NEWFOUNDLAND AND LABRADOR BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

120 Torbay Road, P.O. Box 21040, St. John's, Newfoundland and Labrador, Canada, A1A 5B2

Hearing Transcript

Newfoundland and Labrador Hydro 2017 General Rate Application

April 23, 2018

The Board:

Darlene Whalen, Chair and CEO Dwanda Newman, Vice-Chair James Oxford, Commissioner

Newfoundland and Labrador Hydro:

Geoffrey Young, Counsel Alex Templeton, Counsel

Newfoundland Power Inc.:

Gerard Hayes, Counsel Liam O'Brien, Counsel

Consumer Advocate:

Dennis Browne, Q.C. Steven Fitzgerald, Counsel

Island Industrial Customers

Paul Coxworthy, Counsel Dean Porter, Counsel Denis Fleming, Counsel

Labrador Interconnected Group*

Senwung Luk, Counsel

Iron Ore Company of Canada*

Benoit Pepin, Counsel

*Note – These two parties will not be in attendance every day

Board Counsel/Staff:

Jacqueline Glynn, Board Counsel Maureen Greene, Q.C., Hearing Counsel Cheryl Blundon, Board Secretary

Witness/Witnesses

Mr. James Haynes, President of Newfoundland and Labrador Hydro April 23, 2018 NL Hydro 2017 GRA Page 1 Page 3 1 (9:03 a.m.) 1 MR. HAYNES: 2 CHAIR: 2 Q. Okay. 3 0. Okay, good morning, everybody. I'd like to 3 MR. JAMES HAYNES - CROSS-EXAMINATION BY MR. O'BRIEN: 4 extend first my personal thanks to all of Good morning, Mr. Haynes. 5 you for your understanding for last week, 5 MR. HAYNES: 6 for Thursday and Friday, and especially to 6 A. Good morning. 7 MR. O'BRIEN: you, Mr. Haynes. 8 8 When we left off last week, my recollection MR. HAYNES: Q. 9 No problem. 9 is we were talking about the Avalon A. 10 CHAIR: 10 capability and reserve operating instructions around that time? 11 Q. I guess, you were hoping this wouldn't be 11 12 happening today, but here we are. 12 MR. HAYNES: 13 MR. HAYNES: 13 Yes. A. That's life. MR. O'BRIEN: 14 A. 14 15 CHAIR: 15 0. We were talking sort of about Hydro's philosophy on standby generation use. Now 16 Q. I think before we get started, I just want 16 17 to note we do have a new transcription 17 as an intervener, and Newfoundland Power I services provider. Discoveries Unlimited is 18 18 can only speak for, but I think some of the 19 here, and welcome back, Glenda. Glenda 19 other interveners as well, are interested in 20 20 Gibbons is here as recorder, and I don't this area, given the application for 21 think we have any other matters from the 21 recovery of the amounts from the energy 22 22 supply deferral accounts for 2015, 2016, and parties. 23 MR. TEMPLETON: 23 2017. That application is part of these 24 24 Madam Chair, just as a preliminary matter, proceedings. The amounts in that deferral Q. 25 at our last hearing date on Tuesday, April 25 account, in the energy supply deferral Page 2 Page 4 1 17th, a second undertaking was provided. The 1 account, in the evidence they suggest, or 2 undertaking was to provide the 2017 budget 2 there's a cumulative amount over those three 3 3 and when it was approved. That undertaking, year periods of about 59 million dollars. Hydro has filed a document today. Copies of 4 4 Does that sound right to you in that range? 5 5 that document have been circulated to the MR. HAYNES: 6 6 panel and to all parties, and it is filed in I thought the total was 65 in total of all Α. 7 7 of them. fulfilment of Undertaking #2. 8 8 MR. O'BRIEN: 9 9 CHAIR: 0. And that's for the total deferral account 10 Perfect. Thank you, Mr. Templeton. Ms. 10 itself, I think, but for the energy supply, Q. Glynn, is there anything that you need to – 11 11 I think, itself, if we took something in 12 MS. GLYNN: 12 that -13 13 Q. Just one matter. We did have an updated MR. HAYNES: undertakings list which will now be updated 14 14 A. Subject to check, yes. 15 to reflect the filing of Undertaking #2 by MR. O'BRIEN: 15 16 Hydro. We do have new paper transcripts for 16 Q. Subject to check, okay. So we're looking at 17

17 the two hearing days last week. If any of 18 the parties would like us to take the old 19 paper transcripts, we can certainly do that 20 and do what we need to do with those. Thank 21 you. 22 CHAIR:

still under oath right now.

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Q.

22 Thank you. Okay, so we're back to you, Mr. 23 O'Brien, thank you, and Mr. Haynes, you're 24 25

something in the range of about 20 million dollars a year associated with fuel for primarily the Holyrood GT use, is that right?

MR. HAYNES:

Primarily the Holyrood, but it would be the A. whole, I'm sure.

MR. O'BRIEN:

Okay, and that cost is based on cost of #2

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April 23, 2018 NL Hydro 2017 GRA Page 5 1 fuel, which doesn't run through the RSP? 1 The number of operating hours, and there are A. 2 2 criteria, and I'm not familiar with the MR. HAYNES: 3 3 No, that's correct. depth of that there, but they would generate Α. 4 4 MR. O'BRIEN: into a requirement for overalls at certain 5 5 time frames on, you know, the effective And I think we did speak about the fact that Q. 6 running the Holyrood GT, the cost of that 6 starts, and I think there's another driver 7 7 from a fuel basis would be significantly with respect to total hours of running -8 8 higher than hydroelectricity, from the cost MR. O'BRIEN: 9 9 of that energy? 0. Okav. 10 10 MR. HAYNES: MR. HAYNES: 11 Α. Well, it's fuel related, so, yes. 11 Α. Would affect that. So there is a capital 12 MR. O'BRIEN: 12 component in the sense of, you know, I won't say regular hours. Those requirements are 13 And I believe I had asked you whether it 13 Q. 14 would be an average of somewhere in the 14 driven by - totally energy produced, our 15 range of about 30 cents a kilowatt hour to 15 operating hours probably more so than 16 run the Holyrood CT? 16 energy, and the number of starts primarily, 17 MR. HAYNES: 17 the two that I'm familiar with. 18 Α You did mention that. I didn't check that. 18 MR. O'BRIEN: 19 It sounds high. 19 So there's really sort of a couple of Q. 20 MR. O'BRIEN: 20 variables here. It's the number of starts 21 Q. Does it? 21 and then really how long you're running the 22 MR. HAYNES: 22 unit as well in terms of capital? 23 23 A. I would have thought 20 or 25 cents, but, MR. HAYNES: 24 24 vou know -Yeah, they would drive a capital eventually, A. 25 MR. O'BRIEN: 25

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Would you be able to check on that for us 2 and give us an undertaking to check on that? 3

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MR. HAYNES:

Q.

Yes, I'm sure we can get that number fairly Α. quickly.

6 MS. GLYNN:

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7 Noted on the record. Q.

8 (UNDERTAKING)

9 MR. O'BRIEN:

10 So even if it's, say, 20/25 cents a kilowatt Q. hour, that's still over double what it would 12 be for running, say, thermal energy?

13 MR. HAYNES:

> Yes, but it's a different unit which is used A. for different applications.

16 MR. O'BRIEN:

17 Yeah, yeah. No, I understand, yeah. What 0. 18 about capital cost of running the CT?

19 MR. HAYNES:

20 A. Capital cost for running the CT would 21 basically be driven by such things as the 22 number of starts.

23 MR. O'BRIEN:

24 Right. Q. 25 MR. HAYNES:

1 MR. O'BRIEN:

> Q. Okay. I wonder if we could bring up – this is one of the documents that we had provided in advance. It's from Hydro's capital budget application of 2018. It's response to an RFI NP-NLH-004.

7 MS. GLYNN:

> We'll mark that as an exhibit. Q.

9 MR. O'BRIEN:

10 And can we mark that as Information? Q.

MS. GLYNN: 11

> Q. Information Item, and, unfortunately, I'm unsure which number we're -

MR. O'BRIEN:

The last one we had there – I think it would 0. be Information 4. Does that sound right?

MS. GLYNN:

18 Q. Thank you, Mr. O'Brien, it is. It will be 19 entered as Information #4.

MR. O'BRIEN:

There's actually two with this one, the NP-Q. 004, and then - NP-NLH-004 and NP-NLH-0019 are with this group.

24 MS. GLYNN:

25 Okay. Page 8

April 23, 2018 NL Hydro 2017 GRA Page 9 Page 11 1 MR. O'BRIEN: 1 MR. O'BRIEN: 2 2 Q. Maybe we'll mark the 004. Would that be #4? Q. And so this is sort of based on how many 3 MS. GLYNN: 3 times – you have certain overalls at certain 4 4 Q. Yes, so NP-NLH-004 will be entered as

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Page 10

6 7 MR O'BRIEN. 8 Okay, thank you. So Information #4, Mr. Q. 9 Haynes, that's a request for information 10 concerning Hydro's current estimated capital cost per equivalent start, and I think 11 12 that's what you were talking about when you mentions per start for the Holyrood gas 13 turbine, and the current estimate there in 14 15 terms of the response was 33,000 per, and is 16 that per – that's per equivalent start, is 17 that right? 18 MR. HAYNES: 19

entered as Information #5.

