is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the 250,000.00 limit, correct? A. Well we would have Board approval for the overall Capital Budget, but we not have	8		8	
you've identified there that there are four primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. Is one you've been examined on already and that's B-5 which is the exciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 7 Unit that's B-5 which is the sciter for No. 10 And the sciter for No. 7 Unit that's B-5 which is the sciter for No. 10 And the sciter fo	9	•	9	
primary areas of focus in identifying capital projects and you indicate that the first was safety, the second is compliance with the environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. In that's B-5 which is the exciter for No. 7 Unit at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the \$50,000.00 limit, correct? A. Well we would have Board approval for the overall Capital Budget, but we not have	10		10	*
projects and you indicate that the first was safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. at Bay D'Espoir. And this is a project that Hydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the \$50,000.00 limit, correct? A. Well we would have Board approval for the overall Capital Budget, but we not have	11	•	11	· · · · · · · · · · · · · · · · · · ·
safety, the second is compliance with environmental regulations, the third relates to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. Bydro put forward initially as part of its 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the \$50,000.00 limit, correct? A. Well we would have Board approval for the overall Capital Budget, but we not have	12	- · · · · · · · · · · · · · · · · · · ·	12	
to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. MR. HAYNES: A. Yes. Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. 14 2003 Capital Budget Application, correct? A. That's correct. Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? A. Yes. Q. Now, clearly if that, in and of itself was considered a project, you wouldn't have needed Board approval because it doesn't hit the \$50,000.00 limit, correct? A. Well we would have Board approval for the overall Capital Budget, but we not have	13	- ·	13	
to reliability and then the fourth, which is over on the next page is to reduce cost or improve efficiencies. 16 Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? 18 MR. HAYNES: 18 A. Yes. 19 Q. Now, clearly if that, in and of itself was 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was 25 A. That's correct. 26 Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? 27 A. Yes. 28 A. Yes. 29 Q. Now, clearly if that, in and of itself was 29 considered a project, you wouldn't have needed 20 Board approval because it doesn't hit the 21 \$50,000.00 limit, correct? 22 A. Well we would have Board approval for the 23 O. Well we would have Board approval for the 29 overall Capital Budget, but we not have	14	*	14	• • •
over on the next page is to reduce cost or improve efficiencies. 16 Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? 18 MR. HAYNES: 19 A. Yes. 19 Q. Now, clearly if that, in and of itself was 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was 26 Q. And you sought and obtained Board approval to expend \$13,100.00 towards this project? 20 expend \$13,100.00 towards this project? 20 Now, clearly if that, in and of itself was 21 considered a project, you wouldn't have needed 22 Board approval because it doesn't hit the 23 Source of the expend \$13,100.00 towards this project? 24 A. Yes. 25 A. Well we would have Board approval for the overall Capital Budget, but we not have	15		15	
improve efficiencies. 17 expend \$13,100.00 towards this project? 18 MR. HAYNES: 19 A. Yes. 19 Q. Now, clearly if that, in and of itself was 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was 26 expend \$13,100.00 towards this project? 27 Q. Now, clearly if that, in and of itself was 28 considered a project, you wouldn't have needed 29 Board approval because it doesn't hit the 20 \$50,000.00 limit, correct? 21 A. Well we would have Board approval for the 22 overall Capital Budget, but we not have	16	•	16	Q. And you sought and obtained Board approval to
18 MR. HAYNES: 19 A. Yes. 19 Q. And I take it generally then, capital projects 20 Q. And I take it generally then, capital projects 21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was 25 A. Yes. 26 Q. Now, clearly if that, in and of itself was 27 considered a project, you wouldn't have needed 28 Board approval because it doesn't hit the 29 \$50,000.00 limit, correct? 20 A. Well we would have Board approval for the 21 overall Capital Budget, but we not have	17		17	
Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. Q. In reviewing your Schedule B projects, I was 20 considered a project, you wouldn't have needed 21 Board approval because it doesn't hit the 22 \$50,000.00 limit, correct? 23 A. Well we would have Board approval for the 24 overall Capital Budget, but we not have	18	-	18	
Q. And I take it generally then, capital projects are meant to fall under one of those four categories? A. Generally. Q. In reviewing your Schedule B projects, I was 20 considered a project, you wouldn't have needed 21 Board approval because it doesn't hit the 22 \$50,000.00 limit, correct? 23 A. Well we would have Board approval for the 24 overall Capital Budget, but we not have	1			
21 are meant to fall under one of those four 22 categories? 23 A. Generally. 24 Q. In reviewing your Schedule B projects, I was 25 Board approval because it doesn't hit the 26 \$50,000.00 limit, correct? 27 A. Well we would have Board approval for the 28 overall Capital Budget, but we not have	1			•
22 categories? 22 \$50,000.00 limit, correct? 23 A. Generally. 23 A. Well we would have Board approval for the 24 Q. In reviewing your Schedule B projects, I was 24 overall Capital Budget, but we not have	1			1 0 0
23 A. Generally. 23 A. Well we would have Board approval for the 24 Q. In reviewing your Schedule B projects, I was 24 overall Capital Budget, but we not have	1			
24 Q. In reviewing your Schedule B projects, I was 24 overall Capital Budget, but we not have	1	_		
	1	•		
				-

- Q. And could you tell me what's the purpose of 1 the \$12,000.00 budget for engineering work at 2 that point? 3
- A. Generally in the engineering department, if 4 it's a capital job, they charge their time off 5
- to a capital job cost and if we were going to 6 spend "X" number of personal weeks on a 7
- particular project which we had full 8
- confidence or at least a good degree of 10 confidence would actually translate into a
- capital budget, we would prefer to charge that 11
- time to the capital. We don't have a "slush" 12
- fund for capital projects. I mean, we do 13
- things off the side of the desk, obviously, as 14
- anybody does, but this is a defined project. 15
- 16 This is engineering time usually later in the fall to prepare the specification to ensure
- 17
- that we are ready to go to tender and have a 18
- project that we can deliver in the early 19 schedule. 20
- 21
- Q. Okay, so if I'm gathering you correctly then, the intention at least is that when you seek 22
- approval from the Board, as was the case for 23
- this particular project, for an engineering 24
- related expenditure, in this case of 25

you're showing now in this -

- Page 163

24

- A. I don't recall if it was the exact same 2
- 3 number. We do do a review and just do a reality check, you know, as we indicated in 4
- 5 other testimony this morning, I mean the
- numbers are generally plus or minus ten 6
- percent. If it's in the ballpark, we 7 8
 - generally don't change it unless something
- 9 came to light to indicate there was a specific
- need to revise the numbers. Generally they 10
- 11 stay more or less the same, but they can 12 change.
- 13

1

2

- Q. Because I think it was the case that according to the revised section F that was filed, that 14 15 that \$13,000.00 hadn't been spent yet.
- A. Not yet, that's a resource issue with the 16 engineering staff themselves. 17
- Q. Sure. You're up to your eyeballs with Granite 18 19 Canal and everything else.
- A. Generally speaking and other jobs, yes. 20
- Q. And other jobs. But if it hadn't been spent, 21
- then presumably the detailed engineering work 22
- has not been done. 23
- A. If will if the intention is to complete it 24 25 this fall.

\$12,000.00, that's so Hydro can do the

Page 162

- 1 detailed engineering that's required to set 2
- yourself up for a tender and a purchase in the 3
 - main part of the project in the subsequent
- capital year? 5

4

7

10

- A. To prepare specifications, occasionally to 6
 - hire consultants if it's a technical expertise
- 8 that we need, such as we did for the, for
- instance the energy management system. Like,
 - we will not be placing an order for the energy
- management system until late fall or early 11
- next year, pending the approval, but that 13 12
- million dollars would have included consulting 13
- fees as well for specialists in that area. So 14
- it can take two or three forms, but typically 15
- 16 and ideally there was no tender award.
- Occasionally it was a multi-year job. Granite 17 Canal, for instance, we obviously had to make 18
- 19 commitments.
- 20 (2:16 p.m.)
- Q. So when Hydro put forward this budget, this 21
- project in particular, as part of its 22 2003
- 23 Capital Budget Application which would have
 - been taken in 2002, was the numbers projected
- for your 2004 expenditure the same as what 25
- Page 164
- Q. Okay. 1
 - A. It will be done.
- 3 Q. And that after that detailed engineering work
- is done, you would at that point, presumably 4 5 issue a tender?
- A. Yes. 6

8

19

- 7 Q. And based on the replies to those tenders,
 - you'd pick the lowest cost bidder or what you
- 9 feel is the best price for performance that
- you're receiving? 10
- 11 A. The evaluated tender that meets their needs,
- it may not be the absolute lowest cost, but it 12
- would be justified; typically it is, but not 13
- always. 14
- 15 Q. Right. And then if there's an adjustment, it's made in the following capital year, it 16
- just a variance on your Schedule F again from 17
- what you're projecting you were going to spend 18
 - in 2004 to what you actually spent?
- A. Yes, I mean, when the capital job cost is 20 21
 - closed, it might be \$700,000.00. It might be
- \$783,000.00, there are limits where they can 22 23
- go above and beyond before they have to come back for approval. But typically speaking, we 24
 - are--our intention and our desire is to come

- in basically not to exceed the budget.
- 2 Q. Okay, let's just look at another one, B-16,
- and that's the--again, just trying to pick
- 4 ones that you've already looked at and asked
- 5 questions on and gave replies to. And this is
- 6 the replacement of the loader backhoe. And
- again, this was one of these projects that you
- put forward as part of the 2003 Capital Budget
- 9 Application.
- 10 A. That's correct.
- 11 Q. And there was a very small amount there for engineering again, \$3,000.00?
- 13 A. That's done by our Bishop Falls staff and our
- 14 fleet management, they would just basically do
- a specification and be prepared to go to
- tender. Sometimes they're long delivery,
- sometimes it's not. It's their best guess,
- they need to do some preliminary work prior,
- and we would like to have that piece of
- 20 equipment, obviously, early in the year before
- we start the summer maintenance program. So
- we'd be looking for an earlier delivery than -
- 23 Q. You'd want an early 2004 delivery on the
- 24 backhoe?
- 25 A. Preferably, if at all possible.

- Page 166

 Q. So again it's a case of your engineering work
 - sets you up with a detail specification of the
 - 3 type of equipment you actually want order
 - fulfilled?
 - A. That's correct.
 - 6 Q. But now, if we go back to the exciter project
 - again, B-5, in this one you say that the
 - 8 exciter will be an ABB Unitrol P, similar to
 - 9 that used on Units 1 to 6 in Bay D'Espoir?
 - 10 A. Yes.

4

5

7

11

21

24

25

2

- Q. So in the case of project B-5, you've got a
- specific piece of equipment in mind?
- 13 A. We have a general piece of equipment in mind
- to maintain standards in training to reduce
- those costs, but when it comes down to the
- specific machine, its program and parameters
- for Unit No. 7 would not be the same as for
- Units No. 1 and 6. There are differences
- between the units, there's different--it's a
- 20 different size turbine, there's a different
 - generator, different limits that it has to
- 22 abide by to protect -
- 23 Q. Sure. It's not as simple, as I think has
 - already been indicated, it's not a simple off
 - the shelf plug and play kind of arrangement.

Page 167

- 1 A. No, no.
- 2 Q. There's engineering involved, but you have
- more of a lock on the specifics of what piece
- 4 of equipment you're looking for, right?
- 5 A. Yes.

8

25

- 6 Q. In the case of B-16, backhoe is just a
- backhoe, I take it colour, shape doesn't
 - really to Hydro, just as long as it meets the
- 9 specifications?
- 10 A. I would assume so. In Churchill Falls they
- had a preference for a certain type of machine
- and Hydro, I think it's a bit less, but in
- 13 Churchill there's a slight different reason
- for that. Services here from different
- vendors are more available.
- 16 O. Right.
- 17 A. I'm assuming, I did not ask if they wanted a
- specific, for instance, Catapiller, or
- whatever, I assume it's open to the lowest
- 20 acceptable tender that can do the job, as long
- as he meets the specification.
- 22 Q. And then we have, of course, B-71 which is the
- 23 VHF project. And as I think--and I've got
- some detailed questions about the VHF project
 - itself, but I think it's fair to say that at

- this point in time the project figures
 - provided in B-71 are Hydro's best estimates of

Page 168

- 3 the amount of money that this is going to
- 4 require?
- 5 A. Yes, as are essentially all the Capital Budget
- 6 proposals, they are based on our best estimate
- and most of the time, if not all the time, I'm
- sure occasionally we miss, but by and large we
- 9 don't do too bad on -
- 10 Q. Okay, but the thing that differentiates B-71
- from, for instance, the backhoe project or the
- exciter project is that as opposed to the
- exciter project where you have a specific
- piece of equipment in mind and as opposed to
- the backhoe project where you know you're
- buying a backhoe, in B-71 you're using
- estimates but you're also at this point, if
- 18 I'm gathering correctly, and I guess we can
- ascertain that or hopefully it already has
- been, you're leaving your options open about
- 21 exactly what piece of equipment you're going
- to end up buying.

- 23 A. We would--the approach that would be taken 24 would be to go out with a functional
 - specification, this is what we need to do our

 Page 165 Page 168

l .	7, 2005 Wint	i-i ag	c 11L Hydro 2004 Capital Budget Application
	Page 169		Page 170
1	job and we would be open to vendors who bid	1	you apply for a small amount of engineering
2	any system and we would evaluate it based on	2	budgetary approval in order to do more
3	the costing, reliability and other issues.	3	detailed analysis on generating a spec, so
4	And we will come up with a preferred vendor.	4	that you can then come to the Board and seek
5	Q. And I guess particularly in the case where you	5	specific approval for the larger amount based
6	have a multi-year project, there's time to	6	on a specific piece of equipment and a
7	make subsequent adjustments in what your	7	specific budget item?
8	actual capital cost comes in at, verses what	8	A. I would suggest and Mr. Downton can interrupt
9	your best estimate is at this point?	9	me if I'm wrong, but when we go out for an
10	A. What we had provided in one of the RFI's was	10	exciter, we basically know the parameters,
11	that depending on where Work Services &	11	specific typing of parameters, it has to have
12	Transportation were, for instance, you know,	12	a certain voltage, a certain current
13	if they made a capital contribution, that we	13	capability and a certain, you know, transfer
14	would actually revise the 2005 cash	14	function, if you will, certain characteristic
15	requirements to reflect that. And if weI	15	of when it's operating for voltage change and
16	would also suggest that in 2004, if we go out	16	current changes. On a backhoe we know we need
17	with a functional specification and Motorola,	17	to be able to have certain reach and so on.
18	Aliant, I really don't care who comes back and	18	On the VHF, if you go out with an RFP, what
19	it meets with the specification and does the	19	we're looking for is a VHF radio system and
20	job and there is a revised number for the	20	there are so many multitude of different ways
21	latter cash flow, that we would also revise	21	to do it, you know. Nobody inwe have used
22	that in a subsequent submission to the Board.	22	examples of Passport and the other ones to
23	Q. And can I ask why in this case, in B-71, Hydro	23	come up with what we think is a reliable
24	wouldn't have considered taking the approach	24	estimate to do the job, but we have not
25	similar to what you did in B-5 and B-16 where	25	pitched on the final solution. On the exciter
	Page 171		Page 172.
	Page 171 for Bay D'Espoir, it has to be, for instance.	1	Page 172 about, but I don't know the specifics.
1 2	for Bay D'Espoir, it has to be, for instance,	1 2	about, but I don't know the specifics.
2	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is,	2	about, but I don't know the specifics. Q. And you'll see in the project description it
2 3	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But	2 3	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment
2 3 4	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we	2 3 4	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures."
2 3 4 5	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or	2 3 4 5	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X"
2 3 4 5 6	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF.	2 3 4 5 6	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if
2 3 4 5 6 7	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe.	2 3 4 5 6 7	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a
2 3 4 5 6 7 8	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has	2 3 4 5 6	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles
2 3 4 5 6 7 8 9	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber	2 3 4 5 6 7 8	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And
2 3 4 5 6 7 8 9	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things	2 3 4 5 6 7 8 9	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr.
2 3 4 5 6 7 8 9 10	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined.	2 3 4 5 6 7 8 9 10	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer.
2 3 4 5 6 7 8 9 10 11	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes?	2 3 4 5 6 7 8 9 10 11	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have
2 3 4 5 6 7 8 9 10 11	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? AR. DUNNE:	2 3 4 5 6 7 8 9 10	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense.
2 3 4 5 6 7 8 9 10 11 12 13 N	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really.	2 3 4 5 6 7 8 9 10 11 12 13 14	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So
2 3 4 5 6 7 8 9 10 11 12 13 N	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two	2 3 4 5 6 7 8 9 10 11 12 13	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece
2 3 4 5 6 7 8 9 10 11 12 13 14 15	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as	2 3 4 5 6 7 8 9 10 11 12 13 14 15	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full
2 3 4 5 6 7 8 9 10 11 12 13 N 14 15 16 17 18 19	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I think isI don't think that's in production,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full specifications of how that piece of equipment
2 3 4 5 6 7 8 9 10 11 12 13 N 14 15 16 17 18 19	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I think isI don't think that's in production, I think that's -	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full specifications of how that piece of equipment is going to be installed and so on, you've got
2 3 4 5 6 7 8 9 10 11 12 13 N 14 15 16 17 18 19 20 N	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I think isI don't think that's in production, I think that's - MR. HAYNES:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full specifications of how that piece of equipment is going to be installed and so on, you've got B-16 which is the backhoe which is just the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 N	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I think isI don't think that's in production, I think that's - MR. HAYNES: A. That's really TRO.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full specifications of how that piece of equipment is going to be installed and so on, you've got B-16 which is the backhoe which is just the general idea of the equipment you need and
2 3 4 5 6 7 8 9 10 11 12 13 N 14 15 16 17 18 19 20 N 21 22	for Bay D'Espoir, it has to be, for instance, 237 volts and 17,000 amps or whatever it is, which I don't know the details offhand. But there's a lot more certainty about what we need at the end of the day for a backhoe or for an exciter than there is for the VHF. Q. Well you already know you need a backhoe. A. We know we need a backhoe, we know that it has to reach "X" number of feet or has rubber tires or whatever the case is. Those things are already defined. Q. Mr. Dunne, do you want to correct Mr. Haynes? MR. DUNNE: A. Not really. Q. The other type of category I had was two examples, one is B-39 and one is as good as the other, which is service extensions which I think isI don't think that's in production, I think that's - MR. HAYNES: A. That's really TRO. Q. That's outside your bailiwick, but if I could	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	about, but I don't know the specifics. Q. And you'll see in the project description it says, "This project is an annual allotment based on past expenditures." A. Which basically is that every year we have "X" number of service extensions, you know, if somebody builds a house or builds a subdivision, we have to obviously stick poles and design a distribution system to suit. And subject to correction by Mr. Reeves or Mr. Martin, I'm quite sure that's the answer. Based on past practice, every year we have this recurring expense. Q. Sure, it's an historical expenditure. So we've got the exciter which is specific piece of equipment, but you still need to do engineering work on in order to get the full specifications of how that piece of equipment is going to be installed and so on, you've got B-16 which is the backhoe which is just the general idea of the equipment you need and then you're just looking for a tender toan

Page 173 of temperatures. But by and large, that the day. 1 1 2 A. It's a system that we need to acquire to 2 covers most of the issues. replace the current system. Q. Okay, I guess we can turn to the VHF project 3 3 Q. And then you've got project's life service itself and I guess Mr. Dunne, you'll be the 4 4 extension which are just based on historical one handling some of those questions, although 5 5 6 expenditures and that's what you figure you're I think Mr. Dunphy might want to wade in on 6 7 going to end up having to spend this year with some parts as well. And the first thing I 7 some escalation, if that's appropriate? would like to start with if I could, Mr. 8 8 O'Reilly, is the telecommunication plan. It's A. Yeah. 9 10 Q. Is there any other sort of you can think of 10 an attachment to NP-1. And I'm looking for conceptually, a capital project that Hydro page 15, Mr. O'Reilly. Now this is actually 11 11 would need to put forward in either this in the section dealing with, as you will see 12 12 budget or other ones that you wouldn't be able the east-west interconnection microwave radio 13 13 to fit into one of those four categories systems, Mr. Downton, but it's a statement 14 14 that's close to the bottom of the page, Mr. 15 neatly? 15 16 A. No, I don't think offhand there are any there 16 O'Reilly. There's no line numbers of this, but it's the last paragraph. I just wanted 17 17

from the point of view of category four on a cost basis, but we did have one a couple of years ago which you may remember was a reheater retubing in No. 3 Holyrood. We had a problem there and there was a payback overtime based on increased deficiency, so that would have justified on two reasons, one being the economics was there; secondly, it solved an operating problem that we had on the control

Page 176

operating costs? 1

2 (2:30 p.m.)

18

19

20

21

22

23

24

25

16

17

18

19

20

21

22

23

24

25

3 MR. DOWNTON:

- A. That is a fair assessment, that's one of 5 several objectives that were put forward with the telecommunication plan. I guess the most 6 important objective of the telecommunication's 7 plan was to put forward a plan that would look 8 9 after the replacement of the obsolete technologies; in particular, Powerline Carrier 10 11 and Microwave Infrastructure, Infrastructure that we had in our system as of 12 1995, and that's where the telecommunication's 13 plan grew from. 14 15
 - Q. If we could just go over to page 23 and this is in your actual VHF mobile radio section part of this telecommunication plan, and it's point No. 3. "Aliant is getting out of the mobile radio business and concentrating primarily on cellular. This technology is not a viable alternative for a generation and transmission utility." And I take it given generally the comments that you've made so far, Mr. Downton, while on the stand, that

- A. Cellular is not a viable alternative?
- 2 Q. Well no, that Aliant is still getting out of the mobile radio business and concentrating 3 primarily on cellular? 4

first to get you to confirm whether this

statement applies generally, as it would seem

to imply through that sentence, to your whole

telecommunication plan or whether it's just in

Company's reliance on leased services and thus

relation to this microwave radio system, but

that the long-term objective is to reduce the

improve system availability and reduce

A. Yes.

18

19

20

21

22

23

24

25

1

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Page 175

Q. Okay, and if we go to the Business Case for the VHF Replacement Project and page 2, Mr. O'Reilly, the paragraph starting with "Ownership of the MRS", and about halfway through that there's a sentence that starts, "As an example, Aliant has reduced the coverage and service for its mobile telephone system as Cellular Telephony has eliminated most of the customer base and it has now sought permission from its regulator to discontinue this service completely. Ownership of the utilities, MRS, brings control of the critical piece of infrastructure required to operate and maintain the electrical grid of a major utility." So that's a one, two of Aliant's-confirmation again that Aliant from your vantage point is no longer interested in maintaining a mobile radio system and that ownership of your communication systems, a

that's the position you still hold?

July	7 9, 2003 Mult	i-Pa	ge MNL Hydro 2004 Capital Budget Application
	Page 177		Page 178
1	policy based decision that this utility has	1	by Aliant, isn't it in the Gander property?
2	made?	2	A. Gander central office, yes.
3	A. I guess with regards to the first sentence, it	3	Q. Now, let's just presuppose for a moment that
4	is still our understanding that Aliant is	4	Hydro selects the Passport System and
5	wanting to remove itself from "mobile radio	5	implements it as it would seem to be the
6	business". I guess with regards to the last	6	current thinking about the way that that might
7	one, the ownership issue, as I indicated in	7	take place, if you were to proceed that route,
8	the presentation, right now there does not	8	and you were to also move your sites as
9	exist an alternative but for Hydro to own its	9	anticipated as well in conjunction with all of
10	infrastructure; however, as I indicated when	10	that, you would have a total of 35 sites, I
11	and if we go to tender, we will entertain a	11	think is the intention?
12	leasing option and evaluate it as such.	12	A. That is the intention.
13	Q. Okay, but you currently have how many sites,	13	Q. And how many would be owned by Aliant?
14	repeater sites on the Island now?	14	A. I believe I indicated 21 and Hydro would have
15	A. Twenty-nine and approximately 26 are Aliant's.	15	14.
16	Are you talking for the mobile radio?	16	Q. And there's no switch under that scenario, so
17	Q. Yes, for the VHF system.	17	we don't have to worry about that.
18	A. Existing system.	18	A. That's right.
19	Q. Yes, your existing VHF system, has 29 repeater	19	Q. Okay, Work Services & Transportation, it is
20	sites?	20	indicated in Hydro's discussions with Work
21	A. Sites, that's correct.	21	Services it is hoped that Work Services
22	Q. And 26 of them are owned by Aliant?	22	participates in this project, both in a
23	A. Yes.	23	contribution towards the capital cost, as well
24	Q. Three are owned by Hydro, plus the switch and	24	as a contribution towards the ongoing
25	the switch is owned right now, well maintained	25	operating and maintenance costs, correct?
	Page 179		Page 180
1	A. Yes, that is correct.	1	foot the bill for fifty percent of the capital
2	Q. And that Hydro's position is, and I believe	2	cost of this project and agree to pay fifty
3	this was in response to questions from counsel	3	percent of the operating and maintenance cost
4	from Newfoundland Power in particular, that	4	on an ongoing basis, that they would want to
5	Hydro believes that a fair allotment of the	5	exercise some element of ownership or control
6	cost between yourselves and Work Services &	6	over the system? Would you not anticipate
7	Transportation would be in the order of	7	that?
8	fifty/fifty?	8	A. There has not been that indication to us. I
9	A. That's correct.	9	guess what we would look at is providing an
10	Q. And is that generally the arrangement that you	10	agreed upon level of service because at the
11	have with Work Services & Transportation under	11	end of the day they will, I guess, Hydro has
12	your existing arrangement with them?	12	the expertise, I guess, to manage it if at the
13	A. Under the existing arrangement, it covers	13	end of the day it ends up as, well Hydro owned
14	fifty/fifty on the operational costs.	14	facilities, and we would provide a contractual
15	Q. And we know the technology was put in 15 years	15	level of service for the overall system.
16	ago, soI don't know, are you aware of	16	Q. It seems odd though that if I'm willing to
17	whether Work Services & Transportation	17	participate in fifty percent of the capital
18	participated in the capital cost of the	18	cost of a fairly expensive piece of equipment
19	existing system when it was installed 15 years	19	that I wouldn't want to exercise any
20	ago?	20	ownership, control over it or put a tentacle
21	A. No, basically the system from my recollection	21	in there somehow to make sure that this system
22	was installed in '88/'89 and I believe that	22	is run and operated and maintained, added on,

23

24

25

whatever, in accordance with my best

A. Yes, and the way I would see that being done

interests, as well as Hydro's?

Work Services came on in 1993.

Q. Okay. Would you anticipate that if Work

Services & Transportation was to, as hoped,

23

24

Page 18	3
---------	---

- is through a contractual service, well what I 1
- 2 call service level agreement which would
- specify the level of service that I, as a user 3
- and owner of that, would expect to receive and 4
- also a process to look after any additions to 5
- 6 the, or expansions to the system et cetera. Q. So that's a speculative one, but at least we
- know that even under a scenario that Hydro is 8
- putting forward now that if you, at the end of
- 10 the day, have 35 sites in the Province and 21
- of them are still on Aliant sites, that you 11
- really still have a mix, don't you, of owned 12
- and leased? 13
- 14 A. Yes.

7

21

1

23

- 15 Q. And so while the stated corporate objective is
- 16 to own this communication's system, in reality
- the ownership is still in a large measure with 17
- Aliant, isn't it, by virtue of the fact that 18
- most of your sites are on Aliant sites and you 19
- end up leasing back and entering into service 20
 - agreements with Aliant?
- 22 A. Yes, that's correct.
- Q. But as I understand it, Hydro does not want to 23
- become a common carrier, as it's known? 24
- A. That is correct. 25

Page 182

- Q. And could you just explain to the panel 1 members what your understanding of a common 2
- carrier is? 3
- A. I guess if Hydro were to be a common carrier, 4
- say for mobile communications, if say a fire 5
- department, say in Blaketown wants VHF mobile 6
- service and they approach Newfoundland and 7
- Labrador Hydro, then we are obligated to 8
- provide that service, as long as we have 9
- 10 coverage in that area. So we cannot turn back
- anyone who comes to the table to ask for 11
- service if we can accommodate them within the 12
- designed parameters of the system. It's no 13
- different than Aliant providing telephone 14
- service. They cannot say no. 15
 - Q. And why does Hydro not want to be a common
- carrier? 17

16

24

25

1

2

3

4

5

6

7

8

9

10

11

12

- A. Primarily that's not our core business. Our 18
- core business is not telecommunications, it's 19
- an integral part of supporting our core 20
- business infrastructure, as well, I guess one 21
- of the other aspects is we are not staffed for 22
- 23 it and also, but more importantly, it brings a
 - whole new regulatory regime that Industry
 - Canada and CRTC that for what we would look

Page 183

- at, would not make sense.
- Q. You feel like you've had enough regulation, I 2
- 3 take it?
- 4 A. I won't comment on that.
- 5 Q. The only thing is if you go to your
- telecommunication plan again, page 26, I think 6
- Mr. O'Reilly. In that paragraph starting with 7
- "Utilities that have made" -8
- 9 A. Yes.
- 10 Q. And this is in a discussion cost summary
- 11 project status and capital cost and then it's
- in your conclusion section, actually. And you 12
- 13 go utilities have made an investment in high
- capacity and so on and so on. But it goes, 14
- the last sentence, "with a privately owned 15
- high capacity telecommunication network, band 16
- width is readily available for internal high 17
- speed data transfer or for the generation of 18
- 19 additional revenue by leasing any excess band
- width to third parties." 20
- A. And that option is not there unless we become 21
- a common carrier. I guess we -22 Q. But it's expressed there as a, I take it, you
- know, from the statement that it's expressed 24
- that that might be something Hydro would do 25