Information #4, and NP-NLH-019 will be

That would be my understanding, yes. A. MR. O'BRIEN: Q. And are you able to tell me exactly what an equivalent start is?

23 MR. HAYNES: 24 I did have a brief discussion with someone Α 25 last summer explaining what an equivalent

start was, and, basically, it's not the 1 2 number of times that you actually start the 3 gas turbine, it's a calculated number based on Siemens, which is the equipment supplier 4 5 recommendation of how you do these overalls, 6 and it depends on, obviously, the number of 7 starts you do. It depends on the number of 8 trips that you may have at certain loads. 9 Like, if it tripped off at 75 percent load, that may be – I can't quote the number that 10 that would be. 11

12 MR. O'BRIEN:

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Q. Okay.

14 MR. HAYNES:

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But it would not be 1. So there's two or A. three penalties on that there. The intention is to measure the stress on the machine.

19 MR. O'BRIEN:

> 0. Okav.

21 MR. HAYNES:

And it's the OEM recommendation to go back A. after – I think the number is actually 400 equivalent starts into this minor overall that is required.

number of starts?

5 MR. HAYNES:

> A. Yes.

MR O'BRIEN.

And so this capital cost based on that, and Q. the number of actual starts or equivalent starts until you get to that point?

MR. HAYNES:

A. The equivalent starts would always be higher than the actual number of starts, yeah, unless you had completely perfect operations, but if there's a trip, for instance, there would be a penalty, and I do not know what the numbers are, but it's a calculated value

MR. O'BRIEN:

20 Right. Q.

21 MR. HAYNES:

> That basically, you know, measures the A. stress upon the machine, and it's a recommendation by the OEM to actually do these overalls in that period of time.

Page 12

1 MR. O'BRIEN:

> So every time you start the machine, you've Q. got a fuel cost based on how long you run it, and an equivalent – a capital cost based on at least the fact that you had started it?

MR. HAYNES:

An eventual capital cost based on that. Α

MR. O'BRIEN:

Q. Is there any difference to capital cost, say, if the CT runs for an hour versus ten hours?

13 MR. HAYNES:

> A. Not that I'm aware of, except your total running hours would actually result in an overall later on because of the actual production, if you will, or running hours. They're two different things, as I understand

20 MR. O'BRIEN:

> Okay. So every time it's started, whether Q. it's for capacity or threshold purposes, customers would bear the cost of that start?

MR. HAYNES:

Eventually.

April 23, 2018 NL Hydro 2017 GRA Page 13 Page 15 1 MR. O'BRIEN: for the Avalon reserve. With TL-267, the 1 2 2 Q. Yeah, eventually. pressure on that does decrease a lot, 3 MR. HAYNES: 3 because basically we have a lot more 4 4 And, you know, the actual time frame to do flexibility to bring hydro power in from the A. 5 5 Bay d'Espoir area, or from west, I should that is, obviously, something that would be 6 looked at from the point of view of the – 6 say, and – so that'll decrease that. You 7 7 from the asset health point of view or the know, when Soldiers Pond comes in, even on a 8 8 asset folks who look at the number of mono-pole basis, that will also, you know, 9 starts, they will plan for a capital budget 9 decrease the numbers of starts, and all 10 based on expected starts for the year. If 10 those things are looked at by the production 11 there's a lot more starts because the 11 people in an effort to provide the least 12 cost, but to maintain those reserve levels situation changes, that would advance; if 12 13 it's delayed, you would move out, and so on the Avalon. With the 267 in service, the 13 14 they would predict when the ideal timing 14 Avalon regional planning or production thing 15 would be for an overall because of that. 15 is not nearly as intense as it was. MR. O'BRIEN: MR. O'BRIEN: 16 16 17 And the amount included in each of the years 17 Q. Q. Okay. 18 here for this deferral account, the energy 18 MR. HAYNES: 19 supply deferral account, is well in excess 19 But we do have to recognize the fact that we A. 20 of the \$500,000.00 threshold built into 20 have had some limitations at Holyrood as 21 those accounts. Is that fair? Hydro would 21 well. 22 22 MR. O'BRIEN: essentially eat the first \$500,000.00 of 23 23 that account, but the remaining -So with that line in place, we should see a 0. reduction in fuel costs and starts? 24 24 MR. HAYNES: 25 A. That's my understanding, yes. 25 MR. HAYNES: Page 14 Page 16 1 MR. O'BRIEN: 1 A. Over time, yes. 2 2 MR. O'BRIEN: Q. Yeah, yeah. So does that \$500,000.00 3 3 threshold provide any incentive to Hydro not Q. Hydro brought an application for the 4 disposition of balances in the 2015 and 2016 4 to run the GT? 5 5 (9:15 A.M.) account, the energy supply deferral account, 6 6 MR. HAYNES: last fall and this was denied, correct? Every time we look at operating the gas 7 7 MR. HAYNES: A. 8 turbine, we look at the need from the point 8 Α Denied or deferred, yes. 9 9 of view of, you know, meeting our reserve MR. O'BRIEN: 10 and so on, so our primary focus is on 10 Q. Were you aware that the Board felt that reliability, and if that was the option that Hydro had not adequately addressed the cost 11 11 was available, or the most - you know, we and benefits of Hydro's approach to general 12 12 would run the other gas turbines first, if 13 13 dispatch in we could. When you start the Holyrood gas MR. HAYNES: 14 14 15 15 turbine, first of all it has a minimum Yes, I'm aware of that. Α. 16 loading of 40 megawatts, so basically you're 16 MR. O'BRIEN: 17 not – you know, and the other machines, the 17 Q. And that Hydro had not proven that its costs Hardwood and Stephenville machines can run 18 were reasonable and necessary to provide 18 19 19 at a lower load. So we would look for what reasonable service at that point? 20 20 we can do, but if it's an Avalon MR. HAYNES: 21 requirement, and depending where Holyrood is 21 That was the conclusion on our application; A.

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with respect to its capability, which

basically is a primary one along with

Newfoundland Power Avalon units as well,

obviously, we would run that if and required

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however, we have reapplied, obviously, and I

think that we've actually, you know, better

justified the utilization of that gas

turbine. We done it to protect the

April 23, 2018 NL Hydro 2017 GRA Page 17 Page 19 1 customers and to provide Avalon security, 1 Yes. A. 2 2 and, basically, we've provided information MR. O'BRIEN: 3 3 to the Board, to interveners, to Q. That third bullet there, the maintenance 4 Newfoundland Power, and on the rationale for 4 spinning reserves, we touched on that as 5 5 using that. well. We talked about the spinning reserves 6 MR. O'BRIEN: 6 being equal to the capacity of the largest 7 7 Q. And is it important in your mind that that online unit, plus, I believe it's an 8 8 rationale or that operational philosophy additional 70 megawatts of available reserve 9 9 incorporates an appropriate cost benefit to cover performance uncertainties, is that 10 10 analysis? right? 11 MR. HAYNES: 11 MR. HAYNES: 12 I'm pretty comfortable that the folks who 12 A. Α. That's what it says, yes. 13 make the decision to run the gas turbine 13 MR. O'BRIEN: 14 looked at that particular part. If you're 14 0. Okay, and if we look down at Footnote 15, I 15 referring to the balance of reliability, 15 think that's where it says, "For the current overall system reliability and cost, we have system this is equal to 170 megawatts from 16 16 17 taken the position that we have responded to 17 the Unit 1 or 2 at Holyrood's online, and is otherwise 154". So those are your bigger 18 the reports that have been made by the 18 19 Liberty folks, and through Board 19 units? 20 20 information, and through other stakeholders MR. HAYNES: 21 that they want security on the Avalon, and 21 Those are the larger units, yes. Α 22 that's what we did. So we haven't – you 22 MR. O'BRIEN: 23 know, if we were to change the way we did 23 Yeah, okay. So if we look at those figures. 0. 24 24 that, there would be more risk to the the total spinning reserves which is 25 customers at the time, if that's what you 25 maintained is either 240 megawatts if Unit 1 Page 20 Page 18 1 1 or 2 is online, or it will be 224 if the mean. 2 2 largest unit is Bay d'Espoir? MR. O'BRIEN: 3 That's part of my question. I guess, I'm 3 MR. HAYNES: Q. 4 4 more sort of focused on would you agree that Yes, or it could be less if Bay d'Espoir Α. 5 even with a focus on reliability, it's still 5 happened to be off, but Bay d'Espoir 6 important that when Hydro is looking to 6 operates a lot because it's the most 7 collect these costs, that they show that the 7 efficient machine. 8 8 operational philosophy in running that MR. O'BRIEN: 9 9 standby generation, that there's been a 0. So if that happened to be off, would you 10 have Unit 1 or 2 on? You could have all least cost benefit analysis done? 10 11 MR. HAYNES: 11 three off? 12 12 A. Yes, it's important that, basically, we take MR. HAYNES: 13 the least cost approach to provide the 13 A. If unit at Holyrood – security that we anticipate the customers 14 14 MR. O'BRIEN: 15 need or want. 15 Could you have all three off? 0. 16 MR. O'BRIEN: 16 MR. HAYNES: 17 I wonder if we could pull up page 3.6 from 17 It is possible, but generally speaking #7, Q. Α. 18 the evidence. The operational improvements, 18 if #7 is not down for maintenance at Bay 19 19 d'Espoir, you know, typically it does we started talking about those a little bit 20 vesterday – last week we talked about daily 20 operate. Not all the time, but typically it 21 21 system status meetings, and the new does operate as it is the most efficient 22 22 turbine. operating instruction. That was the T-096 23 Avalon capability and reserves instruction, 23 MR. O'BRIEN:

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Q.