- with a privately owned system, band width is readily available to yourself or for the additional generation of additional revenue for Hydro by selling this excess band width or leasing it out. So you're saying that that's not -
- A. To enter into competition? Basically no, that has not even been considered and as far as I know will not be considered. When we looked at the microwave infrastructure expansion very early on in the process, we did have a meeting with Aliant and we basically laid out all our
- communication's plans and we told them 13 14
- definitively that we have no desire to enter into competition with Aliant. There are 15
- opportunities, yes, there are opportunities 16
- out there to generate additional revenue. 17
- Some of our sites we have Aliant cellular 18 19 sites on, so we backhaul some T-1s for them to
- generate some additional revenue and in the 20
- 21 case of the Bay D'Espoir system, they went and paid for the overbill cost, so we could
- 22 provide--both parties could provide a cost-23
- effective solution for both Hydro and Aliant 24 services into the Bay D'Espoir area. But 25
 - Page 181 Page 184

Page 184

	TITUTE I	age	NL Hydro 2004 Capital Budget Application
	Page 185		Page 186
1 other than that, there is no other desire to	1		to maintain that level of comfort on the
2 enter into competition.	2		system?
3 Q. Okay. Chair, that's a good place to take a	3	A	. That's correct.
4 break.	4	Q.	. And as I think it's been shown by your
5 CHAIRMAN:	5		Appendix 8 in the business case that you're
6 Q. Okay, Mr. Kennedy. We'll come back in fiftee	en 6	;	starting to experience some, what could be
7 minutes.	7	,	described as flaky performance on the switch
8 (BREAK AT 2:44 P.M.)	8	;	itself?
9 (3:00 p.m.)	9	A	. That's correct.
10 CHAIRMAN:	10	Q.	. Just curiosity, can the switch be taken out of
11 Q. Okay, Mr. Kennedy.	11		service in order to service it?
12 MR. KENNEDY:	12	A	. No.
13 Q. Thank you, Chair, Commissioners. Mr. Down	iton, 13	Q	. And so as far as the justification for the
I wonder if we could just start with some	14		project goes, a replacement for the VHF system
really simple givens. Given is that Hydro's	15		is needed because it's presently unreliable,
proposal at its absolute essence is it's	16	i	it exposes your employees to safety issues,
seeking approval to replace its existing VHF	17	,	and also, it itself then creates potential
18 system.	18		reliability issues for your transmission or
19 MR. DOWNTON:	19	1	electrical generation system?
20 A. That's correct.	20	A	. That's correct.
21 Q. And the reason for this, is that it's fifteen-	21	Q	. Now so once the conclusion is reached that a
year-old technology. It's been manufacturer	22		replacement of VHF is warranted, based on
discontinued in certain aspects?	23		those, it's a matter of then choosing the
24 A. Yes.	24		replacement, correct?
25 Q. Your difficulty in acquiring spares in order	25	A	. That's correct.
	Page 187		Page 188
1 Q. And would you agree with me that in choosing			that ultimately, it has to be a reliable
1 Q. And would you agree with me that in choosing	g a 1		that ultimately, it has to be a fellable
1	g a 1 2		system, whatever you put in place.
	2		•
2 replacement, really you have two things that	2	MR.	system, whatever you put in place.
2 replacement, really you have two things that 3 you need to consider. There's business	3	MR.	system, whatever you put in place. DUNPHY:
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's	2 3 4	MR. A	system, whatever you put in place. DUNPHY: Yes, that's true.
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made?	2 3 4 5	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct.	2 3 4 5 6	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve	2 3 4 5 6 7	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances,	2 3 4 5 6 7 8	MR. A. Q	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like?	2 3 4 5 6 7 8 9	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct.	2 3 4 5 6 7 8 9 10	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Province of the discussion we just had as to	2 3 4 5 6 7 8 9 10 11 11 12	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Por instance, the discussion we just had as to whether Hydro would be interested in becoming	2 3 4 5 6 7 8 9 10 11 11 12	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology?
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Per instance, the discussion we just had as to whether Hydro would be interested in becoming a common carrier would be a business decision	2 3 4 5 6 7 8 9 10 11 11 12 9n, 13	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors,
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems?	2 3 4 5 6 7 8 9 10 11 12 on, 13 14	MR. A. Q. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes.
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Por instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been	2 3 4 5 6 7 8 9 10 11 12 on, 13 14	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr.
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common carrier.	2 3 4 5 6 7 8 9 10 11 11 12 on, 13 14 15 arrier 16	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common car for that.	2 3 4 5 6 7 8 9 10 11 11 ng 12 on, 13 14 15 arrier 16	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common ca for that. Q. No, exactly, but the decision not to become a	2 3 4 5 6 7 8 9 10 11 12 on, 13 14 15 arrier 16 17 18	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common car for that. Q. No, exactly, but the decision not to become a common carrier is not a technology decision.	2 3 4 5 6 7 8 9 10 11 11 12 13 14 15 16 17 18 19	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is at page 28 of his report, and specifically
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common car for that. Q. No, exactly, but the decision not to become a common carrier is not a technology decision. It's a business decision?	2 3 4 5 6 7 8 9 10 11 11 12 on, 13 14 15 arrier 16 17 18 19 20 21	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is at page 28 of his report, and specifically paragraph 11.3.1, that the technology,
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common ca for that. Q. No, exactly, but the decision not to become a common carrier is not a technology decision. It's a business decision, that's correct.	2 3 4 5 6 7 8 9 10 11 ng 12 on, 13 14 15 arrier 16 17 18 19 20 21 22	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is at page 28 of his report, and specifically paragraph 11.3.1, that the technology, especially in this field, in this area, is
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common car for that. Q. No, exactly, but the decision not to become a common carrier is not a technology decision. It's a business decision, that's correct. Q. Okay. In regards to the technology decisions,	2 3 4 5 6 7 8 9 10 11 ng 12 on, 13 14 15 arrier 16 17 18 19 20 21 22	MR. A. Q.	system, whatever you put in place. DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is at page 28 of his report, and specifically paragraph 11.3.1, that the technology, especially in this field, in this area, is advancing rapidly and with that, changing
replacement, really you have two things that you need to consider. There's business decisions that need to be made, and there's technology decisions that need to be made? A. That's correct. Q. And the business decisions would involve elements such as cost, partners and alliances, financing, and the like? A. That's correct. Q. For instance, the discussion we just had as to whether Hydro would be interested in becomin a common carrier would be a business decisio in relation to your communication systems? A. Well, that's the decision that's already been made. Hydro would not become a common car for that. Q. No, exactly, but the decision not to become a common carrier is not a technology decision. It's a business decision, that's correct. Q. Okay. In regards to the technology decisions, I think Mr. Dunphy actually described that you	2 3 4 5 6 7 8 9 10 11 ng 12 nn, 13 14 15 arrier 16 17 18 19 20 21 22 u 23	MR. A. Q. Q. A. A. A. A.	DUNPHY: Yes, that's true. And in the technology decisions, would you agree that the three main things that would need to be considered are the type of technology that's ultimately employed, the supplier availability for the type of technology that is ultimately selected and then the support that is available in regards to that technology? Those are three highly significant factors, yes. Now, as I think it was pointed out by Mr. Downton during one of his cross-examinations that Mr. Cook himself, in his report, and I believe you pointed out the passage which is at page 28 of his report, and specifically paragraph 11.3.1, that the technology, especially in this field, in this area, is advancing rapidly?

	Page 189		Page 190
1	changing.	1	
2	Q. Two steps ahead and a step back at times. So	2	
3	given that, and sort of given my discussion	3	•
4	with Mr. Haynes regarding the approach taken	4	
5	by Hydro in putting forward this B71 project,	5	
6	would it be reasonable to say that in projects	6	
7	like this, where you're looking to acquire new	7	
8	technology, and it's a significant size of a	8	
9	project, so of course the complexity of the	9	
10	project increases with the size, that it's a	10	-
11	case of best thinking scenarios, as you move	11	
12	along in your decision making process?	12	
13	A. I'm not quite clear on what you mean by that	13	
14	phase.	14	
15	Q. The decision that you have at any given moment	15	
16	is based on your best thinking about the	16	-
17	technology that's available at this moment and	17	_
18	your analysis of the cost benefit that's	18	
1	derived from those technologies that are	19	
19	available?		•
20	A. Yes.	20	1
21	Q. And that different from a backhoe, where we	21	
22 23	can fix, relatively far ahead of time, the	22 23	
1	specification for that backhoe and then have	24	
24 25	with reasonable certainty that you're going to	25	
23	with reasonable certainty that you re going to	23	actuary continued on from 20, but it involves
1	D 101		D 100
	Page 191		Page 192
1	Industry Canada and whether ifit says	1	added later, since data rates are alternative
2	Industry Canada and whether ifit says "further discussion will be completed with	1 2	added later, since data rates are alternative dependent." So would this be sort of like a
2 3	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland	1 2 3	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going
2 3 4	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the	1 2 3 4	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete
2 3 4 5	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back	1 2 3 4 5	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project?
2 3 4 5 6	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though,	1 2 3 4 5 6	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON:
2 3 4 5 6 7	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify	1 2 3 4 5 6 7	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct.
2 3 4 5 6 7 8	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data	1 2 3 4 5 6 7 8	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for
2 3 4 5 6 7 8	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure	1 2 3 4 5 6 7 8	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long
2 3 4 5 6 7 8 9	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed?	1 2 3 4 5 6 7 8 9	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained
2 3 4 5 6 7 8 9 10	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed.	1 2 3 4 5 6 7 8 9 10	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been
2 3 4 5 6 7 8 9 10 11 12	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with	1 2 3 4 5 6 7 8 9 10 11 12	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed?
2 3 4 5 6 7 8 9 10 11 12 13	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be	1 2 3 4 5 6 7 8 9 10 11 12 13	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy
2 3 4 5 6 7 8 9 10 11 12 13	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also	1 2 3 4 5 6 7 8 9 10 11 12 13 14	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements,	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time. Q. Okay. Because it says that theif I gather	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and looked at their applications. So it has
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time. Q. Okay. Because it says that theif I gather correctly, the next sentence says "if a	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and looked at their applications. So it has started, but it has to be completed.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time. Q. Okay. Because it says that theif I gather correctly, the next sentence says "if a complete current mobile data assessment of	1 2 3 4 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and looked at their applications. So it has started, but it has to be completed. Q. Okay. 11.3.10, "radio coverage predictions
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time. Q. Okay. Because it says that theif I gather correctly, the next sentence says "if a complete current mobile data assessment of needs applications is not fully identified	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and looked at their applications. So it has started, but it has to be completed. Q. Okay. 11.3.10, "radio coverage predictions should be completed prior to preparation and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Industry Canada and whether ifit says "further discussion will be completed with Industry Canada in the event Newfoundland Power wishes to become a joint owner of the NLH mobile radio system," and I'll come back to that in a moment. The next one though, 11.3.8 says "it's necessary to identify Newfoundland and Labrador Hydro's data requirements from a data infrastructure requirement." So is that being completed? A. I wouldn't say it's definitively completed. We've conducted preliminary discussions with our users to indicate what they foresee to be future data requirements. We've also discussed, with several of the manufacturers that we've contacted, the ability of their systems to handle data, but in terms of specific identification of data requirements, it has not been completed at this time. Q. Okay. Because it says that theif I gather correctly, the next sentence says "if a complete current mobile data assessment of	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	added later, since data rates are alternative dependent." So would this be sort of like a condition precedent to your ultimately going out with a tender, you would need to complete this aspect of the project? MR. DOWNTON: A. Yes, that's correct. Q. In the case of 11.3.9, "the requirement for status messaging is significant in the long term. These requirements should be attained from radio users and so on." Has that been completed? A. Again, I guess further to what Mr. Dunphy said, we've talked to our users and Mr. McDonald in particular, about some of his requirements. We have done an initial review with Hydro's users and that will have to be refreshed again, and we've also visited other users who basically have data on board and looked at their applications. So it has started, but it has to be completed. Q. Okay. 11.3.10, "radio coverage predictions should be completed prior to preparation and

	Page 193		Page 194
1	A. Preliminary radio coverage predications have	1	without a switch, LTR with a switch, and then
2	been performed.	2	LTR with the Passport add-on.
3	Q. Okay. So once Hydro decided that it needed to	3	A. I don't profess to be an expert in LTR, but I
4	replace the VHF system and then in addressing	4	will relate my understanding. LTR was
5	its technology decision making, I just wanted	5	originally developed as a trunking protocol
6	to make sure I understood the available	6	for very small systems. It's commonly used in
7	technologies and what exactly was canvassed,	7	single-site systems. There have been -
8	and if I gather correctly from the	8	Q. Just if I could interrupt, that would be for
9	examinations to date, that we can really talk	9	instance a taxi stand?
10	about two different systems, a conventional	10	A. Exactly. A taxi stand or a small trucking
11	system and an LTR system?	11	company. The LTR that Mr. Cook refers to in
12	A. Really what we found in our analysis is that a	12	his report is actually LTR Net, which is aas
13	trunking system of some sort would be the best	13	I understand it, it's a extension of LTR for
1	fit.		multiple site systems, and really, from what I
14		14	<u>*</u>
15	Q. Before you determine whether it's the best	15	can glean from Passport, it is much the same
16	fit, you have to look at all the available	16	thing. It's an extension of LTR that allows
17	technologies that are at least a possible fit?	17	you to use LTR in multiple site systems and
18	A. Yes.	18	also adds additional functionality, which LTR
19	Q. And conventional is a possible fit?	19	does not require or does not have. For
20	A. Yes.	20	instance, LTR radios apparently are quite
21	Q. And LTR is a possible fit?	21	easily cloned, so that a stolen radio can be
22	A. A version of LTR is a possible fit, yes.	22	added to an LTR network quite easily and never
23	Q. And so let's just talk about that, when we	23	discovered.
24	talk about versions of LTR, and I had three	24	Q. Sure, okay. So there's a number of elements,
25	different scenarios under the LTR. I had LTR	25	but I just wonder, in the case of an LTR
		1	
	Page 195		Page 196
1	system without a switch, so the single		(3:15 p.m.)
1 2	system without a switch, so the single repeater, as youor single site antenna, you		(3:15 p.m.) Q. Okay.
1	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple	1 ((3:15 p.m.) Q. Okay. A. And I believe, hope that they would have
2	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to	1 ((3:15 p.m.) Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so
2 3	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple	1 (2 3	(3:15 p.m.) Q. Okay. A. And I believe, hope that they would have
2 3 4	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to	1 (2 3 4	Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I
2 3 4 5	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and	1 (2 3 4 5	(3:15 p.m.)Q. Okay.A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system.
2 3 4 5 6	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to	1 (2 3 4 5 6	Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I
2 3 4 5 6 7	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the	1 (2 3 4 5 6 7	Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR.
2 3 4 5 6 7 8	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two	1 (2 3 4 5 6 7 8	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR?
2 3 4 5 6 7 8 9	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it	1 (2 3 4 5 6 7 8	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in
2 3 4 5 6 7 8 9	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order	1 (2 3 4 5 6 7 8 9 10	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone
2 3 4 5 6 7 8 9 10	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it	1 (2 3 4 5 6 7 8 9 10	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in
2 3 4 5 6 7 8 9 10 11 12	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order	1 (2 3 4 5 6 7 8 9 10 11 12	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone
2 3 4 5 6 7 8 9 10 11 12 13	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the	1 (2 3 4 5 6 7 8 9 10 11 12 13	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques,
2 3 4 5 6 7 8 9 10 11 12 13 14	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from	1 (2 3 4 5 6 7 8 9 10 11 12 13	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me
2 3 4 5 6 7 8 9 10 11 12 13 14 15	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct?	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes.	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux Basques, I have to know that they're down in	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch? A. No.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux Basques, I have to know that they're down in Port aux Basques?	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch? A. No. Q. Under Passport?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux Basques, I have to know that they're down in Port aux Basques? A. Yes.	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch? A. No. Q. Under Passport? A. No, there is no need for a central switch.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux Basques, I have to know that they're down in Port aux Basques? A. Yes. Q. And then I would have to punch in the code in	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch? A. No. Q. Under Passport? A. No, there is no need for a central switch. Q. And because of that, it allows for this
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	system without a switch, so the single repeater, as youor single site antenna, you have one repeater and if you have multiple channel capabilities, you have the ability to have top groups off of that one repeater and that's basically what that system will enable? A. I think so, yes. Q. If we put a switch in the mix, which is kin to the system that currently exists, you have the ability for remote-to-remote talking. So two users hanging off separate repeaters, but it still requires the user to key in, in order forand they would have to know where the other person is for them to be able to go from repeater to repeater, correct? A. I believe that's correct, yes. Q. So if I'm up in Carmanville and I want to speak with somebody that's down in Port aux Basques, I have to know that they're down in Port aux Basques? A. Yes. Q. And then I would have to punch in the code in order to access the repeater that's down in	1 (2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	 Q. Okay. A. And I believe, hope that they would have registered with the Port aux Basques site so that they are recognized by the LTR system. Q. Right. The Passport, which is, if I understand correctly, an add-on technology to LTR? A. I would define it as an enhancement to LTR. Q. Right. And it allows remote-to-remote communications. So again, if I'm up in Carmanville and I want to speak with someone down in Labrador or down in Port aux Basques, then I can do that, but it doesn't require me to key in any special codes? A. No. All it requires you to know is the number assigned to the other user's radio. Q. And there's no need for a switch? A. No. Q. Under Passport? A. No, there is no need for a central switch. Q. And because of that, it allows for this distributed architecture that you described?

Guij	7, 2000 Ividit	45	c 112 Hydro 2001 Suprai Badget Application
	Page 197		Page 198
1	looked at in his Business Case for the mobile	1	I'll take your word for it, yes.
2	radio system was the difference between using	2	Q. He sees that as a weakness inherent in your
3	an open standard system versus a proprietary	3	existing system in that you're locked in to
4	system.	4	one vendor to supply that one switch, correct?
5	A. Yes.	5	A. Yes.
6	Q. And just so we're clear, proprietary system	6	Q. Okay. And that, as I understand it, at least,
7	meaning that there is a technology that is	7	is whyone of the reasons why he recommends
8	owned by that one company that unless they've	8	the Zetron system?
9	allowed other companies to use, only they can	9	A. I believe he actually recommends the EF
10	produce equipment and systems that work on	10	Johnson system.
11	that technology?	11	Q. EF Johnson, sorry.
12	A. Yes.	12	A. Yes.
13	Q. Open standards would be something that allows	13	Q. Now the Passport system that Hydro's
14	multiple manufacturers to produce equipment	14	considering -
15	that uses that standard and so therefore, it's	15	A. Yes.
16	multi-vendor supported?	16	Q if I understood you correctly, you indicated
17	A. Yes.	17	that Motorola, as one supplier, would be able
18	Q. And that one of the things Mr. Cook looked at	18	to provide everything that's required in order
19	when looking at that issue is he recommends,	19	for you to run the system? To have a fully
20	where possible, to use open standards?	20	integrated mobile radio system in the
21	A. Yes.	21	province, Motorola can provide the radios, the
22	Q. He critiques the existing system in that it	22	repeaters and through some sort of resale
23	uses a proprietary switch, your existing	23	agreement, the controller?
24	system?	24	A. Yes.
25	A. Well, I don't recall the exact phrase, but	25	Q. As I believe has been ascertained by Mr.
	Page 199		Page 200
1	Hutchings in the (unintelligible - coughing)	1	Q. And in this case, they have the ability to
2	yourself, the controller is actually produced	2	Motorola has the ability to resell that
3	and normally sold by a company called Trident	3	Trident controller?
4	Microsystems?	4	A. Yes.
5	A. Yes.	5	Q. But ultimately, that controller is
6	Q. Now that controller is proprietary technology,	6	proprietary?
7	isn't it?	7	A. No, the standard is -
8	A. The Passport protocol is licensed to multiple	8	Q. The technology is owned by Trident?
9	manufacturers. Right now Trident is the only	9	A. The standard is licensed by Trident to other
10	manufacturer that makes the switch, but they	10	manufacturers.
11	do license the protocol too. Right now, I	11	Q. Okay. There are a number of Passport
12	believe they have five radio manufacturers.	12	licensees?
13	Q. You say switch, I find that raises a great	13	A. Yes, I believe there are five that I know of.
14	deal of confusion because we just ascertained	14	Q. I have nine, so you indicated that there was
15	that the Passport doesn't need a switch, but I	15	one other one that you dealt with? That you
16	appreciate that, in your view, you look at	16	I believe in a question you said you spoke to
17	still as if it is a switch. But -	17	other suppliers besides Motorola?
18	A. Yes, and functionally, it is a switch.	18	A. We did speak to other suppliers besides
19	Q. Acting like a switch, but can you call it a	19	Motorola, but not about Passport.
20	controller instead, just so we're clear on	20	Q. Okay. So have you spoken to anyone else
21	what we're speaking about?	21	besides Motorola about the Passport system
22	A. We can call it a controller.	22	yet?
23	Q. So the controller is made by Trident	23	A. No.
24 25	Microsystems?	24	Q. Would it be your intention to do so?
	A. Yes.	25	A. If -

July	y 9, 2005 Wint	1-1	age NL flyuro 2004 Capitai Duuget Application
	Page 201		Page 202
1 N	MR. DOWNTON:		MR. DOWNTON:
2	A. Through the tender process.	2	A. It would probably go a little bit different
3 1	MR. DUNPHY:	3	
4	A. Well, if we write a functional specification,	4	
5	we'll entertain any responses that come along.	5	
6	Q. Sure. You indicated that Motorola was one of	6	
7	the largest mobile radio manufacturing	7	
8	companies in the world.	8	
9	A. Yes.	9	
10	Q. That would give you a certain level of comfort	10	
11	when deciding who to purchase from,	11	day, with say ten bids. You may end up with
12	presumably?	12	
13	A. Yes.	13	
14	Q. Can you tell me who the agent is for Motorola	14	
15	here in the province?	15	
16	A. Aliant Telecom is one agent for Motorola. I'm	16	
17	not certain that they're exclusive, but I know	17	
18	they are an agent for Motorola.	18	
19	Q. Okay. So if Aliantif Hydro ended up	19	
20	selecting the Passport system and ended up	20	
21	contracting with Motorola in order to acquire	21	
22	it, would it bewould you expect it to be	22	
23	order fulfilled, if you will, through Aliant,	23	
24	as Motorola's agent here in the province?	24	
25	A. Well -	25	
	Page 203		Page 204
1	supplier of the Motorola system.	1	besides Aliant and Hydro, to access repeater
2	A. I guess the statement that Aliant are getting	2	
3	out of the mobile radio business is a	3	
4	reflection on the fact that for a number of	4	
5	years, they basically pursued province-wide,	5	wasn't considered or why you have no
6	to provide a province-wide system, and they	6	
7	internally even have their own mobile radio	7	
8	infrastructure, and I guess what they have	8	
9	done over the last say three to five years, in	9	
10	particular, is withdrawn from that market,	10	
11	especially upon loss of the RCMP/RNC system.	11	
12	And in discussions with their vice-presidents,	12	
13	et cetera, what they basically find is to	13	
14	investfor them to invest directly into a	14	
15	mobile radio infrastructure, there's not	15	
16	enough users on the island to do that for a	16	
17	province-wide system. They would rather invest	17	
18	it in cell technology, because there's a	18	
19	better return on investment for them.	19	
20	Q. As indicated, under one of your scenarios with	20	
21	the additional six sites to bring your total	21	
122	to thinty five and that twenty and of them	22	you stated that staying at Aliant sites is

22

23

24

25

you stated, that staying at Aliant sites is

Q. That you would want to consider other sites

getting more costly?

to thirty-five and that twenty-one of them

would be Aliant and the remaining fourteen

would be Hydro owned sites, was there any

thought given to contracting with anyone else,

22

23

24

Jui	y 7, 2005 Wint	1 1 45	c 11L Hydro 2004 Capital Dudget Application
	Page 205		Page 206
1	besides Aliant sites?	1	Newfoundland Power's sites, and Mr. Cook, and
2	A. Yes, we will be considering other sites.	2	Mr. Dunphy can probably speak better to this,
3	Q. Okay. It's just I don't see any reference to	3	but Mr. Cook did have meetings with
4	that anywhere in any documentation about -	4	Newfoundland Power to discuss, I guess,
5	A. No, I guess we've had just preliminary	5	possibility when and if it's a viable option
6	discussions with the RCMP, even say a month or	6	to maybe put one system in for two.
7	so ago, and we basically will bewe've had	7	Q. Okay. And Mr. Cook does make reference to
8	several meetings and they're interested in	8	Newfoundland Power. I think I'd mentioned
9	pursuing having accommodation at some of our	9	just when I was asking a question earlier
10	sites and basically having the ability to	10	about what was completed and what wasn't, that
11	reciprocate on their behalf.	11	there was reference to the fact that there may
12	MR. DUNPHY:	12	need to be discussions with Industry Canada in
13	A. Of course, Mr. Kennedy, we've also been	13	the event that Newfoundland Power was to
14	contacted by CBC to see if we're interested in	14	participate by way of ownership in the
15	buying any of their sites.	15	project, but just from a technical
16	Q. Do either of you, Mr. Downton or Mr. Dunphy,	16	perspective, when Hydro is conducting its
17	are either of you aware of Newfoundland	17	review of what kind of system to replace the
18	Power's current VHF system, in a technical	18	existing VHF radio communication with, I'm
19	way? For instance, do you know what	19	trying to ascertain what, if any, information
20	Newfoundland Power's current coverage area is?	20	Hydro secured from Newfoundland Power in order
21	MR. DOWNTON:	21	to take that into account in this design, and
22	A. All I can speak to is that I've seen it in one	22	I'm wondering, did you get detailed
23	of their VHF mobile radio booklets, and I do	23	information about Newfoundland Power's current
24	have a listing, and I think in the	24	VHF system, for instance?
25	consultant's report is a listing of	25 MI	R. DUNPHY:
	Page 207		Page 208
1	A. We have obtained information on Newfoundland	1	Newfoundland Power repeater sites in the
2	Power's VHF system, and the indications that	2	province?
3	we have is that there is a possibility that	3	A. I believe Hydro may have that information. I
4	the system could be expanded to -	4	don't rememberI don't have that information.
5	Q. This system, whatever new system you purchase,	5	Q. Okay. Do you have a list of the number of
6	you mean?	6	radios and their locations used by
7	A. Yes, that we will have sufficient expansion	7	Newfoundland Power employees?
8	capability to bring Newfoundland Power on, if	8	A. Not personally, no.
9	and when that's a viable alternative.	9	Q. And do you know anything about Newfoundland
10	Q. Okay. So that sufficient expansion from	10	Power's paging requirements?
11	Hydro's perspective, right, that the equipment	11	A. No.
12	itself, I mean, for instance, you described	12	Q. Do you know whether Newfoundland Power has a
13			-
14	the Passport system as having a virtually	113	planned life cycle replacement of its VHF
	the Passport system as having a virtually unlimited number of expansion capability?	13 14	planned life cycle replacement of its VHF system?
	unlimited number of expansion capability?	14	system?
15	unlimited number of expansion capability? A. It's huge. I can't remember the exact number.	14 15 MI	system? R. DOWNTON:
15 16	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that	14 15 MI 16	system? R. DOWNTON: A. My indication, and this comes through Mr.
15 16 17	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users	14 15 MI 16 17	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by
15 16 17 18	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system?	14 15 MI 16 17 18	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at
15 16 17 18 19	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right.	14 15 MI 16 17 18 19	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their
15 16 17 18 19 20	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right. Q. But do you, right now, have detailed	14 15 MI 16 17 18 19 20	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their existing mobile radio system.
15 16 17 18 19 20 21	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right. Q. But do you, right now, have detailed information about Newfoundland Power's current	14 15 MI 16 17 18 19 20 21	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their existing mobile radio system. Q. Is that, could we say, sort of a verbal-to-
15 16 17 18 19 20 21 22	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right. Q. But do you, right now, have detailed information about Newfoundland Power's current VHF system, for instance, the coverage area	14 15 MI 16 17 18 19 20 21 22	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their existing mobile radio system. Q. Is that, could we say, sort of a verbal-to- verbal communication that someone had
15 16 17 18 19 20 21 22 23	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right. Q. But do you, right now, have detailed information about Newfoundland Power's current VHF system, for instance, the coverage area that they require?	14 15 MI 16 17 18 19 20 21 22 23	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their existing mobile radio system. Q. Is that, could we say, sort of a verbal-to- verbal communication that someone had concerning it, or do you have that in a
15 16 17 18 19 20 21 22	unlimited number of expansion capability? A. It's huge. I can't remember the exact number. Q. And so from a technical perspective, in that sense, there's nothing limiting more users using the system? A. Right. Q. But do you, right now, have detailed information about Newfoundland Power's current VHF system, for instance, the coverage area	14 15 MI 16 17 18 19 20 21 22	system? R. DOWNTON: A. My indication, and this comes through Mr. Reeves, is that it was indicated by Newfoundland Power that they are looking at at least another five years life in their existing mobile radio system. Q. Is that, could we say, sort of a verbal-to- verbal communication that someone had