MR. HAYNES:

Okay.

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correct?

MR. HAYNES:

April 23, 2018 NL Hydro 2017 GRA Page 21 Page 23 1 But, you know, it could be down for 1 Williams? A. 2 2 maintenance or it could be in sequence MR. HAYNES: 3 3 connection mode, but, basically, the If you're going to go down in a lot of Α. 4 spinning reserve is a bit of a dynamic 4 detail -5 number. I mentioned before that we looked 5 MR. O'BRIEN: 6 at the Avalon as a separate region, and if 6 0. Yeah, I'm kind of looking at – 7 7 MR. HAYNES: we go back to the – if we end up we have a 8 8 line outage, a line out from Bay d'Espoir She is, you know, very familiar with that A. 9 9 east, or whatever, we'll kind of flip back and her team. 10 10 to that particular mode, so it's a bit MR. O'BRIEN: dynamic, but, basically, what we endeavour 11 11 Q. Okay, let me ask you – I'll take that issue to do is to ensure that we have, you know, 12 12 of the name plate versus the de-rated rating 13 reserve to cover the loss of that large 13 up with Ms. Williams. I wonder if we could 14 machine, whatever that large machine is at 14 move to the next – if we move up on the 15 the time. 15 screen. Let me ask you just in terms of the MR. O'BRIEN: CT, the operation of the CT, were you 16 16 17 Okay. So then that's your N minus 1 17 involved when the Holyrood CT was procured? Q. 18 contingency, is that right? 18 Were you at Hydro then? 19 MR. HAYNES: 19 MR. HAYNES: 20 20 Exactly, yes. When I retired, the intention was to put Α. 21 MR. O'BRIEN: 21 forward a capital budget proposal for a 22 So if your reserve is to cover the loss of 22 replacement gas turbine. I did come back in Q. 23 that largest machine, and, say, the largest 23 January of 2014 to assist with the 24 24 machine that's on is actually de-rated at preparation of the capital budget, so I was 25 the time, the most – let's say it's one of 25 back for two or three months, basically, you Page 24 Page 22 know, stewarding, I suppose, if you will, 1 the Unit 1's that rated at 150. 1 2 2 the application for TL-267 and the gas MR HAYNES: 3 3 turbine, and then I left and I wasn't back A. Okay. 4 MR. O'BRIEN: 4 after. 5 5 Q. All right. The most you're going to lose is MR. O'BRIEN: 6 that 150, is that fair? 6 0. Okay. 7 MR. HAYNES: 7 MR. HAYNES: 8 8 Or the Holyrood number – I'm sorry, Bay So, basically, my involvement was – as I Α Α 9 9 d'Espoir #7, similar number. said, when I retired, we knew that there was 10 10 MR. O'BRIEN: an upcoming need for additional generation. 11 Okay, all right, so whatever the largest one 11 MR. O'BRIEN: 0. 12 is, but let's say it's de-rated to, for 12 Q. Okay. 13 argument sake, 160, so that's higher than 13 MR. HAYNES: 14 the Bay d'Espoir, but it's lower than the 14 A. We were – you know, we were looking at 15 15 170? location, we were looking at size and so on, 16 MR. HAYNES: 16 and when I returned, basically, you know, I 17 My understanding is that would be the 17 came back on a short term basis to just help A. 18 trigger point for actually looking to doing 18 ensure that the applications to the Board 19 the calculations for the spinning reserve 19 got in and where appropriate to get those 20 requirements on the island or the Avalon, 20 items approved. 21 but I would suggest as well that Ms. 21 MR. O'BRIEN:

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Williams is more than familiar with the

Is that something I should take up with Ms.

details of this if you want to –

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MR. O'BRIEN:

Q.

And were in – in terms of putting those

applications together and the need for that

unit, are you aware sort of what the plan was in terms of the operation of that unit

April 23, 2018 NL Hydro 2017 GRA Page 25 Page 27 1 once you obtained it? 1 that. You look at, you know, the ground 2 2 MR. HAYNES: level dispersion of the exhaust gas to meet 3 3 A. No, the actual – the application was mostly the environmental requirements. 4 4 from the point of view that we had a MR. O'BRIEN: 5 5 capacity shortfall that we needed to Q. Okay. So was there a new permit then 6 address. 6 obtained as a result of a change in the plan 7 7 MR O'BRIEN. of operation? How did that work? 8 8 MR. HAYNES: Q. Okay. 9 9 MR. HAYNES: A. I'm not quite sure of the actual details, 10 A. When it comes down to the actual operating 10 but Ms. Williams could actually delve into 11 parameters and, you know, I guess, you know, 11 that. 12 12 dealing with the outcome of the events of MR. O'BRIEN: 13 2013/2014, those were, I think, 13 And it's fair to say that that Holyrood GT Q. is operating in recent years well in excess 14 considerations, although some of those were 14 15 made later, but certainly it would be an 15 of that 500 hours? MR. HAYNES: asset on the Avalon. Having it on the 16 16 17 Avalon would be highly desirable. There was 17 It's been operating – I don't know off the A. 18 discussion whether it should be actually 18 top of my head the total number of hours. 19 inside the St. John's loop, if you will, but 19 It was operated more than we would have 20 that would be an environmental – it was 20 anticipated because of some issues we've had 21 concluded that would be a permitting issue, 21 with Holyrood, but from a future 22 22 perspective, you know, with the DC line and and so Holyrood was thought to be the next 23 23 TL-267, they will decrease. best location. MR. O'BRIEN: 24 MR. O'BRIEN: 24 25 Q. Okay. 25 0. Are there any maintenance or performance Page 26 Page 28 1 MR. HAYNES: 1 concerns with respect to the GT due to 2 2 increased operation? A. So, you know, it was location and the 3 3 overall capital budget made sure we covered MR. HAYNES: 4 4 off all the things required to get approval Other than the original equipment A. 5 5 from the Board. manufacturers recommendations on short term 6 MR. O'BRIEN: 6 or long term overalls, depending on the 7 So in terms of the plan sort of operation, 7 number of starts and the operating hours, Q. 8 we understood from the last hearing that 8 that's all that I'm aware of. 9 9 initially it was planned that the CT was MR. O'BRIEN: 10 really going to operate less than 500 hours 10 I wonder if we could pull up NP-NLH-038, Q. page 79, attachment 1, page 79. I just 11 a year. Were you aware of that? 11 12 12 wanted to go back just in terms of a normal MR. HAYNES: 13 sequence of operating for the CT, I guess, A. That was certainly the intent because that's 13 what the environmental permit was based for standing generation. So you determine 14 14 15 the Avalon capability, you base your 15 upon. 16 MR. O'BRIEN: 16 threshold on expected loads. "To position 17 17 the Avalon power system to cover off the 0. Okay. What do you mean by that? single largest contingency, perform the 18 MR. HAYNES: 18 19 following". So number 3 is ensure Well, basically, if you – my recollection 19 A. 20 from the environmental regulations is that 20 Newfoundland and Labrador Hydro static depending on your anticipated number of 21 21 reactive resources are in service, and 22 running hours, there would be a different 22 request Newfoundland Power to maximize 23 environmental requirement from the point of 23 Avalon hydro generation. Number 5 there, 24 view of emissions modelling, or the height 24 increase Holyrood real and reactive power up

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of the stack, for instance, and things like

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to maximum Holyrood capability, that falls