Jui	y 9, 2003 Winin	i-rag	<u>e 1</u>	NL Hydro 2004 Capital Budget Application
	Page 209			Page 210
1	A. Well, I can't speak to it. I've talked to Mr.	1	f	For instance?
2	Reeves, but whether it's in writing or not, I	2 M	IR. DO	OWNTON:
3	don't know.	3	A. N	My understanding is that there is not. I
4	GREENE, Q.C.:	4		guess, our interpretation of the CRTC and
5	Q. The only thing that would be in writing was	5	Ī	ndustry Canada ruling is that Hydro would not
6	produced during the 2001 General Rate	6	b	be able to entertain Newfoundland Power as
7	Application where minutes of meetings and	7	jı	ust an ordinary user and charge a fee for
8	joint coordination were placed on the record	8	S	service. Basically, Newfoundland Power would
9	and one of the items discussed was a joint VHF	9		have to "buy in" to the expansion of the
10	radio project.	10		nfrastructure and be, well say if you want to
11	HUTCHINGS, Q.C.:	11		call it a partner.
12	Q. So from either of your perspectives, Mr.	12		And I guess, presumably they would at some
13	Downton or Mr. Dunphy, is there any technical	13		point need to buy in to the existing capital
14	impediment to Newfoundland Power being able to	14	_	costs, whatever its book value is at that
15	use this system?	15		point?
16	MR. DUNPHY:	16	A. I	would expect so.
17	A. Not that I'm aware of.	17	Q. <i>A</i>	And I guess if you've already Works Services
18	(3:30 p.m.)	18	a	and Transportation having cost shared into
19	Q. Do you know if there's any legal impediment,	19	У	your system prior to that, that's going to
20	and I ask that not from a utility perspective,	20	С	complicate matters, isn't it?
21	but more from a perspective of the CRTC	21	A. V	Well, hopefully it'll make everything cheaper
22	regulations, in so far as you know them, about	22	f	or everyone.
23	being tripped up on common carrier status, for	23	Q. I	Do you know if there's any corporate policy or
24	instance, or the like, for Newfoundland Power	24	С	contractual arrangements that Newfoundland
25	to add in to this system in five years time,	25	P	Power has which would prevent it from
	Page 211			Page 212
1	eventually cost sharing in this system with	1	р	percentage.
2	Newfoundland Hydro?	2	•	So you're no longer fifty-fifty then?
3	A. Not that I'm aware of.	3	A. N	No, that's right.
4	Q. In regards to your discussions with Works	4		And would that then change your pitch for the
5	Services and Transportation, just a couple of	5	n	nix on shared capital costs and shared O&M?
6	questions, but one oddity first. Mr. Cook, in	6	Α. Υ	Yes, it most certainly would.
7	his report, at page 28, at 11.3.6, makes	7	Q. T	Γhat's what you're arguing is the basis, forms
8	mention ofhe talks about "continued shared	8	tl	he basis for the arrangement?
9	use with WS & T since gross should not change,	9	A. Y	Yes.
10	except for the addition of approximately one	10	Q. <i>A</i>	And that would be a hundred on top of -
11	hundred radios currently used for simplex	11	A. <i>A</i>	About seven. Well, basically seven hundred
12	operation only, as identified by Works	12	O	overall. So that would make it eight, so
13	Services and Transportation in a meeting with	13	У	ou'd end up with say four-fifty.
14	Newfoundland Hydro dated, and to be confirmed	14	Q. V	Versus three-fifty?
15	with a follow-up letter to the meeting." So	15	A. \	Versus three-fifty, so you're looking at
16	those one hundred radios that he refers to	16	p	probably aanyway, I won't do the math.
17	there, are they in excess of the one hundred	17		Okay.
18	or in excess of the radios that was indicated	18		Sixty-forty mix maybe.
19	that Works Services and Transportation are	19	Q. S	So that's about fifty-six percent then?
20	already using?	20		Yes.
21	A. Yes, they are. So if, I guess, right now, as	21		When does Hydro see themselves moving ahead
22	indicated here, they operate in a simplex	22		with obtaining a binding agreement with Works
23	operation and if, I guess, Works Services	23		Services and Transportation?
24	deems that they want to bring those hundred	24		guess when we get release to move forward
25	radios on, then that would change the	25	V	with this particular project.

4

10

19

1

2

- Q. Okay. So the Board approval is a condition 1
- precedent to your being able to go seek 2
- binding agreement with Works Services and 3 4
 - Transportation?
- A. Well, from my perspective, I see it as a 5
- 6 natural progression to do that.
- 7 Q. Is there a reason why you wouldn't flip it
- around the other way, seek and obtain a 8
- written commitment from Works Services and
- 10 Transportation that they'd cost share in this
- project on a certain basis, contingent on 11
- ultimately getting the Board approval? 12 A. I guess we've had discussions with Works 13
- Services and we've basically given, I guess, 14
- the preliminary budget numbers and, as I 15
- 16 indicated there, working through their system
- with that, but I guess, until we have or there 17
- is a product to definitively offer, then 18
- basically it's difficult for them to also seek 19
- funding. 20
- 21 MR. HAYNES:
- 22 A. If I could, I think as we said before, is that
- if Works Services and Transportation were not 23
- a part of this particular exercise, we would 24
- still be proposing a practically identical 25

Page 215

- the consultant's report, that is something 1
- 2 that we would get put to bed, so to speak,
- 3 before we move along. So we would confirm
- with Newfoundland Power their requirements, 4
- 5 their desires and then move forward.
- Q. Mention is made of CF(L)CO in some aspects of 6
- 7 your Business Case. Do I understand correctly
 - that CF(L)CO is already using a Passport
- 9 system in Labrador?
- A. Basically, they're not really--shouldn't say 10 11 it's a system.

- Q. Are they using a Passport standard mobile 12
- communication? 13
- A. We installed for Churchill a single-site 14
- Passport repeater for them to have 15
- communications within the town site and 16
- airport area, but it's a single repeater 17
- system and it's their system. 18
- 19 MR. HAYNES:
- A. I would add, they have another separate system 20
- that covers their operating footprint in 21
- Labrador, separate from the system that's put 22
- in for town services. 23
- Q. Let's switch out now to just a couple of 24 questions on B59 and B60, which are the 25

- Page 214 Capital Budget proposal. So it is a win-win, 1
 - and we need approval to proceed, and then 2
 - obviously there'll be a fair bit of time 3
 - dedicated to negotiating an appropriate
 - arrangement with Works Services and 5
 - Transportation. But if they weren't there, 6
 - 7 we'd still have to act.
 - Q. And can I ask you, when Hydro sees moving 8
 - ahead with earnest discussions with 9
 - Newfoundland Power about its participation in
 - your new mobile communication system? 11
 - 12 MR. DOWNTON:
 - A. I guess Mr. Dunphy has already had some
 - initial discussions six weeks ago with Mr. 14
 - 15 Casey.
 - 16 MR. DUNPHY:
 - A. Earlier this spring, the topic was brought up 17
 - in a meeting. Mr. Casey indicated that they 18
 - are quite satisfied with their system right
 - now and have no plans to change it, but--and 20
 - when the time comes, they will certainly enter 21
 - into negotiation, enter into discussions then 22
 - to see if it's a practical thing to do. 23
 - 24 MR. DOWNTON:
 - A. But with that said, as Mr. Cook indicated in
 - Page 216 corporate applications and the application
 - enhancements. Mr. Haynes, or Mr. Downton, I
 - think you were the one answering a lot of 3
 - these questions. Can you tell me, is there 4
 - 5 currently in place in Hydro an incentive

 - program that encourages people to find lower 6
 - cost solutions when choosing technologies for 7
 - your corporate applications and application 8

 - 9 enhancements?
 - 10 MR. DOWNTON:
 - 11 A. Is there an incentive program? I guess -
 - Q. Do I, as an engineer or an IT professional, 12
 - whether it's someone down in the trenches or 13
 - someone at a manager level behind a desk or 14
 - what have you, have some motivation to find 15
 - lower cost solutions to put in place in your 16
 - application environment? 17
 - 18 MR. HAYNES:
 - 19 A. There is no formal incentive program for most
 - of the employees. There's a very, very 20
 - limited incentive program in Hydro or 21
 - performance program in Hydro. Basically, 22
 - they're expected to do the work. They have to 23
 - review this exercise, but there's no personal 24 25
 - reward for doing their job, other than a

A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are Q. Okay. That's all the question I have, Chair, thank you, gentlemen. 11 cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I 15 wonder, Mr. Downton, if you could comment on 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you could explain from Hydro's perspective as to 20 Q. Okay. That's all the question I have, Chair, thank you, gentlemen. 21 with respect to whichever, conventional or 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 installed.		Page 217		Page 218
3 A. I was waiting to answer that. But seriously, when we go through the different applications, we have people who do a lot of research, and do a lot of research on their own, and as part of going through any upgrades or any applications, we look at different solutions. 3 We are not tied necessarily to any traditional solutions. 4 No, basically, the only Unix server that we have now is what I call a data mart that basically is used to process the data from the energy management system. 5 Q. You of unit fuell you about it. 9 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. 3 Q. Your don't know whether you do or not. 4 Q. Your web server, do you know what that runs on on? 5 A. No, but I can- Page 219 technologies to select, but do you employ what's actually being called utility computing services, whether it's lor data storage or actual data crunching? 5 A. No. 6 Q. Do you capitalize all your software licensing fees at present? 6 Q. Do you capitalize all your software licensing fees a feer applicanting present of protects of the internal costs arising from that cross-examination by Mr. Downtoon of the internal costs arising from that cross-examination is the discussion about the transcript, Mr. Alteen and it related to the issue of the internal costs arising from that cross-examination is the discussion about that whether internal costs arising from that cross-examination is the discussion about whether internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether cither a conventional or trunked randy selected and is related to the issue of the internal costs arising from that cross-examination is the discussion about whether internal costs arising from that cross-examination or the discussion about the transcript, Mr. Alteen expressed his confusion at the end of the answer. So I wondered if you could commen	1	-	1	Q. Do you know if you're using Apache or are you
3 A. I was waiting to answer that. But seriously, when we go through the different applications, we have people who do a lot of research, and do a lot of research on their own, and as part of going through any upgrades or any applications, we look at different solutions. 3 We are not tied necessarily to any traditional solutions. 4 No, basically, the only Unix server that we have now is what I call a data mart that basically is used to process the data from the energy management system. 5 Q. You of unit fuell you about it. 9 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. 3 Q. Your don't know whether you do or not. 4 Q. Your web server, do you know what that runs on on? 5 A. No, but I can- Page 219 technologies to select, but do you employ what's actually being called utility computing services, whether it's lor data storage or actual data crunching? 5 A. No. 6 Q. Do you capitalize all your software licensing fees at present? 6 Q. Do you capitalize all your software licensing fees a feer applicanting present of protects of the internal costs arising from that cross-examination by Mr. Downtoon of the internal costs arising from that cross-examination is the discussion about the transcript, Mr. Alteen and it related to the issue of the internal costs arising from that cross-examination is the discussion about that whether internal costs arising from that cross-examination is the discussion about whether internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether cither a conventional or trunked randy selected and is related to the issue of the internal costs arising from that cross-examination is the discussion about whether internal costs arising from that cross-examination or the discussion about the transcript, Mr. Alteen expressed his confusion at the end of the answer. So I wondered if you could commen	2	MR. DOWNTON:	2	
when we go through the different applications, we have people who do a lot of research, and do a lot of research on their own, and as part of going through any upgrades or any applications, we look at different solutions. We are not tied necessarily to any traditional solutions. We are not view and a spart of going through any upgrades or any applications, we look at different solutions. We are not tied necessarily to any traditional solutions. We are not view and to go you use Unix now on your 400? 10 Q. Do you use Unix now on your 400? 11 A. No, basically, the only Unix server that we have some security issues with regards to the web site. The other as aspect of the current design of the web site, it requires, we'll say, an IT professional to make changes to the web site. And what we've done with unit intent is provide a common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of tools so that, say, HIS for their own content. And then the intent basically for the internet site is for the corporate common set of the internet site is for the corporate common set of the internet site is for the corporate common set of the internet site is for the corporate common set of the internet site is for the corporate common set of the internet site is for the corporate co	3	A. I was waiting to answer that. But seriously,	3	
swe have people who do a lot of research, and do do a lot of research on their own, and as part of going through any ungrades or any applications, we look at different solutions. We are not tied necessarily to any traditional solutions. A No, basically, the only Unix server that we have now is what I call a data mart that basically is used to process the data from the energy management system. A Yes, but I can't tell you about it. Q You don't know whether you do or not. A We are Basically in my understanding, we are employing Lunix operating systems in our intrusion detection systems. Q Your web server, do you know what that runs on? A No, but I can - Page 219 technologies to select, but do you employ whar's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A No. Q Do you capitalize all your software licensing fess at present? A No. Q Expense them as in an operating expense, I means a fair bit about. The first question on with the respect to internal costs arising from that make the project Br1 which is the mobile replacement system that they vie talked a fair bit about. The first question with respect to whether either a consistent whether items licenses are capitalized. Q Okay. That's all the question I have, Chair, thankyou, gentlemen. Z CHARMAN: 2 CHARMAN: A Nea and the first inductions and part that work? A Nea brace and the respect to whether themselves is indicated in your projects there, could with the sofic bejective is with this work? A Well, I guess we have some security issues with the year of the web site. And what we've done with our intranet design of the web site. The other aspect of the current design of the web site. And what we've done with our intranet sing for the web site. And what we've done with our intranet sing for the web site. And what we've done with our intranet is provide a common set of the internal basic all your sofice and the runs of the internal costs are r	4	•	4	· · · · · · · · · · · · · · · · · · ·
do a lot of research on their own, and as part of going through any upgrades or any applications, we look at different solutions. We are not tied necessarily to any traditional solutions. O. Do you use Unix now on your 400? A. No, basically, the only Unix server that we basically is used to process the data from the cergy management system. A yes you purchase or up on your 400? O, Are you employing any Lunix operating systems in our intrusion detection systems. O, You don't know whether you do or not. O, You don't know whether you do or not. O, A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. O, You whost I can - Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? O, Do you expense those? O, No. O, Do you expense those? O, So, your Microsoft software licensing fees at present? O, Do you expense thome as in an operating expense, I mean. A, No. O, Oo, Oxay. That's all the question I have, Chair, thanky ou, gentlemen. A whon, ou, friend to do on ony our web site as indicated in your projects there, swith your web site that you want to achieve with this work? A. Well, I guess we have some security issues with regards to the web site. The other as special to the web site. The other aspect of the current design of the web site. A Well, I guess we have some security issues with regards to the web site. The other aspect of the current design of the web site. A Well, I guess we have some security issues with regards to the web site. And what we've done with our intranet is provide a common set of tooks so that, say, list for their intranet site, they can go and manage that on tent themselves. O, Your webserver, do you know what that runs on? Q, Your webserver, do you know what that runs on? Q, Your webserver, do you know what that runs on? Q, Your webserver, do you furthe or account A	5	T T	5	•
of going through any upgrades or any applications, we look at different solutions. We are not tied necessarily to any traditional solutions. O Do you use Unix now on your 400? A No, basically, the only Unix server that we lave have now is what I call a data mart that basically is used to process the data from the energy management system. A No, basically, in process the data from the energy management system. A Yes, but I can't tell you about it. O You don't know whether you do or not. A We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. O Your web server, do you know what that runs on? A No, but I can - Page 219 technologies to select, but do you employ whan's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A No. O Do you expense them as in an operating expense, I man. A No, Do you expense those? A Page 210 (D Syopou expenses those? A Page 211 (See Apre.) A No. O Do you expense them as in an operating expense, I man. A Yes, but I can't left you pay. A No, Und desktop licensing fees are expenses. Our server operating system licenses are capitalized. O Q O Nay, That's all the question I have, Chair, thank you, gentlemen. Yes thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? Yes thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? Yes thank you, what selected and installed. A BONOWYION: Swith rigards to the web site. A Well, I guess we have some security issues with regards to the web site. The other aspect of the current design of the web site, it in the with regards to the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. With rigards to the web site. The other aspect of the current design of the web site. With regards to the web site. The other aspect of the web site. The other aspect of the current design of the web sit			6	
applications, we look at different solutions. We are not tied necessarily to any traditional solutions. O Do you use Unix now on your 400? A No, basically, the only Unix server that we basically, it well to a large the passion of the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. The other aspect of the current design of the web site. The other it requires, we'll say, an IT professional to make changes to the web site. And what we've done with our intranet is provide a common set of tools so that, say, HIK for their intranet is in the Hydro environment at all? A Yes, but I can't tell you about it. You don't know whether you do or not. You web site to make changes to the web site. And what we've on a reduction systems in our intrusion detection systems. You web server, do you know what that runs on? A No, but I can - Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A No. A No. A No. O Do you capitalize all your software licensing fees at present? A No. A No. D Do you expense those? A No. A Sasically - C Expense them as in an operating expense, I mean. A Yes. C Spense them as in an operating expense, I mean. A Yes. C Q Ookay. That's all the question I have, Chair, thank you, gentlemen. You have be a part web site to the web site. The other aspect to whicheve with our transet say, and that we've done with our intranet is grow the whith our intranet is grow that it requires to the web site. The other and with our intranet is grow the with the work! If GREENE, Q.C. Q Oyou capitalized. You have be requrded the web site. It requires, we'll say, an IT professional to make changes to the web si		•		
We are not tied necessarily to any traditional solutions 9 is with your web site that you want to achieve with this work?				
10			_	
11 Q. Do you use Unix now on your 400? 12 A. No, basically, the only Unix server that we have now is what I call a data mart that basically is used to process the data from the energy management system. 14 basically is used to process the data from the energy management system. 15 Q. Are you employing any Lunix operating systems in the Hydro environment at all? 16 A. Yes, but I can't tell you about it. 17 Q. You don't know whether you do or not. 18 A. Yes, but I can't tell you about it. 19 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. 21 Q. Your web server, do you know what that runs on? 22 what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? 24 A. No. 25 Q. Do you capitalize all your software licensing fees at present? 26 A. No. 27 Q. Do you expense those? 28 A. No. 29 A. No. 29 Q. Do you expense those? 30 A. No. 31 A. Sestimation of the web site, on there as a spect of the current design of the web site. And what we've done with our intranct is provide a communication to make changes to the web site. And what we've done with our intranct is provide a commun set of tools so that, say, IIR for their intranet site, they can go and manage their own content. And then the intent hemselves. 26 Q. Your web server, do you know what that runs on? 27 Q. Dose Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what eve we be site. The other intranet spice of the internal cost as the present moment on the stream on? 28 Q. Does Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what either from the cross-examination by Mr. Alteen and it related to the issue of the internal costs of the web site. And what we've done with a manage that content the whole of the manage th		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
A. No, basically, the only Unix server that we have now is what I call a data mart that basically is used to process the data from the energy management system. Q. Are you employing any Lunix operating systems in the Hydro environment at all? 17 of tools so that, say, HIR for their intranet sprovide a common set of tools of that, say, HIR for their intranet site, they can go and manage their own content. And then the intent basically for the internate site, they can go and manage their own content. And then the intent basically for the internate site is for the corporate communications department who would own that we've done with our intranet is provide a common set of tools so that, say, HIR for their intranet site, they can go and manage their own content. And then the intent basically for the internat site is for the corporate communications department who would own that we've done with our intranet is provide a common set of tools so that, say, HIR for their intranet site, they can go and manage their own content. And then the intent basically for the internat site is for the corporate of tools so that, say, HIR for their intranet site, they can go and manage their own content. And then the intent basically for the internat site is for the corporate of tools so that, say, HIR for their intranet site, they can go and manage their own content. And then the intent basically for the internat site is for the corporate of the current design of the web site. 18 4 Yes, but I can 1				
have now is what I call a data mart that basically is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is used to process the data from the energy is unit of tools so that, say, IRR for their intranet is frow do tools so that, say, IRR for their intranet is the theory of tools so that, say, IRR for their intranet is the procest norm of tools so that, say, IRR for their intranet is the theory of tools so that, say, IRR for their intranet is the theory of tools so that, say, IRR for their intranet is the theory of tools so that, say, IRR for their intranet is the theory of tools so that, say, IRR for their intranet is the title the internal cost is the procest more of the out of tools so that, say, IRR for their intranet is the title the internal cost and the internal cost is the title the internal cost is the process of the corporate website to manage that content themselves. 20. Your web server, do you know what that runs of the internal cost the metal cost is the internal cost to manage that content themselves. 21. Q. Your web server, do you know what that runs on the internal cost the manage that content themselves. 22. Q. Your web server, do you know what that runs on the internal cost is the internal cost to manage that content themselves. 23. Q. Does Hydro out source any of its IT requirements at the present meth wo would be consistent with say the project Bydro out source any of its IT requirements at the present method what is a consultant base, and advising you as to what a call the few your and the internal cost to manage that cont		· · · · · · · · · · · · · · · · · · ·		- · · · · · · · · · · · · · · · · · · ·
basically is used to process the data from the energy management system. Q. Are you employing any Lunix operating systems in the Hydro environment at all? A. Yes, but I can't tell you about it. A. We are. Basically, in my understanding, we are employing Lunix operating systems in our ontrivation detection systems. Q. Your web server, do you know what that runs on? A. No, but I can - Page 219 technologies to select, but do you employ what's actually being called utility computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. No. Q. Expense them as in an operating expense, Imean. A. Yes. A. Our desktop licensing fees are expenses. Our for instance, that you, gentlemen. A. Chair. A. Chair. If requires, we'll say, an IT professional to make changes to the web site. And what we've of done with one with at we'ne with one with at one with a fore to the web site. And what we've of done with one with with expect to web site. And what we've of done with one with with expect to week site. And what we've of done with one whether you'd a common set of tools so that, say, HR for their intranet site, they can go and manage their own content. And then the intent basically for the internet site is for the corporate communications department who would own that we's tell the internet site is for the corporate communications department who would own that we's it is for data storage or a manage that content themselves. Q. Dose Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what Page 220 I GREENE Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for cither Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs arising from that cross-examination is the discussion about whether internal costs wou		· ·		-
neergy management system. A Yes, but I can't tell you about it. Your web server, do you know what that runs on? A No, but I can - Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A No. Do you expense those? A No. O Do you expense those? A Resically - O Do you capitalize all your software licensing mean. A Res. A Res. A Res. A Res. A Res. A Rear exploying Lunix operating systems in our intrusion delection systems. Page 219 Page 220 Do boes Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what a consultant base, and advising you as to what few. B GREENE, Q.C: Q Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for a few. The first question on re-direct is for sessex-amination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I cross-examination is the discussion about whether internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. Q Okay, That's all the question I have, Chair, thank you, gentlemen.				
16 Q. Are you employing any Lunix operating systems in the Hydro environment at all? 17 A. Yes, but I can't tell you about it. 18 A. Yes, but I can't tell you about it. 19 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. 21 are employing Lunix operating systems in our intrusion detection systems. 22 (Your web server, do you know what that runs on? 23 Q. Your web server, do you know what that runs on? 24 technologies to select, but do you employ what's actually being called utility computing a where you purchase on a needed basis computing 4 services, whether it's for data storage or actual data crunching? 4 A. No. 4 A. No. 5 Q. Do you capitalize all your software licensing fees at present? 9 A. No. 9 A. No. 10 Q. Do you expense those? 11 A. Basically - 12 Q. Expense them as in an operating expense, I mean. 13 mean. 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, for instance, that you pay. 16 A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. 20 Cokay. That's all the question I have, Chair, thank you, gentlemen. 21 communications department who would own that web site to manage that content themselves. 22 cut the internet site is for the corporate communications department who would own that web site to manage that content themselves. 24 C. Poss that's actually being called utility computing a few technologies to select, but do you employ what's actually being called utility computing a few technologies to select, but do you employ what's actually being called utility computing a few technologies to select, but do you employ what's actually being called utility computing a few technologies to select, but do you employ what's actually being called utility computing a few. The first question on re-direct is for the consultant base, and advising you as to what a few technologies to select. The first question on re-direct is for the internal c		*		
in the Hydro environment at all? A Yes, but I can't tell you about it. O You don't know whether you do or not. A We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. O You web server, do you know what that runs on? A No, but I can - Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A No. O Do you capitalize all your software licensing fees at present? A No. Do you expense those? A No. Do you expense those? A Sasically - O Do you Expense them as in an operating expense, I mean. A Yes. O So, your Microsoft software licensing fees, for instance, that you pay. A Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. O Cokay. That's all the question I have, Chair, thank you, gentlemen. A Wen. Content. And then the intent basically for the internet site is for the corporate web site to manage that content themselves. D Dos you expense tho would own that we be site to manage that content themselves. C D Cosa your web server, do you know what that runs are employing Lunix operating system in our content themselves. C D GREENE, Q.C.: O C Septembly of the internet site is for the corporate consumunications department who would own that web site to manage that content themselves. C D GREENE, Q.C.: O C Septembly our software licensing fees in few. The first question				_
18 A. Yes, but I can't tell you about it. 19 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. 21 Q. Your web server, do you know what that runs 22 web site to manage that content themselves. 22 Q. Your web server, do you know what that runs 23 Q. Does Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what 25 actually being called utility computing 4 where you purchase on a needed basis computing 4 services, whether it's for data storage or a catual data crunching? 21 A. No. 22 O. Do you capitalize all your software licensing 6 fees at present? 23 Q. Do you expense those? 3 A. No. 4 A. Basically - 4 A. Basically - 5 Q. Do you expense those? 4 A. Yes. 5 Q. So, your Microsoft software licensing 6 for instance, that you pay. 5 Gor instance, that you pay. 6 Gor instance, that you pay. 6 Gor instance, that you pay. 7 Gor instance, that you pay. 7 Gor instance, that you pay. 8 Gor instance, that you pay. 9 Gor instance, that				