April 23, 2018 NL Hydro 2017 GRA Page 29 Page 31 in front of the start, load up, and standby 1 disposal of those balances, talks about that 1 2 2 generations. Why would you do that first? idea of not being spot on, there will be 3 MR. HAYNES: 3 times where the Holyrood GTs run when it's 4 Well, you would load up Holyrood to what you 4 not necessary to be run, in that it might in A. 5 5 could actually get up to – sorry, you would retrospect be run for longer than necessary 6 just increase the load on Holyrood to 6 or it might in retrospect not have been 7 7 accommodate the load on the Avalon as far as needed at the time? 8 8 you could go. MR. HAYNES: 9 9 MR. O'BRIEN: A. I wouldn't use the word "not necessary", but 10 Yeah. 10 if you initiate – if the folks initiate that Q. a gas turbine is required and the minimum 11 MR. HAYNES: 11 12 And that is the cheapest way to provide 12 loading is 40 megawatts, then you may have A. 13 energy, obviously, would be – not the 13 some, you know, megawatts in excess of that for the Avalon from that perspective. The 14 cheapest, but certainly cheaper than gas 14 15 turbines, but the gas turbines are not so 15 other factor is that when the units are shut much an energy consideration as a capacity 16 16 down in the evening or whatever after peak 17 17 and there's a judgment call made by the one. 18 MR. O'BRIEN: 18 operators in the ECC as well, if the load And in terms of – you get a more efficient 19 19 forecast is not falling off as sharply as Q. 20 output then from the thermal generators when 20 anticipated, they may delay that for any 21 they're up at a higher load? 21 hour or two or whatever, but, you know, I 22 MR. HAYNES: 22 would like to go back and say that, you 23 23 know, if you want to get into all those A. Typically, the higher the load, the better 24 kilowatt hours per barrel of oil. 24 different nuances, that Ms. Williams would 25 MR. O'BRIEN: 25 be the best one to actually go over all Page 30 Page 32 Okay, and that's certainly more efficient those different parameters that initiate the 1 Q. 1 2 2 than running the Holyrood generators at a gas turbine operating and what all the push 3 lower capacity and, say, putting the CT on 3 and takes are, if you will. 4 4 at 40 percent, is that fair? MR. O'BRIEN: 5 5 MR. HAYNES: Q. Okay, I'll take that up with her. Are you 6 6 able to tell me whether or not there are any A. Yes, but when you get to the point where you 7 have to turn on the gas turbine on the 7 procedures or measures that Hydro has in 8 8 Avalon to meet it, if you had everything place to ensure that standby generation is 9 9 else exhausted and you needed 5 megawatts, not running longer than necessary, or times 10 and that's all you had, then you turn on 40 10 when it's not necessary, apart from this – MR. HAYNES: 11 megawatts. 11 12 MR. O'BRIEN: 12 Α. At a high level, I know that there's a lot 13 13 of attention paid to that by Ms. Williams Q. You put on 40 megawatts. MR. HAYNES: 14 14 group and others. They look at it and if 15 15 they see something that's a little bit A. So, you know, you can have some – you're not 16 going to be spot on the 240, 24/7, 365. 16 peculiar looking, they will go back and ask 17 It's going to move around a bit. There's 17 questions to the ECC, you know, why wasn't 18 going to be a bit of jaggedness, if you 18 it shut down earlier, or why it was left on, 19 will, if you were to look at a plot or a 19 or whatever. 20 20 graph that would indicate that. MR. O'BRIEN: 21 21 (9:30 A.M.) 0. Okay. 22 MR. O'BRIEN: 22 MR. HAYNES: 23 23 Q. When you say you're not going to be spot on, A. Again Ms. Williams actually has been – I 24 actually, that's the next point I wanted to 24 would say that she's been, for lack of a 25 25 ask you about. The application for the better word, she's been all over that file,

April 23, 2018 NL Hydro 2017 GRA Page 33 Page 35 looking at the operating and rationalizing 1 1 is. 2 2 if it's being operated properly. MR. O'BRIEN: 3 3 MR. O'BRIEN: Q. And when you say you've been operating this, 4 4 So have there been any sort of retrospective and I think you mentioned this earlier, sort Q. 5 5 studies of analyses done just to look at of in accordance with what Liberty has 6 that? 6 indicated and what you understand 7 7 MR HAYNES: stakeholders to -8 8 I don't think there's been to look at the A. MR. HAYNES: 9 9 whole, but I think there's a fair review A. That's our understanding, yes. 10 done in the application to actually further 10 MR. O'BRIEN: 11 the recovery of those costs. I think the 11 Q. Have you done a survey of stakeholders on last application has a lot more detail on 12 12 this particular issue? 13 that, but again Ms. Williams would be the 13 MR. HAYNES: 14 best to delve into that aspect of it. 14 A. We haven't done a survey of stakeholders. 15 MR. O'BRIEN: 15 Basically, from the Liberty comments and 16 different things that come back, and no one And has there been any consideration to 16 Q. 17 modifying, spinning reserve criteria, or 17 has pushed back until – of any consequence, 18 anything like that? 18 anyway, until now. However, we are open to 19 MR. HAYNES: 19 whatever is - the best balance of cost and 20 20 reliability is where we want to land. Not at this point in time, but we're still Α. operating as largely an isolated island 21 21 MR. O'BRIEN: 22 system. We do have the Maritime Link, so we 22 Q. Have you looked at other options like 23 have avoided some starts of the gas turbine 23 relying on non-spinning reserves versus – 24 based on that, and that's a decision that's 24 MR. HAYNES: 25 made daily depending what the load forecast 25 A. We have arrangements with some industrial Page 34 Page 36 customers for interrupterable or that's 1 is, and they will continue, but from the 1 2 point of view of looking at the island 2 probably not the right word any more, but security, we have not. I think when the DC 3 3 curtailable load. We've looked at those. 4 line comes in from Labrador, particularly 4 We did go out and look for as much as we 5 long term, that there will be some other 5 could get of that. We did enter a new 6 thoughts given to that particular aspect 6 contract with Corner Brook Pulp and Paper 7 7 because there is a cost to running spinning last year to increase that amount, and that 8 8 doesn't – that doesn't help the Avalon part, reserve 9 9 MR. O'BRIEN: but it helps that. Certainly, you know, 10 10 Right. from Vale, and Praxair, those do help, but Q. MR. HAYNES: 11 11 they're not always available from those 12 12 A. And what we felt, or what we feel is that folks, but we do go for those. 13 13 what we're doing right now is what is MR. O'BRIEN: 14 anticipated and expected by the various 14 0. But like you say, that wouldn't help the 15 parties, and, you know, we haven't had any 15 Avalon? 16 significant pushback, if you will, on the 16 MR. HAYNES: 17 operating of that. Obviously, when the cost 17 A. Yes, they would help the Avalon. 18 came in, it was -18 MR. O'BRIEN: 19 19 MR. O'BRIEN: Q. Any other options you looked at for the 20 20 0. Significant cost. Avalon for maintaining, say, a non-spinning MR. HAYNES: 21 21 reserve? 22 MR. HAYNES: It was a significant cost, yes, but that is 22 A. 23 - you know, if you want that level of 23 I don't have a level of detail. That there A.

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reliability on reserve, then there's a price

to pay regrettably, but that is the way it

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again from a generation and planning point

of view, Ms. Williams would be the best to

April 23, 2018 NL Hydro 2017 GRA

April 2	23, 2018				NL Hydro 2017 GR
		Page 37			Page 39
1		speak to that.	1	MR. O'BRIE	
2	MR. O'BRIE	N:	2	Q.	And do you have any knowledge of sort of how
3	Q.	I understand that a part of Hydro's	3		much that OT would –
4		operational philosophy includes staffing the	4	MR. HAYNE	S:
5		ECC in advance as well?	5	A.	Not off the top of my head, but again Ms.
6	MR. HAYNE	S·	6		Williams, that's actually - those are
7	Α.	What we have done in response to what we	7		primarily folks in her shop.
8	11.	perceive to be the expectations of our	8	MR. O'BRIE	1 1
9		customers, is that basically if we foresee	9	Q.	All right. Okay, I wonder if we could move
10		that we are, you know, close to a spinning	10	Q.	just – I have a few questions for you just
11		reserve issue or if there's a storm coming,	11		in terms of the reliability side of things.
12		<u> </u>	12		
		we will actually – rather than have an event			If we could pull up page 3.8 of the
13		that requires an outage to a customer, we	13		evidence. Reliable operations systems
14		will staff the gas turbines without starting	14		performance, at line 20 here, "In 2016,
15		them, so that basically we don't have an	15		Hydro moved towards a more customer focused
16		hour or an hour and a half response time, or	16		reliability model, taking into account the
17		whatever the time is for them to get to the	17		impact on the end user or end consumer of
18		site and start the gas turbines, so they're	18		electricity". Just kind of walk me through
19		ready to act. So if there was a bump, if	19		that idea?
20		there was an event on N-1 and we lost the	20	MR. HAYNE	S:
21		generator and there was a under frequency	21	A.	So what I would refer to that would be, for
22		load shedding, or a shortfall on the Avalon,	22		lack of a technical term, a meter socket
23		then we would potentially have people at the	23		view of the world, and, basically, the
24		station to be proactive in getting the gas	24		customer, whether it's a Newfoundland Power
25		turbines on, whether it's Hardwood's or	25		customer or a Newfoundland Hydro customer, l
		Page 38			Page 40
1		Holyrood, or Stephenville for that matter.	1		don't think they really care who caused the
2	MR. O'BRIE		2		outage. All they know is that they've been
3	Q.	I take it that staffing process doesn't	3		out. You know, traditionally we have looked
4	ζ.	affect the amount that's in the –	4		at our reliability indices on transmissions,
5	MR. HAYNE		5		you know, on transmission line basis. We've
6	A.	My understanding that the amount that's	6		looked at it on our distribution customers
7	11.	there is fuel.	7		for our service territory, whether isolated
8	MR. O'BRIE		8		or inter-connected, we've broken that down.
9	Q.	It's fuel, right.	9		What we didn't do before, we didn't consider
10	MR. HAYNE	, C			· · · · · · · · · · · · · · · · · · ·
			10		from that metric point of view the impact on Newfoundland Power customers. We would
11	A.	That's my understanding.	11		
12	MR. O'BRIE		12		obviously, you know, measure the number of
13	Q.	But that staffing, is there additional cost	13		under frequency load shedding events that we
14	1 (D) 11 1 2 2 2 2	to that that's built into the –	14		had. In our regular meetings with
15	MR. HAYNE		15		Newfoundland Power, we would discuss our
16	A.	Oh, there would be. Any staffing beyond 4	16		performance, they would discuss their
17		o'clock would be under our collective	17		performance, you know, and they would also
18		agreement with IBEW. So there would be	18		look at things that we caused them as a loss
19		overtime.	19		of supply, which is perfectly normal. So we
20	MR. O'BRIE		20		thought that from an end customer – end
	Q.	There would be overtime cost?	21		consumer point of view, we would look beyond
21		. ~	22		the company that actually caused the net
21 22	MR. HAYNE	S:	44		1 3
		S: If they're at the plant, or if they're at	23		effect, and our view was these are the
22	MR. HAYNE	If they're at the plant, or if they're at			effect, and our view was these are the
22 23	MR. HAYNE		23		• •