19 Q. You don't know whether you do or not. 20 A. We are. Basically, in my understanding, we are employing Lunix operating systems in our 21 intrusion detection systems. 22 Q. Your web server, do you know what that runs 23 Q. Your web server, do you know what that runs 24 on? 25 A. No, but I can - Page 219 1 technologies to select, but do you employ 29 what's actually being called utility computing 30 where you purchase on a needed basis computing 31 services, whether it's for data storage or 30 actual data crunching? 5 actual data crunching? 6 A. No. 7 Q. Do you capitalize all your software licensing 36 fees at present? 9 A. No. 9 Do you expense those? 1 A. Basically - 1 Q. Expense them as in an operating expense, I 30 mean. 14 A. Yes. 15 Q. So, your Microsoft software licensing 6 for instance, that you pay. 16 A. Our desktop licensing fees are expenses. Our 18 service operating system licenses are 2 capitalized. 20 Q. Okay. That's all the question I have, Chair, 14 mk you, gentlemen. 19 Content. And then the intent basically for the internat site is for the corporate 2 communications department who would own that web site to manage that content themselves. 21 communications department who would own that web site to manage that content themselves. 22 D. Does Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what Page 219 1 GREENE, Q.C: 2 Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on Fre-direct is for either Mr. Downton of Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs arising from that the present? 1 associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to whether either a conventional or a trunked radio system was selected. And I whether internal costs would be consistent with respect to whether either a conventional or trunked radio, is actu		•		· · · · · · · · · · · · · · · · · · ·
A. We are. Basically, in my understanding, we are employing Lunix operating systems in our intrusion detection systems. Q. Your web server, do you know what that runs on? A. No, but I can -				•
21 are employing Lunix operating systems in our intrusion detection systems. 22 Q. Your web server, do you know what that runs 23 Q. Does Hydro out source any of its IT 24 on? 23 Q. Your web server, do you know what that runs 24 on? 24 A. No, but I can - 25 A. No, but I can - 26 Page 219 1 technologies to select, but do you employ 4 services, whether it's for data storage or 4 either Mr. Downton or Mr. Dunphy and it arises 25 actual data crunching? 4 services, whether it's for data storage or 4 either Mr. Downton or Mr. Dunphy and it arises 25 from the cross-examination by Mr. Alteen and 26 it related to the issue of the internal costs 37 associated with project B71 which is the 38 mobile replacement system that they've talked 30 a fair bit about. The first question with 31 cross-examination is the discussion about 32 Q. Expense them as in an operating expense, I 33 mean. 34 A. Yes. 35 Q. So, your Microsoft software licensing 39 for instance, that you pay. 30 Q. Okay. That's all the question I have, Chair, 4 thank you, gentlemen. 31 Green, are you 24 mr. Downton: 32 CHAIRMAN: 34 Mr. Downton: 34 mr. Altern expressed his content themselves. 36 web site to manage that content themselves. 36 web site to manage that content themselves. 36 web site to manage that content themselves. 36 D. Dos Hydro out source any of its IT requirements at the present moment, other than a consultant base, and advising you as to what 35 mr. 36 page 14 requirements at the present moment, other than a consultant base, and advising you as to what 36 mr. 37 page 220 3 Q. Yes, thank you, Mr. Chair, 10 ply have just a 4 few. The first question on re-direct is for 6 either Mr. Downton or Mr. Dunphy and it arises 6 from the cross-examination by Mr. Alteen and it related to the issue of the internal costs which it respect to internal costs arising from that 11 cross-examination is the discussion about whether internal costs would be consistent with respect to which		· · · · · · · · · · · · · · · · · · ·		•
22 intrusion detection systems. 23 Q. Your web server, do you know what that runs 24 on? 25 A. No, but I can - 26 Page 219 1 technologies to select, but do you employ 29 what's actually being called utility computing 30 where you purchase on a needed basis computing 40 services, whether it's for data storage or 41 services, whether it's for data storage or 42 A. No. 43 A. No. 44 catually data crunching? 45 A. No. 46 it related to the issue of the internal costs 47 Q. Do you capitalize all your software licensing 48 fees at present? 49 A. No. 40 Do you expense those? 41 A. Basically - 41 A. Basically - 42 Expense them as in an operating expense, I 45 Q. So, your Microsoft software licensing for instance, that you pay. 41 A. Our desktop licensing fees are expenses. Our 42 CHAIRMAN: 43 C. Your web server, do you know what that truns 44 or a trunked radio system was selected. And I 45 C. CHAIRMAN: 46 C. Do you capitalize all your software licenses are capt of the internal costs would be consistent with the discussion about that gain, please, because in reading the trunked radio system was selected. And I 50 Q. Okay. That's all the question I have, Chair, thank you, gentlemen. 51 Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? 52 Q. Yes, thank you, on the consultant base, and advising you as to what requirements at the present moment, other than a consultant base, and advising you as to what 52 Thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton Mr. Dunphy and it arises few. The first question on re-direct is for either Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. 52 CHAIRMAN: 53 Q. Thank you, Mr. Kennedy. Ms. Greene, are you		·		
Q. Your web server, do you know what that runs on? A. No, but I can - Page 219 technologies to select, but do you employ technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Do you capitalize all your software licensing fees at present? A. No. Do you expense those? A. No. Do you expense them as in an operating expense, I mean. A. Yes. So your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. CHAIRMAN: A. G. Your Webster it for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed.				
Page 219 Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Do you capitalize all your software licensing fees are expenses. Our server operating system licenses are capt to the data of the answer, so I wondered if you capitalized. Page 219 Page 220 1 GREENE, Q.C.: 2 Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or trunked radio system was selected. And I with respect to whether either a conventional or trunked radio system was selected. And I with respect to whether either a co		· · · · · · · · · · · · · · · · · · ·		——————————————————————————————————————
Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Do you capitalize all your software licensing fees at present? Do you expense them as in an operating expense, I mean. A. Yes. O. So, your Microsoft software licensing for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are captured and captured at the end of the answer, so I wondered if you could explain from Hydro's perspective as to whythe internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. Do (O. Okay. That's all the question I have, Chair, thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct?		•		· · · · · · · · · · · · · · · · · · ·
Page 219 technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. O. Do you capitalize all your software licensing fees at present? A. No. O. Do you expense them as in an operating expense, I mean. A. Yes. O. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are captured are for instance, that you, gentlemen. Dayson or a present you purchase on a needed basis computing and it arises few. The first question on re-direct is for either Mr. Downton on Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs of it related to the issue of the internal costs arising from that it related to the issue of the internal costs arising from that they ve talked a fair bit about. The first question with cross-examination is the discussion about whether internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. O. CHAIRMAN: The Arm Alternation by Mr. Kennedy. Ms. Greene, are you ready to re-direct? A RB. OUNTON:				
technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. O. Do you capitalize all your software licensing fees at present? A. No. O. Do you expense those? A. Basically - O. Expense them as in an operating expense, I mean. A. Yes. A. Yes. A. Our desktop licensing fees are expenses. Our for instance, that you pay. A. Our desktop licensing fees are expenses are capitalized. O. Okay. That's all the question I have, Chair, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dumphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. O. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: CHAI	25	A. No, but I can -	25	a consultant base, and advising you as to what
what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. O. Do you capitalize all your software licensing fees at present? A. No. O. Do you expense those? A. Basically - O. Expense them as in an operating expense, I O. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are O. Okay. That's all the question I have, Chair, A. Curready to re-direct? What's actually being called utility computing where you purchase on a needed basis computing few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about with respect to whether either a conventional with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. CHAIRMAN: MR. DOWNTON:				
where you purchase on a needed basis computing services, whether it's for data storage or services, whether it's for data storage or setual data crunching? A. No. Q. Do you capitalize all your software licensing sees at present? A. No. O. Do you expense those? A. No. O. Do you expense those? A. Asasically - Q. Expense them as in an operating expense, I mean. A. Yes. O. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. O. Okay. That's all the question I have, Chair, thank you, gentlemen. Mere dead to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the mobile replacement system that they've talked associated with project B71 which is the distributions transcript of the internal costs would be consistent whether internal costs would be consistent whether internal costs would be consistent whether internal costs would be consistent as or a trunked radio system was selected. And I because of the internal costs associated with project B71 which is the after the mobile replacement system that they've talked after		-		_
services, whether it's for data storage or actual data crunching? A. No. O. Do you capitalize all your software licensing fees at present? A. No. O. Do you expense those? A. Basically - O. Expense them as in an operating expense, I A. Yes. O. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our Server operating system licenses are capitalized. O. Okay. That's all the question I have, Chair, teady of the capitalized. O. Thank you, gentlemen. A. No. 4 either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs from the cross-examination by Mr. Alteen and it related to the issue of the internal costs it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that respect to internal costs arising from that ross-examination is the discussion about whether internal costs would be consistent whether either a conventional or a trunked radio system was selected. And I with respect to whether either a convention on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you capitalized. O. Okay. That's all the question I have, Chair, why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. A. MR. DOWNTON:		technologies to select, but do you employ		GREENE, Q.C.:
actual data crunching? A. No. O. Do you capitalize all your software licensing fees at present? A. No. O. Do you expense those? A. No. O. Do you expense those? A. Basically - O. Expense them as in an operating expense, I A. Yes. O. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. O. Okay. That's all the question I have, Chair, thank you, gentlemen. So pour Microsoft was Greene, are you are added to the issue of the internal costs are in reading to the internal costs which project B71 which is the mobile replacement system that they've talked and it respect to internal costs arising from that respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent whether internal costs would be consistent or a trunked radio system was selected. And I with respect to whether either a conventional or transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you capitalized. O. Okay. That's all the question I have, Chair, thank you, gentlemen. A. We could explain from Hydro's perspective as to whichever, conventional or trunked radio, is actually selected and installed. A. We could with respect to whichever, conventional or trunked radio, is actually selected and installed. A. No. So your Microsoft software licensing fees, that the end of the answer, so I wondered if you capitalized. O. Okay. That's all the question I have, Chair, with respect to whichever, conventional or trunked radio, is actually selected and installed. A. We could with respect to whichever, conventional or trunked radio, is actually selected and installed.	2	technologies to select, but do you employ what's actually being called utility computing	2	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a
6 A. No. 7 Q. Do you capitalize all your software licensing 8 fees at present? 9 A. No. 9 a fair bit about. The first question with 10 Q. Do you expense those? 10 respect to internal costs arising from that 11 A. Basically - 12 Q. Expense them as in an operating expense, I 13 mean. 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 22 CHAIRMAN: 24 ready to re-direct? 26 direction it related to the issue of the internal costs 27 associated with project B71 which is the 28 mobile replacement system that they've talked 29 a fair bit about. The first question with 29 a fair bit about. The first question with 20 whether internal costs arising from that 21 whether internal costs would be consistent 22 whether internal costs would be consistent 23 used on the internal costs would be consistent 24 mr. Downton; 25 utranscript, Mr. Alteen expressed his confusion 26 could explain from Hydro's perspective as to 27 why the internal costs would be consistent 28 why the internal costs would be consistent 29 why the internal costs would be consistent 20 why the internal costs would be consistent 21 with respect to whichever, conventional or 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing	2 3	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for
7 Q. Do you capitalize all your software licensing 8 fees at present? 9 A. No. 9 a fair bit about. The first question with 10 Q. Do you expense those? 10 respect to internal costs arising from that 11 A. Basically - 12 Q. Expense them as in an operating expense, I 13 with respect to whether either a conventional 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 could explain from Hydro's perspective as to 20 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 20 a fair bit about. The first question with 29 a fair bit about. The first question with 20 whether internal costs arising from that 21 think project B71 which is the 29 a fair bit about. The first question with 20 a fair bit about. The first question with 21 tross-examination is the discussion about 22 whether internal costs would be consistent 23 with respect to whether either a conventional 24 mr. Downton, if you could comment on 25 trunked radio fit he answer, so I wondered if you 26 could explain from Hydro's perspective as to 27 why the internal costs would be consistent 28 with respect to whichever, conventional or 29 trunked radio, is actually selected and 20 installed. 21 micross-examination is the discussion about 24 mr. Downton:	2	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or	2 3 4	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises
fees at present? A. No. Basically - C. Expense them as in an operating expense, I Mean. A. Yes. C. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our Server operating system licenses are capitalized. C. Okay. That's all the question I have, Chair, thank you, gentlemen. Server operating that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. AR. DOWNTON:	2 3 4	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching?	2 3 4	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and
9 a fair bit about. The first question with 10 Q. Do you expense those? 11 respect to internal costs arising from that 11 A. Basically - 12 Q. Expense them as in an operating expense, I 13 with respect to whether either a conventional 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 a fair bit about. The first question with 10 respect to internal costs arising from that 11 cross-examination is the discussion about 12 whether internal costs would be consistent 13 with respect to whether either a conventional 14 or a trunked radio system was selected. And I 15 wonder, Mr. Downton, if you could comment on 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you 19 capitalized. 19 could explain from Hydro's perspective as to 20 Q. Okay. That's all the question I have, Chair, 21 with respect to whichever, conventional or 22 CHAIRMAN: 23 Q. Thank you, gentlemen. 24 with respect to whichever, conventional or 25 trunked radio, is actually selected and 26 installed. 27 MR. DOWNTON:	2 3 4 5	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No.	2 3 4 5	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs
10 Q. Do you expense those? 11 A. Basically - 12 Q. Expense them as in an operating expense, I 13 whether internal costs would be consistent 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 capitalized. 10 respect to internal costs arising from that 11 cross-examination is the discussion about 12 whether internal costs would be consistent 13 with respect to whether either a conventional 14 or a trunked radio system was selected. And I 15 wonder, Mr. Downton, if you could comment on 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you 19 could explain from Hydro's perspective as to 20 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 21 with respect to whichever, conventional or 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 24 MR. DOWNTON:	2 3 4 5 6	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing	2 3 4 5 6	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the
11 A. Basically - Q. Expense them as in an operating expense, I mean. 12 Whether internal costs would be consistent with respect to whether either a conventional 13 with respect to whether either a conventional 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 16 that again, please, because in reading the 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 capitalized. 19 could explain from Hydro's perspective as to 20 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 21 thank DOWNTON: 21 cross-examination is the discussion about 22 whether internal costs would be consistent 23 with respect to whether either a conventional 24 with respect to whether either a conventional 25 whother internal costs would comment on 26 that again, please, because in reading the 27 transcript, Mr. Alteen expressed his confusion 28 at the end of the answer, so I wondered if you 29 could explain from Hydro's perspective as to 20 why the internal costs would be consistent 21 with respect to whichever, conventional or 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present?	2 3 4 5 6 7	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked
12 Q. Expense them as in an operating expense, I 13 mean. 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 capitalized. 19 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 21 whether internal costs would be consistent 13 with respect to whether either a conventional 14 with respect to whether either a conventional 15 with respect to whether either a conventional 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you 19 could explain from Hydro's perspective as to 20 why the internal costs would be consistent 21 with respect to whichever, conventional or 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No.	2 3 4 5 6 7 8	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with
mean. 13 with respect to whether either a conventional 14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 16 that again, please, because in reading the 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 capitalized. 19 Q. Okay. That's all the question I have, Chair, 21 thank you, gentlemen. 21 With respect to whether either a conventional 14 or a trunked radio system was selected. And I 15 wonder, Mr. Downton, if you could comment on 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you 19 could explain from Hydro's perspective as to 20 Why the internal costs would be consistent 21 with respect to whichever, conventional or 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 24 MR. DOWNTON:	2 3 4 5 6 7 8	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those?	2 3 4 5 6 7 8 9	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with
14 A. Yes. 15 Q. So, your Microsoft software licensing fees, 16 for instance, that you pay. 17 A. Our desktop licensing fees are expenses. Our 18 server operating system licenses are 19 capitalized. 10 Q. Okay. That's all the question I have, Chair, 11 thank you, gentlemen. 12 CHAIRMAN: 13 or a trunked radio system was selected. And I 15 wonder, Mr. Downton, if you could comment on 16 that again, please, because in reading the 17 transcript, Mr. Alteen expressed his confusion 18 at the end of the answer, so I wondered if you 19 could explain from Hydro's perspective as to 20 why the internal costs would be consistent 21 with respect to whichever, conventional or 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those?	2 3 4 5 6 7 8 9	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that
Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? 15 wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically -	2 3 4 5 6 7 8 9 10 11	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about
for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? Ithat again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. A. Our desktop licensing fees are expenses. Our transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent in trunked radio, is actually selected and installed.	2 3 4 5 6 7 8 9 10	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I	2 3 4 5 6 7 8 9 10 11 12	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent
A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? A. Our desktop licensing fees are expenses. Our transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. A. Our desktop licensing fees are expenses. Our transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent in transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent in thank you, gentlemen. 22 trunked radio, is actually selected and installed. 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean.	2 3 4 5 6 7 8 9 10 11 12 13	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional
server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? 18 at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I
capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? 19 could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees,	2 3 4 5 6 7 8 9 10 11 12 13 14	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on
Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? Q. Okay. That's all the question I have, Chair, why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the
thank you, gentlemen. 21 with respect to whichever, conventional or 22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 21 with respect to whichever, conventional or 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion
22 CHAIRMAN: 23 Q. Thank you, Mr. Kennedy. Ms. Greene, are you 24 ready to re-direct? 22 trunked radio, is actually selected and 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you
Q. Thank you, Mr. Kennedy. Ms. Greene, are you ready to re-direct? 23 installed. 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to
24 ready to re-direct? 24 MR. DOWNTON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent
·	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or
25 RE-DIRECT BY MAUREEN GREENE, Q.C. 25 A. With regards to Hydro's internal costs, we did	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	technologies to select, but do you employ what's actually being called utility computing where you purchase on a needed basis computing services, whether it's for data storage or actual data crunching? A. No. Q. Do you capitalize all your software licensing fees at present? A. No. Q. Do you expense those? A. Basically - Q. Expense them as in an operating expense, I mean. A. Yes. Q. So, your Microsoft software licensing fees, for instance, that you pay. A. Our desktop licensing fees are expenses. Our server operating system licenses are capitalized. Q. Okay. That's all the question I have, Chair, thank you, gentlemen. CHAIRMAN: Q. Thank you, Mr. Kennedy. Ms. Greene, are you	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	GREENE, Q.C.: Q. Yes, thank you, Mr. Chair. I only have just a few. The first question on re-direct is for either Mr. Downton or Mr. Dunphy and it arises from the cross-examination by Mr. Alteen and it related to the issue of the internal costs associated with project B71 which is the mobile replacement system that they've talked a fair bit about. The first question with respect to internal costs arising from that cross-examination is the discussion about whether internal costs would be consistent with respect to whether either a conventional or a trunked radio system was selected. And I wonder, Mr. Downton, if you could comment on that again, please, because in reading the transcript, Mr. Alteen expressed his confusion at the end of the answer, so I wondered if you could explain from Hydro's perspective as to why the internal costs would be consistent with respect to whichever, conventional or trunked radio, is actually selected and installed.

1

- use the same costs against all of the
- 2 alternatives and the reason we did that is
- 3 because whichever technology we select,
- 4 whichever system we select, would be a new
- 5 system. So, with regards to training, parts,
- 6 project management, engineering, all of those
- would have, in our opinion, the same value
- 8 across all of the systems, we would be
- 9 looking.
- 10 Q. The other thing, if you could look at page B71
- and give the breakdown of the internal cost
- that was just over 3 million dollars.
- 13 (3:45 p.m.)
- 14 A. Now, the category at the bottom called
- "corporate overheads", the overhead at 6
- percent is approximately \$450,000.00;
- contingency at 10 percent is \$687,000.00;
- escalation at approximately 1.8 percent is
- 19 \$440,000.00 and the funds used during
- construction is approximately \$400,000.00.
- That would give you approximately 1.9 million
- 22 dollars.

1

- 23 Q. Now, what is the balance then of the other
- 24 million for the 3 million cost over an above
- 25 the 5.7 million direct cost that was used in

Page 223

- Q. Could you explain what the error was on what
- we have just circulated?
- 3 A. The error was that the person who entered the
- 4 data, somehow managed to transcribe some of
- 5 the results. If you compare Appendix four in
- 6 the original document to the attached table,
- you can see that the totals for August, in the
- 8 original document are identical for the totals
- 9 for September.
- 10 Q. So, the numbers were transposed or repeated?
- 11 A. No, they weren't transposed, they were
- 12 actually moved down because if you compare the
- corrected document, the numbers for September
- actually appear in October in the original;
- the numbers for October appear in November, et
- cetera. It appears to be a cut and paste
- mistake in the original spreadsheet.
- 18 O. And there was no substantive decision that
- turned on that, was there?
- 20 A. Absolutely not.
- 21 Q. I guess we need to mark -
- 22 MR. KENNEDY:

25

- 23 Q. Well, actually, Chair, I don't think we need
- to put that in as an exhibit because it's a
 - revision of an existing document and marked as

- the Business Case analysis.
- 2 A. This cost would be used for internal project

Page 222

Page 224

- 3 management, installation and training.
- 4 Q. And you would find those in the categories
- 5 above, material, supply, labour and
- 6 engineering, is the correct?
- 7 A. That is correct.
- 8 Q. The next item arises also from Mr. Alteen
- 9 cross-examination and it's a reference to
- Appendix C which was a consultant's report and
- attachment four. And I have here a document
- to distribute, I'd like to distribute at this
- time and ask Mr. Dunphy to briefly speak to
- 14 it.
- 15 MR. DUNPHY:
- 16 A. Yes, Mr. Alteen -
- 17 Q. If you could wait Mr. Dunphy until everyone
- has a copy.
- 19 A. My apologies.
- 20 Q. Thank you. Mr. Dunphy, I believe in his
- 21 cross-examination, Mr. Alteen indicate that
- some of the number appear to be incorrect.
- 23 Did you have the opportunity to review that
- and was Mr. Alteen correct?
- 25 A. Yes, he was.
- hat 1 such, so.
 - 2 GREENE, Q.C.:
 - 3 Q. Okay.
 - 4 CHAIRMAN:
 - 5 Q. Just one question on that while you're there,
 - 6 you have two Julys there. Does that appear as
 - well on the--there's a reason for that, is
 - 8 there?
 - 9 GREENE, Q.C.:
 - 10 Q. And I'll ask Mr. Dunphy to speak to that.
 - Sometimes I wish we did have two months of
 - 12 July.
 - 13 CHAIRMAN:
 - 14 Q. I hope the second one is warmer than this one.
 - 15 GREENE, Q.C.:
 - Q. And one less month of February. Mr. Dunphy?
 - 17 MR. DUNPHY:
 - 18 A. Just to avoid further confusion, it was
 - decided, not by myself I might add, to include
 - 20 two months of July to be consistent.
 - 21 Q. Just because it was in the previous report
 - without a mistake and the numbers -
 - 23 CHAIRMAN:

- 24 Q. Yes, I noticed it in the previous report.
- 25 GREENE, Q.C.:

1

- O. But there was no mistake in the numbers, I gather. The next question then arising in re-2
- direct is for Mr. Haynes and it arises from 3
- the cross-examination by Ms. Andrews and in 4
- relates to B8, the gate hoist at Ebbe. In a 5
- 6 response to a question, Mr. Haynes, you
- 7 indicated that Hydro had not done an
- evaluation of continuing with maintenance of 8
- the current system or an analysis of new and
- 10 improved screw mechanism system and I wonder
- if you could advise the Board why Hydro did 11
- not do that particular type of analysis. 12
- 13 MR. HAYNES:

24

25

Q. I guess I implied at that particular time it 14 was about a 50/50 ratio of gates between screw 15 16 stem and so on. Really, the big governing factor is the weight of the gate. Those 17 particular gates at Ebbe are the bigger ones 18 that we have in the Hydro system are 19 approximately four by six or seven meters and 20 they're steel gates. And we do have screw 21 stem gates on smaller gates and they do 22 operate satisfactorily with very little 23

maintenance and very little concerns. These

particular gates, the mode of operation

Page 227

- the plant which does happen often, basically 1 we will employ 3 gates, but number 2 is a 2
- 3 very, very high percentage of the time. Gates
- 1 and 3 are often used yearly. I won't say 4
- daily, but they're certainly used many times a 5
- year to increase the discharge of water and 6
- also obviously for flood handling. 7
- Q. With respect to there answered, is it--the way 8
- 9 I understood your answer is that the alternatives proposed by Ms. Andrews were not
- 10 acceptable to Hydro from a reliability 11
- perspective as a satisfactory solution, 12
- therefore they weren't costed. Is that a fair 13
- 14 15

16

25

- A. That's fair and we're trying to be proactive to ensure the long term reliability and the
- degree of liability that we need for those 17
- particular gates, I guess, experience has 18 19 shown that the screw stem gates are not
- providing that. I should add as well--I'm not 20
- sure if I mentioned it before, but the failure 21
- 22 in, the last failure was five months to acquire, you know, re-engineered or new parts 23
- for that gate. That's too long a time frame. 24
 - Q. The last question arising from Ms. Andrews

changed when Upper Salmon went in. Prior to

- that, they were either opened or closed. Now 2
- they go partial operation. In the engineering 3
- judgment that's based from generation to 4
- engineering operations personnel is that the 5
- continuing of screw stem, particularly for 6
- gate number 2 is really not a satisfactory and 7
- reliable way to continue operation on that 8
- particular gate. As well, all the operating
- mechanisms are 35 years old, the gear boxes 10
- and so. And the most prudent thing from their 11
- point of view for long term to sustain 12
- reliability is to go with a more traditional 13
- hoist mechanism for that weight of a gate, 14
- particularly for it's partial gate operation 15
- 16 requirements. I think there was one other
- thing which I should add, I guess, I inferred 17
- or implied that these gates, number 1 and 3 18
- are only used for flooding handling; that's 19
- really not correct at all. The amount of 20
- water that you gets through a gate depends 21
- obviously on how open the gate is. It also 22 depends on how much water is up stream. And 23
- when we're in low water conditions or when 24
 - there's an unexpected increase in demand at
- 25
 - Page 228

Page 226

- cross-examination related to the replacement 1
- of the exciter on Unit number 7 on Bay 2
- D'Espoir and the question was whether any of 3
- the cards that have been removed from the 4
- 5 exciters in the first six units could be
- reused in Unit number 7? 6
- A. No cards are interchangeable with Unit number 7 8
- 9 Q. The last two questions really aren't redirect, Mr. Chair, but I believe we're in a
- 10 position to answer the two undertakings to Mr. 11
- Hutchings given earlier in the afternoon if 12
 - that's satisfactory at this time.
- 13 14
 - The first one that I had noted related to the Citrix servers and I believe one
- undertaking was with respect to the number of 16
- Citrix servers that we have, Mr. Downton. 17
- Have you been able to confirm that over the 18
- break? 19

- 20 MR. DOWNTON:
- A. There's one server.
- 22 CHAIRMAN:
- Q. Would you spell that, Mr. Downton, for us, 23
- what it is that Mr. Greene is trying to say, 24
- 25 so we'll all know what it is.

July 9, 2005	Mulu-Paş	ge NL Hydro 2004 Capitai Budget Application
Pag	ge 229	Page 230
1 A. One Citrix, C-I-T-R-I-X server.	1	was he wished you to review the all up costs,
2 GREENE, Q.C.:	2	I'll call it, of the Thin Client device. Now
3 Q. And also arising from the same question on th	ne 3	that you have corrected the information on the
4 Citrix servers, I believe, in response to a	4	Citrix server, have you been able towill you
5 question of Mr. Hutchings, you indicated that	5	confirm please, the cost of the Thin Client?
6 that server is required only for the Neoware	6	A. Well, if I take the Thin Client number I gave
7 product of the Thin Client product, was that	7	Mr. Hutchings this morning which was \$1,200.00
8 correct?	8	and I add \$1,250.00 as I just mentioned, that
9 A. No, that's not correct.	9	would be \$2,450.00 per unit.
10 Q. What is the correct answer to that?	10	Q. And the cost again, I'm sorry, I missed that,
11 A. The way that we are designing the	11	of the -
infrastructure is that all devices, end user	12	A. Sorry, \$2,450.00.
devices would go through the Citrix servers.	13	Q. That completes not only my redirect, but the
And I should know that because I have a laptor		few undertakings from today. I believe we
that works in Thin Client mode on my desk.	•	have outstanding, two other undertakings and
So, basically whether it's a laptop, desktop	16	my note just passed and I should have
or a Neoware box, they all go through the	17	remember, we have a table also that I needed
18 Citrix server. So, that basically means that	18	to present in response in re-direct.
the costs are allocated across all of the		CHAIRMAN:
20 units. So, if you want to do a per unit cost	20	Q. You want to do that now?
basis, you can add approximately \$1,250.00 to		GREENE, Q.C.:
the cost of the desktop unit, to the laptop	22	Q. Yes because I hope that will conclude theit
unit and to the Thin Client, Neoware unit.	23	is redirect for the panel. Again, it's in
24 Q. And the last question arising as an	24	response to a question arising from Ms. Henley
undertaking to Mr. Hutchings this afternoon	25	Andrews yesterday with respect to the removal
	ge 231	Page 232
of the exciter for Bay D'Espoir and what	1	filed this list of the equipment to be removed
2 impact the removal of the 150 megawatts of	2	from service just a minute ago.
3 capacity would have with respect to table 8		GREENE, Q.C.:
that was filed in the GRA. So, thank you for	4	Q. No, I have not filed that.
5 reminding me. It must be getting late in the		MR. KENNEDY:
6 day and as I get older, my memory starts to	6	Q. Okay.
7 fail me during the day. These are copies of		GREENE, Q.C.:
8 the table I had intended to produce.	8	Q. I have not spoken to that, Mr. Kennedy.
9 CHAIRMAN:		MR. KENNEDY:
10 Q. Thank you. Did you say that was in response	10	Q. I beg your pardon, okay.
11 to an undertaking?		GREENE, Q.C.:
12 GREENE, Q.C.:	12	Q. Mr. Haynes, could you please indicate now that
Q. Cross-examination of Ms. Andrews to Mr. Haynes	13	the table has been circulated, what this
with respect to what impact the removal of 150	14	table, revised table they chose.
15 megawatts of capacity -	15	A. Well, first of all, this does not respect any
16 CHAIRMAN:	16	energy balance, it's strictly on the loss of,
Q. I remember that, but is it in response to a	17	as we discussed yesterday, if there was 150
numbered undertaking?	18	megawatts removed from the system for one
19 GREENE, Q.C.:	19	year, I guess the inference was made that we
20 Q. Oh no, no sir, it's not.	20	have lots of capacity to get through and it's
21 CHAIRMAN:	21	not a problem. Our objective, I guess, is
22 Q. So, we have to mark it, I guess, Mr. Kennedy.	22	that we when we get to NLLH (phonetic) of 2.2
23 MR. KENNEDY:	23	hours per year, that we would actually
24 Q. Yes, we would, exhibit number 2. Actually,	24	consider new generation sources whether
25 while we're on that, counsel for Hydro, you	25	purchase or build or whatever. And talking

	Page 233		Page 234
1	150 megawatts out of the system basically	1	budget.
2	would change the previous number fromsorry,	2	GREENE, Q.C.:
3	I don't have it, but it's in the GRA from the	3	Q. No, it's not. It's a revised table 8 to
4	original schedule 2, it will actually increase	4	reflect that one question of the impact of the
5	to 12.1 which is well beyond our criteria.	5	removal of 150 megawatts of capacity from Bay
6	And with our load growth, 150 megawatts is	6	D'Espoir.
7	quite a substantial amount of our capacity.	7	MR. HAYNES:
8	Q. So, the removal of the 150 megawatts of	8	A. The original number was actually 0.6 and then
9	capacity would cause a problem immediately	9	
10	with respect to loss of load criteria that's	10	GREENE, Q.C.:
11	been approved by the Board.	11	
12	A. It's a big deal and we don't have any options	12	_
13	obviously for emergency purchase contracts	13	-
14	from, say, Hydro Quebec or Labrador, whomever.	14	
15	Q. The last thing that Mr. Kennedy has referred	15	
16	to, I didn't plan to asksorry.	16	•
1	CHAIRMAN:	17	MR. KENNEDY:
18	Q. Just wanted to clarify, this table 8 comes	18	
19	from -	l	GREENE, Q.C.:
1	GREENE, Q.C.:	20	
21	Q. It's actually in the 2003 Hydro GRA.	21	•
1	CHAIRMAN:	22	•
23	Q. In the GRA, that's right. I just wanted to	23	
24	make sure the record showed that because it's	24	•
25	not table 8 from your Application for the 04		CHAIRMAN:
	Page 235		Page 236
١,	•	1	2
$\frac{1}{2}$	Q. Okay. Just toit's 4:00 and we're done for the day. I just want to be sure where we go	1	
$\frac{1}{2}$	tomorrow morning. There will be an	2	
3	2	3	
4	opportunity for the Board to ask questions,	4	
5	but before that, and realizing that some of	5	8
6	the information that Ms. Greene just filed is		GREENE, Q.C.:
7	in response to Mr. Hutchings and Ms. Henley	7	
8	Andrews queries, you may wish to have a look	8	
9	at that and see if there are any questions you	9	1
10	have in the morning as well as Mr. Kennedy, I	10	1 1
11	suppose. Were you involved in any of those,	11	J 11
12	Mr. Hayes?	12	
1	MR. HAYES:	13	, ,
14	Q. Sorry, I missed the point.	14	1
1	CHAIRMAN:	15	
16	Q. I know, it's 4:00. The information just given	16	1
17	by Ms. Greene, I was saying that anyone who	17	1 ,
18	was involved in those questions may want to	18	*
19	have an opportunity in the morning to ask any	19	•
20	questions of clarification of the witnesses.	20	1
1	MR. HAYES:	21	
22	Q. Well, there were only one or two questions	22	
23	related to Mr. Alteen -		CHAIRMAN:
1	CHAIRMAN:	24	1
25	Q. So, that opportunity will be extended tomorrow	25	with the evidence that had been led so far.

July 9, 2003 Mult	i-Page [™] NL Hydro 2004 Capital Budget Application
Page 237 And where Mr. McDonald wasn't involved in that much of it, I don't think there's a problem with that, if he wants to be excused. Are there any problems with any of the, with counsel. MR. HUTCHINGS: Q. I see no difficulty with that, Mr. Chair. CHAIRMAN: Q. You're excused, Mr. McDonald. GREENE, Q.C.: Q. Thank you very much. I'm sure his family will appreciate it. CHAIRMAN: Q. You're welcome. At 9:00 in the morning. Thank you. Upon conclusion at 4:00 p.m.	