April 23, 2018 NL Hydro 2017 GRA Page 41 Page 43 1 Newfoundland Power events that were totally 1 What CEA would do would be take your 2 2 under their control, but if we caused performance statistics, they would take 3 3 Newfoundland Power grief in the sense of we ours, and they would come up with a 4 4 lost a line, a terminal station, or collective whole, but this is a bit unique 5 5 transformer, or whatever, we would put that for our jurisdiction, but the fact that you 6 in there and we would say this is how we 6 have, you know, 250/260,000 customers that 7 7 impact the customers overall. So it is a bit we contribute, we think it's appropriate 8 8 of an unusual parameter in the sense of that we would actually look at that overall 9 9 recovering. It's not just we measure our performance for most customers. MR. O'BRIEN: 10 performance, but it's the collective 10 performance that we think that we've caused 11 11 Q. Are you able to tell me who sort of within 12 12 any consumer. the organization developed this metric? MR. O'BRIEN: 13 13 MR. HAYNES: 14 Q. So is it fair to say that what you try to do 14 A. Actually, I don't, because that was done 15 here with this measure is to back out any 15 when I was off, and I didn't go back to look issues that Newfoundland Power may have at it. I do look at it as being a reasonable 16 16 17 caused and focused on your own, that's what 17 representation of what we caused Hydro as a 18 18 the whole. 19 MR. HAYNES: 19 MR. O'BRIEN: 20 That's my understanding, yes, that that 20 Q. And are you able to find out for me just Α. 21 would be - you know, we would not include -21 sort of when that was developed and who 22 if you had outages that are planned or 22 developed it? 23 unplanned in any of your areas that were 23 MR. HAYNES: 24 nothing to do with Hydro, they would not be 24 I can endeavour to find out. I suspect it A. 25 in that particular measure. These are the 25 would be coming out of the transmission Page 44 Page 42 1 things that we felt that we inflicted on any 1 folks from the point of view – maybe it was 2 2 a collective decision. I certainly will customer. 3 3 MR. O'BRIEN: find out. 4 4 And where did this type of measure come MR. O'BRIEN: Q. 5 5 from? Is this something that Hydro Okay, thanks. Q. 6 6 developed or is it based on other MS. GLYNN: 7 jurisdictions? 7 Q. We'll note that as an undertaking. 8 8 (UNDERTAKING) MR. HAYNES: 9 9 MR. O'BRIEN: A. I don't know if using other jurisdictions. I think it's something that we came up with. 10 10 Q. And can you tell me sort of how Hydro would utilize the results from this index in its I will say that before I retired, we always 11 11 talked about, you know - we're not 12 decision making? 12 13 dialoguing with Newfoundland Power 13 MR. HAYNES: customers, nor should we, but, basically, if 14 14 A. In Hydro's, you know, goals and objectives 15 for 2017, we actually put in the end user there are issues that we're causing, we do 15 16 have, you know, announcements, some PR 16 customer performance as a high level goal. 17 things, you know, from that perspective, and 17 That would be a deliverable that we would 18 we certainly take responsibility and have. We would actually generate the outage 18 19 based on – we would generate the target accountability for any outages that we've 19 20 number based on historical performance of caused. So I think it's a bit of a home 20 the last three to five years. We would 21 grown indices (phonetic) that looks at the 21 22 22 incorporate planned outages and an allowance whole. It's not so different, I suppose, 23 than some CEA ones from across the country 23 for unplanned outages, and then we would 24 when they add up everybody's particular 24 arrive at a target number, and, basically, 25 metric, but that would not be used by CEA. 25 the basis is for continuous improvement, to

April 23, 2018 NL Hydro 2017 GRA
Page 45 Page 47

		Page 45			Page 47
1		actually keep working that number down and	1	A.	We are improving.
2		if there was a major storm event that was	2	MR. O'BRIEN	
3		excluded from Newfoundland Power, we would	3	Q.	Okay.
4		typically exclude that if it was things	4	MR. HAYNE	
5		beyond a design criteria of the line, but	5	A.	You know, and if you were to look at trend
6		typically these are planned outages that are	6	Λ.	line, if you will, of the pre and post to
7			7		
1		incorporated. So even though the number may	0		these periods, we are on an improvement
8		move around, if we have a lot of planned	8	MD OIDDIEN	trajectory, if you will.
9		outages because we're doing a lot of re-	9	MR. O'BRIEN	
10		work, then that would be incorporated in	10	Q.	And what steps is Hydro taking to get back
11		that target. So once all the work plans are	11		towards the prior 2013?
12		set, those numbers follow that analysis.	12	MR. HAYNE	
13	MR. O'BRIEN	N :	13	A.	We're looking at our work processes. We're
14	Q.	And you use that in terms of corporate	14		looking at, you know, reinstating some live
15		targets?	15		line work, which we're doing very
16	MR. HAYNE	S:	16		cautiously, I might add, because it's
17	A.	It is a corporate target that's actually	17		something that we haven't done for quite a
18		embedded in the performance contract as	18		while. So, that's one of the things that
19		well. It's a very visible number in Hydro,	19		we're looking at doing. We have contracted
20		and basically a target that everybody is	20		some of that, particularly in Labrador, and
21		aware of, or should be aware of. I'm sure	21		have had some benefit to that. But again,
22		they are.	22		it's a process to get back there. A lot of
23	MR. O'BRIEN		23		it is work planning and scheduling from that
24	Q.	And so, for the past few years, you must	24		perspective.
25	Q.		25	MR. O'BRIEN	
23		have gone back and reformulated those	23	WIK. O DIVIEN	
,		Page 46	1		Page 48
1		figures based on that index?	l	Q.	And you say the live line work, that's in
2	MR. HAYNE		2		the transmission area?
3	A.	Yes.	3	MR. HAYNE	
4	MR. O'BRIE	N:	4	A.	Distribution, primarily distribution.
5	Q.	Okay. So, just backed up.	5	MR. O'BRIEN	1:
6	MR. HAYNE	S:	6	Q.	Distribution as well, is it, okay.
7	A.	There's a gentleman in the Reliability group	7	MR. HAYNE	S:
8		actually goes back and actually kind of – I	8	A.	To go back at that, but Mr. LeBlanc actually
9		won't say owns that data, but he analyzes	9		would be involved in that discussion.
10		that data pretty thoroughly to come up with	10	MR. O'BRIEN	J:
11		targets and he incorporates planned outages	11	Q.	And it's something that you're bringing back
12		and so on for setting targets on the go-	12		slowly?
13					
				MR HAYNE	· · · · · · · · · · · · · · · · · · ·
	MR O'BRIFI	forward basis.	13	MR. HAYNE	S:
14	MR. O'BRIE	forward basis. N:	13 14	MR. HAYNE A.	S: Slowly and cautiously. There's a
14 15	MR. O'BRIEI Q.	forward basis. N: And I wonder if we could pull up Information	13 14 15		S: Slowly and cautiously. There's a requirement of training. There's equipment
14 15 16		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to	13 14 15 16		S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of
14 15 16 17		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on	13 14 15 16 17		S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does
14 15 16 17 18		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay.	13 14 15 16 17 18		S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not
14 15 16 17 18 19		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer	13 14 15 16 17 18 19		S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done
14 15 16 17 18 19 20		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer performance figures there. 2013-2014	13 14 15 16 17 18 19 20	A.	S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done right.
14 15 16 17 18 19 20 21		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer performance figures there. 2013-2014 include the larger storm areas, those	13 14 15 16 17 18 19 20 21	A. MR. O'BRIEN	S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done right. J:
14 15 16 17 18 19 20 21 22		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer performance figures there. 2013-2014 include the larger storm areas, those figures. Are you satisfied Hydro is back to	13 14 15 16 17 18 19 20 21 22	A. MR. O'BRIEN Q.	S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done right. Hydro did that before?
14 15 16 17 18 19 20 21 22 23		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer performance figures there. 2013-2014 include the larger storm areas, those figures. Are you satisfied Hydro is back to where it was prior to that now on this	13 14 15 16 17 18 19 20 21 22 23	A. MR. O'BRIEN Q. MR. HAYNE	S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done right. I: Hydro did that before? S:
14 15 16 17 18 19 20 21 22		forward basis. N: And I wonder if we could pull up Information No. 1, page 9, and this is just I want to have a quick look at the actuals for 2017 on that figure. That's Table 3.2, yeah, okay. So, if we look at the end consumer performance figures there. 2013-2014 include the larger storm areas, those figures. Are you satisfied Hydro is back to where it was prior to that now on this figure, on this metric?	13 14 15 16 17 18 19 20 21 22	A. MR. O'BRIEN Q.	S: Slowly and cautiously. There's a requirement of training. There's equipment and so on. But a lot of utilities kind of backed out of that over time and it does take time to get back at that and it's not without risk obviously and has to be done right. Hydro did that before?

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MR. HAYNES:

concern obviously, but it can be done.

April 23, 2018 NL Hydro 2017 GRA Page 49 Page 51 1 MR. O'BRIEN: 1 considered something you expect to continue? 2 MR. HAYNES: 2 Is there -Q. 3 3 MR. HAYNES: No. The most significant driver for that Α. 4 As long as it's done properly. 4 was the Penstock issue. A. 5 5 MR. O'BRIEN: MR. O'BRIEN: 6 Q. 6 Okay. Any additional cost or is that a cost 0. 7 7 MR. HAYNES: savings? 8 8 MR. HAYNES: A. And you know, that would be – that was not 9 9 I think there may be some additional cost anticipated certainly accept that there. It A. 10 because it's slower to do, but at the end of 10 was a unique issue that we feel that we have the day, it does increase customer and we're addressing and we have had reports 11 11 12 12 reliability if there are less outages. You done, but Ms. Williams, again, to speak to 13 know, it may be cheaper than bringing in 13 that there. 14 diesels. We can't bring in diesels 14 MR. O'BRIEN: 15 everywhere we operate, but where we can, we 15 Okay. Q. will, if there's an extended outage. MR. HAYNES: 16 16 17 MR. O'BRIEN: 17 But Penstock No. 1 was a contributor in 2016 A. 18 Q. Has there been a cost benefit analysis 18 and again in 2017 to some degree. 19 undertaken for that? 19 MR. O'BRIEN: 20 20 MR. HAYNES: And I do see, just in the actuals, to be Q. 21 I don't think there's been a cost benefit 21 fair, 2017 figures come down to 2.29. A. 22 analysis that I'm aware of, but again, Mr. 22 MR. HAYNES: 23 23 LeBlanc could actually look at that. A. Yeah. MR. O'BRIEN: 24 MR. O'BRIEN: 24 25 Q. Okay. 25 0. So, do you expect that to be in that area or Page 50 Page 52 1 MR. HAYNES: 1 to improve? 2 2 A. We're still trying to balance, obviously, MR. HAYNES: 3 customer reliability and cost. 3 I would expect that or better. Typically, A. 4 4 (9:45 a.m.) the – you know, we've always, you know, been 5 MR. O'BRIEN: 5 very good on DAFOR for hydraulic machines, 6 6 but that has been our past. We are working Q. I wonder if we could go to the evidence, 7 Section 3.4. It's page 311, 3.11. That's 7 to get that back. But the Penstock was the 8 it, okay. If we can go up there to lines 15 8 biggest single driver for sure. 9 9 to 16. The generation – Hydro – hydraulic MR. O'BRIEN: 10 generation performance. We talked last time 10 Okay. So, in terms of getting back to where Q. 11 about Bay D'Espoir station having some you were back say in 2012-2013, what steps 11 12 issues just in terms of that leak that was is Hydro taking? 12 13 13 MR. HAYNES: MR. HAYNES: 14 A. On the Penstock, yes. 14 A. Again, on the long-term asset planning part, 15 MR. O'BRIEN: you know, to provide timely intervention to 15 16 Q. The Penstock, yes. And there's an 16 the machine, to the units, to get them ready 17 indication here that that may have impacted 17 for winter operations so we don't have any the DAFOR figures since 2014. Is that what 18 unplanned outages. That's the biggest 18 19 the focus might be? 19 driver. Again, this would be in Ms. 20 MR. HAYNES: 20 Williams' shop and she's been driving that

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MR. O'BRIEN:

Q.

It certainly would have had an impact on

Is this impact – we see a bit of a dramatic

change going upwards there in 2016. Is that

DAFOR for that period of time.

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A.

MR. O'BRIEN:

Q.

and would keenly be involved in the Penstock

Okay. Can we scroll down to the next page

there just in terms of thermal generation

issue as well.

April 23, 2018 NL Hydro 2017 GRA Page 53 Page 55 performance? There was some issues with 1 particular units with recommendations. 1 2 2 Unit 1 and Unit 2 in 2016. I guess that's MR. O'BRIEN: 3 the reason for the increase there in DAFOR. 3 Q. What's Hydro's current plan for the 4 4 MR. HAYNES: operation of Holyrood between say now and 5

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5 That's the furnace pressure and the A. economizer fouling, those issues that we're 6 trying to address, those are, and you know, 7 8 they – that there basically is indicating 9 the amount of derating that we've had this 10 past winter, I'm sorry, over time. I'm sorry. 2016 was probably the reheater tube 11 12 issue. 13 MR. O'BRIEN: 14 Q. Okay. 15 MR. HAYNES: 2017 would have been the economizer and 16 Α

MR. O'BRIEN:

And do you expect that to continue along the Q. same lines until Holyrood is -

MR. HAYNES:

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22 Our goal is to actually – we are looking at A. 23 the current fouling issues that we have on the economizers and, you know, the air 24 25 heater baskets and so on. We are, you know.

furnace pressure.

Page 54 taking steps to actually mitigate some of that. But, you know, it is an issue that the economizer is a very congested area and difficult to clean and we tried a couple of different things to clean it and we will continue. But we did go back, I think, last year – I think we were up there starting off at 160. The thermal units do derate over the winter operating season. That's been always the case, but I think, you know, in the last – last year has been a little bit more than we would have - more than I would have anticipated anyway.

But we do have a group looking at the various things that we can do to aid that. You know, the air heater basket changing is one. The fuel additive modifications is another one. So, we are looking at two or three things to address that and we do have - we have engaged the OEMs on that or our major contractors. It may not be the OEM because they've changed hands so many times, but Badcock and Wilcox of the world or us and whoever to come back and look at these

when it converts to a synchronous condenser

operation?

MR. HAYNES:

Sorry, I didn't catch the first part. A.

MR. O'BRIEN:

From now until when Holyrood converts to say Q. synchronous condenser operation, what's the plan in terms of -

MR. HAYNES:

Α. The plan is that basically we will still – we still depend on Holyrood from the point of view of backup and we will also run it as required, but hopefully running at a lower load with the Labrador Island Link in service because we'll take whatever megawatts and whatever energy we can get over that reliably. But we have – we obviously have to work around that reliability. We can't shut down Holyrood totally, in total, because we have the Labrador Island Link, but you know, if we

Page 56 can shut down one machine early or two machines early, we will compress that. So, we hope to have less running hours over time.

MR. O'BRIEN:

And do you have -0.

7 MR. HAYNES:

> Up to, you know, 2021 when you would cease Α thermal operation.

10 MR. O'BRIEN:

> So, is there a plan in shutting down one at 0. a certain time or is it just -

13 MR. HAYNES:

> A. There is a schedule every year of basically, you know, what the production plans are for Holyrood plant.

MR. O'BRIEN:

Right. Q.

MR. HAYNES:

A. And you know, that is a plan for the year. As the year unfolds, things change. That'll be adapted and modified as required, but there is a plan. Basically, you know, that feeds into our total operating hours, our fuel forecast and so on.

April 23, 2018 NL Hydro 2017 GRA

Aprı	123, 2018		NL Hydro 2017 GF
	Page 57		Page 5
1	MR. O'BRIEN:	1	A. When I left, I was the Vice-President of
2	Q. And your current view of the timing of	2	Regulated Operations which basically was
3	conversion to synchronous condenser would	3	responsible for the wire side of the
4	still be 2021?	4	business, the control – ECC or the Energy
5	MR. HAYNES:	5	Control Centre, and the hydro, thermal and
6	A. 2021 is still the date that we're working	6	gas turbine generation.
7	with and still the one that the folks at	7	BROWNE, Q.C.:
8	Nalcor are working towards. The first power	8	Q. Now, in 2013 when you left, the 2011, 201
9	in 2019 and basically, you know, the Muskrat	9	2013 period, these were sort of critical
10	Falls plant completed by – and you know,	10	years for the Muskrat Falls Project. What
11	we've also said that 2021 would be – we	11	involvement did you have or did Hydro ha
12	would also maintain the plant for a little	12	in creating the Project?
13	bit thereafter, but basically, we're – I	13	MR. HAYNES:
13	think April 2021 is when we would be	14	A. From a Hydro perspective, from my
15	finished, if you would, on the thermal	15	perspective, I was responsible for the day-
16	production side is the plan.	16	to-day operations of most of the assets, if
17	MR. O'BRIEN:	17	you will, you know, outside Hydro Place.
18	Q. And where will you be at that point? You'll	18	So, from the point of view, the Planning
19	just have – will you have one unit as a	19	department reported to Engineering at the
20	synchronous condenser or what's the -	20	time, which was not under Hydro. It was
21	MR. HAYNES:	21	basically the Engineering was a Nalcor
22	A. Well, the intention right now was that No. 3	22	department. I think some of the people ma
23	already has the capability to operate as a	23	have been in Hydro, but basically it was no
24	synchronous condenser.	24	in the Regulated Operations area.
25	MR. O'BRIEN:	25	BROWNE, Q.C.:
	Page 58		Page (
1	Q. Right.	1	Q. So, what does that mean? Does that mean
2	MR. HAYNES:	2	Hydro had no involvement or some involvement
3	A. That will be retained. Unit No. 1 and 2	3	or can you expand upon that?
4	will be shut down.	4	MR. HAYNES:
5	MR. O'BRIEN:	5	A. Well, I don't have a lot to add from the
6	Q. Okay. Those are all my questions, Madam	6	point of view of the expansion. My
7	Chair.	7	involvement was very little. I mean, I was
8	CHAIR:	8	aware it was there. My concern was that we
			•
9	Q. Thank you, Mr. O'Brien. Mr. Browne, are you	9	would have to do something with Holyrood if
0	ready to proceed?	10	we did not replace Holyrood or to come up
1	MR. JAMES HAYNES, CROSS-EXAMINATION BY DENNIS BROWNE,	11	with something else from that perspective,
2	Q.C.	12	but the overall, you know, review of the
3	BROWNE, Q.C.:	13	Project was done by Planning and they did
14	Q. Thank you, Commissioner. Mr. Haynes, what	14	the studies, if you will, on what the next
5	year was it you came back to Hydro?	15	potential source would be.
6	MR. HAYNES:	16	BROWNE, Q.C.:
7	A. I came back in late June 2016.	17	Q. So, that was Hydro Planning?
8	BROWNE, Q.C.:	18	MR. HAYNES:
9	Q. And when did you leave?	19	A. Planning, I think – I don't actually
0	MR. HAYNES:	20	remember if they were actually Nalcor. I
1	A. I think it was April of 2013, March or	21	suspect they probably worked for Hydro, but
22	April.	22	they reported up to Engineering Department,
- 4	BROWNE, Q.C.:	23	the Vice-President of Engineering, which
		L 43	the vice-freshdent of Engineering, which
23	, ,		
	Q. And what were your duties when you left? MR. HAYNES:	24 25	basically was who looked after Engineering for all of Nalcor.

April	23, 2018		NL Hydro 2017 GRA
	Page 61		Page 63
1	BROWNE, Q.C.:	1	MR. HAYNES:
2	Q. So, was Hydro doing work for Nalcor as the	2	A. But they would have been looked at by the
3	Project was conceived and was progressing	3	Planning. The Planning folks would have
4	along or was Hydro left to do its own work	4	looked at that on generation planning, the
5	on the Island and in Labrador?	5	alternatives that they were looking at, and
6	MR. HAYNES:	6	I do not – I don't have any of that.
7	A. We were doing our own work with respect to –	7	BROWNE, Q.C.:
8	from an operations point of view, which I	8	Q. You weren't party to that?
9	was responsible for. We do not – I don't	9	MR. HAYNES:
10	recall the exact, you know, details of the	10	A. I wasn't party in the sense of actually, you
11	other part of that question that you have.	11	know, vetting what was good, what was bad,
12	I mean, the review was done of what our	12	what was indifferent. I mean, I may have –
13	options were. The Engineering Department	13	I may have, and I do not recall, you know,
14	provided estimates and there was analysis	14	have a general understanding of what was
15	done and then there was a lot of other work	15	there, what was looked at, but you know,
16	done by, I suspect, some Hydro and Nalcor	16	that is – even though – you know, those
17	people as a whole. But I can't speak to the	17	particular planning studies are done
18	details of that. I don't know the – I was	18	routinely and doing often. We're
19	not involved in detailed analysis anyway.	19	undertaking one now from the point of view
20	BROWNE, Q.C.:	20	of what our long-term thoughts are, but it's
21	Q. So, your duties didn't take you into the	21	you know, it's a stand-alone job that was
22	work of planning or assisting to plan	22	done. Depending what you look at, there
23	Muskrat Falls?	23	were lots of options looked at and there
24	MR. HAYNES:	24	were options that were maybe not looked at
25	A. Other than the fact that, you know, if there	25	could have been looked at. But that's water
25		23	
1	Page 62 were things that we needed to do. If we	1	Page 64 under the bridge from that perspective.
2	needed to build transmission lines, we'd be	2	BROWNE, Q.C.:
3	doing all that from a planning point of	3	Q. Yeah, and we have an Inquiry looking at
4	view, but when it came down to the option	4	that.
5	for the next source of power to fulfil our	5	MR. HAYNES:
6	obligations to serve, if you will, that was	6	A. Yes, exactly.
7	done by the Planning Department which	7	BROWNE, Q.C.:
8	reported to Engineering.	8	Q. And this is not that Inquiry, but I'm just
9	BROWNE, Q.C.:	9	trying to get a focus on what, if any,
10	Q. And you said that your concern was Holyrood?	10	involvement you had in reference to that and
11	MR. HAYNES:	11	can speak to, because your evidence has
12	A. My concern was that we are – we would have	12	Muskrat Falls all over it.
13	to eventually address what the long-term	13	MR. HAYNES:
14		14	
1	replacement, if you will, of Holyrood		, , , ,
1 15	hanging Halarand is hasically it was 10	1 15	President of Degulated Operations that I
15	because Holyrood is basically – it was 40	15 16	President of Regulated Operations that I
16	odd years old and it was getting more	16	would look after the daily operations of
16 17	odd years old and it was getting more pressure to operate. It was an aging asset	16 17	would look after the daily operations of Hydro and basically was on the operations
16 17 18	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the	16 17 18	would look after the daily operations of Hydro and basically was on the operations context.
16 17 18 19	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost	16 17 18 19	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.:
16 17 18 19 20	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost increases, if you will, to replace that	16 17 18 19 20	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.: Q. And were you – is it fair to say you were a
16 17 18 19 20 21	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost increases, if you will, to replace that asset. It was not conceivable that we would	16 17 18 19 20 21	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.: Q. And were you – is it fair to say you were a proponent of Muskrat Falls or had you taken
16 17 18 19 20 21 22	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost increases, if you will, to replace that asset. It was not conceivable that we would run that for another 20 or 25 years.	16 17 18 19 20 21 22	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.: Q. And were you – is it fair to say you were a proponent of Muskrat Falls or had you taken a position on it or what was your position?
16 17 18 19 20 21 22 23	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost increases, if you will, to replace that asset. It was not conceivable that we would run that for another 20 or 25 years. BROWNE, Q.C.:	16 17 18 19 20 21 22 23	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.: Q. And were you – is it fair to say you were a proponent of Muskrat Falls or had you taken a position on it or what was your position? MR. HAYNES:
16 17 18 19 20 21 22	odd years old and it was getting more pressure to operate. It was an aging asset and we would have to, somewhere along the way, have taken some pretty significant cost increases, if you will, to replace that asset. It was not conceivable that we would run that for another 20 or 25 years.	16 17 18 19 20 21 22	would look after the daily operations of Hydro and basically was on the operations context. BROWNE, Q.C.: Q. And were you – is it fair to say you were a proponent of Muskrat Falls or had you taken a position on it or what was your position?

April 23, 2018 NL Hydro 2017 GRA Page 65 Page 67 1 0. Yes. 1 more than we needed, but you know, there 2 2 MR. HAYNES: were plans to sell the excess in the 3 A. My personal position was that basically 3 external market and so on. 4 based on the estimates that were there at 4 So, you know, that's a tough question, 5 5 Mr. Browne. I actually don't know. I'm not that time and the cost estimates and the 6 schedule that it didn't seem like a bad 6 sure. I mean, it would be – I said to 7 7 somebody else once before that I would find idea. I don't think that thermal future is 8 8 a sustainable future personally and I think it difficult not to want to go to a hydro 9 9 that I would be – I personally would have a route because of its inherent reliability 10 hard time saying that a hydro project would 10 and, you know, its environmental attributes, not beat, if you will, from an overall point 11 11 but it's a – I don't have an answer. I've 12 of view, a thermal plant, continued thermal 12 thought about it many times, but I do not operation. But the estimates that were 13 13 have an answer. BROWNE, Q.C.: 14 available at the time, the cost increases, 14 15 the cost to continue with Holyrood, they 15 Q. At the time when Holyrood was under didn't – you know, they were tough. They discussion and Dr. Stephen Bruneau from the 16 16 17 would increase, but they didn't seem to be – 17 University had a proposal to replace Holyrood with gas, the LNG from the offshore 18 you know, under the assumptions at the time, 18 19 where Holyrood was going to go, they didn't 19 and bring it onshore to Holyrood to replace seem to be outrageous. It seems to be, you 20 the facility in that fashion. Were you 20 familiar with that idea? 21 know, at the time, a reasonable course of 21 22 action. But it was a huge cost and the cost 22 MR. HAYNES: 23 23 overruns and the delay in schedules are the I read an article, but I'm not familiar with A. 24 24 biggest thing that are impacting where we any depth to that. You know, I do read 25 25 trade articles and I know it's always Page 68 Page 66 are today. 1 1 potential but I also know it's not cheap. 2 (10:00 a.m.)2 That's all I know. I didn't dive into that 3 3 BROWNE, Q.C.: particular – and I wasn't familiar if that 4 4 was looked at or not. I have no idea. And looking back, if you knew now – if you Q. 5 5 have this knowledge when you were putting it BROWNE, Q.C.: 6 together, would you have been a proponent? 6 Okay. Just if we can go now to see – we Q. 7 MR. HAYNES: 7 look at rates. I'm very interested in 8 8 rates. If we can go to the document that Hindsight is 20/20. I don't know. Α 9 9 BROWNE, O.C.: Mr. O'Brien made reference to, it's IC-NLH-10 Your CEO, the CEO of Nalcor says the Muskrat 10 122, page 20 of 26. There you go; that's Q. it. Okav. Falls Project was a mistake. Do you share 11 11 12 that point of view? 12 We have the Island Interconnected 13 MR. HAYNES: 13 domestic rate projections and you see these 14 projections, they escalate from 2021 when A. At the time, the Muskrat Falls Project was 14 15 extremely expensive. It was more than we 15 the projection is 22.89 cents a kilowatt and 16 needed, but I've also looked at the fact 16 they go to 2030 when it goes to 25 cents a 17 that we looked at Holyrood as being a – we 17 kilowatt and then 2040, it goes to 32 cents 18 had counted in our production planning at a kilowatt. So, the projection is upward 18 19 and constant. Now, these projections that about 3,000 gigawatt hours a year from 19 20 Holyrood and so, also was 465 megawatts net 20 vou have there, do these include the HST? 21 to the system. What Muskrat Falls was going 21 MR. HAYNES: 22 to bring was about 4900 gigawatt hours, so 22 A. Well, it says on the bottom they exclude

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HST>

They exclude HST?

BROWNE, Q.C.:

it's more than we would, just need to

replace Holyrood, and about 800 megawatts or

700 something delivered. So, it was a bit

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April 23, 2018 NL Hydro 2017 GRA Page 69 Page 71 1 MR. HAYNES: 1 that was done. It was done by Investment 2 Evaluation of Nalcor. The 22.89 basically, 2 A. Yes. BROWNE, Q.C.: 3 3 I think, you know, those are consistent with 4 4 Yeah, that's the answer. what the projections would be. The model Q. 5 5 that they actually use, I would – I can't MR. HAYNES: 6 It's on the bottom of the graph. 6 imagine it does not include that there. It A. 7 7 BROWNE, Q.C.: would not include any unknown capital costs. 8 8 That's correct, according to the bottom, and For instance, if we were to - if we, at the Q. 9 9 I - so, with HST, we can anticipate another end of our review of adequacies, you know, 10 10 15 percent on all of these rates? felt and the Board agreed that we actually needed to add additional generation for, you 11 MR. HAYNES: 11 12 12 know, Island security, if you will, that Or whatever the HST rate is, yes. A. would be a driver. But basically, our 13 BROWNE, Q.C.: 13 14 Q. It's 15 percent. 14 capital program is out there projected and 15 MR. HAYNES: 15 there would be assumptions made. They would Currently, yes. all be normally included, yes. 16 A. 16 BROWNE, Q.C.: 17 BROWNE, Q.C.: 17 But these factors can always change, right? 18 Q. Okay. And these projections, do they 18 Q. 19 include Newfoundland Power's rate of return 19 The load factor can change. 20 and if that rate of return should escalate 20 MR. HAYNES: 21 or should Newfoundland Power seek increases 21 A. Yes. 22 from time to time? Is there anything built 22 BROWNE, Q.C.: 23 into this projection to deal with that 23 0. The capital cost may change. These are 24 concern? 24 variables? 25 MR. HAYNES: 25 MR. HAYNES: Page 70 Page 72 I'm not sure. Newfoundland Power costs 1 A. 1 A. They are variables, yes. 2 2 actually do increase over time, but whether BROWNE, Q.C.: 3 that is in here and the applications they've 3 Q. So, if something happens and you need a 4 made or an assumption of escalation, I have 4 project, ratepayers are still going to have 5 5 no idea. to pay for that? 6 6 BROWNE, Q.C.: MR. HAYNES: 7 So, granted you haven't created this 7 If the Board approved – if the Board agrees 0. A. 8 document and you see it the way it is, the 8 that we need to invest more capital and in 9 9 way I do. So, what – if we can look to, that sense, if something happens, yes, that 10 would drive rates. But based on what was just for a few moments, if we can go to the 10 overall factors impacting rates, if we go to known at the time and the forecast there for 11 11 12 IC-NLH-122, page 18 of 26. And there, Hydro load, et cetera, those are the numbers that 12 13 has given a document to the Industrial are there and the load forecast as well. 13 14 Customers, overall factors impacting rates, 14 BROWNE, Q.C.: 15 16 17 18

the forecast of load and changes in	Q. Could you undertake to give us the name of
regulated rates not related to Muskrat	the person who put this projection and put
Falls, updated capital costs, updated	this chart together and came up with this
operating and maintenance costs, updated	chart; we saw a reference to rates, so, we
financing costs. So, are these factors	can find if that person is being called as a
included in the projections or are they	witness in this proceeding? (UNDERTAKING)
outside the projections that we just saw in	21 MR. HAYNES:
the chart, the rate chart?	A. I can undertake to – yes, I can see what I
MR. HAYNES:	can do.
A. I would expect that they are, but I can't	24 BROWNE, Q.C.:
speak in detail to that particular analysis	Q. Sure.
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NL Hydro 2017 GRA April 23, 2018 Page 73 Page 75 1 MR. HAYNES: 1 looking for the name of somebody who can do 2 2 A. I would suggest that from the point of view this? 3 3 BROWNE, Q.C.: of the overall rates model that Mr. Fagan 4 4 would be the best one, from a Hydro point of Yes, it would be helpful. If Mr. Fagan Q. 5 5 developed the chart and he's been called as view, to get into that, at least a 6 connection to that there. But, I don't 6 a witness, good. But if someone outside 7 7 think he can speak to the long-term model developed the chart and Mr. Fagan is 8 8 speaking to it, that's certainly another that was on that particular slide. 9 9 matter. But, I think it would be BROWNE, Q.C.: 10 Now, in reference to rates -10 interesting to know who developed the chart. 0. MS. GLYNN: 11 11 So, that would be the undertaking. 12 Excuse me, Mr. -12 MR. YOUNG: 0. 13 BROWNE, Q.C.: 13 Q. We can look into that. It's most likely not 14 Q. - we know now -14 a Hydro person, but we can definitely look 15 MS. GLYNN: 15 into that. When I say not a Hydro person, it's probably a Nalcor person. 16 Mr. Browne, excuse me. I just want to note 16 0. BROWNE, Q.C.: 17 that as the undertaking, please. 17 18 Okay. 18 BROWNE, Q.C.: Q. 19 Pardon? 19 MS. GLYNN: Q. 20 MS. GLYNN: 20 Q. So, the undertaking is to provide the name of the person who developed the chart? 21 Q. I just wanted to note that there was an 21 22 undertaking provided. 22 BROWNE, Q.C.: BROWNE, Q.C.: Yes. 23 23 Q. 24 Okay, thank you. 24 CHAIR: Q. 25 MS. GLYNN: 25 0. All clear? Page 74 Page 76 MS. GLYNN: 1 Q. Thank you. 1 2 MR. YOUNG: 2 Q. Yes. 3 3 Q. Yeah, I'm not sure exactly what the BROWNE, Q.C.: 4 undertaking is. I understand – I think I 4 Q. In IC-NLH-122, Attachment 1, page 22 of 26, 5 5 understood the question, but I'm not sure there's an electricity rate comparison and 6 what it is we're -6 we have it there. We have various provinces 7 BROWNE, Q.C.: 7 and we're here in 2018, the Province of 8 8 You're undertaking to provide the name of Newfoundland and Labrador is not mentioned Q. 9 9 who came up with the chart, who developed there. We're looking at rate comparisons. 10 10 this chart. But, you would agree with me today that the 11 MR. YOUNG: 11 rate for domestic consumers on the 12 12 Q. Okay. Interconnected system right now is 10.64 13 BROWNE, Q.C.: 13 cents in the Province of Newfoundland and 14 14 Q. I want to know who developed this chart, so Labrador, subject to check? 15 we can find out how they came up with these 15 MR. HAYNES: 16 numbers. 16 A. Yes. The last note there says 11.7 17 MR. YOUNG: 17 actually, but subject to check. BROWNE, Q.C.: 18 18 Q. Okay. And the only reason I – Mr. Browne, 19 the only reason I'm interjecting here is 19 It does say 11.7 and – but that was July 1, Q. 20 2017. We probably had an adjustment 20 then you said and whether or not he or she would be called, and I think the answer is – downward. I'd just note in my last – in my 21 21 22 I don't know if this satisfies the 22 own last statement, it was 10.64 cents, but 23 23 maybe we can get that clarified, if you can undertaking, but the answer is Mr. Fagan

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will be called. He can testify, but he

didn't do this chart. So, you're still

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undertake why you're saying 11.7 cents in

this particular chart, but today, it is

April 23, 2018 NL Hydro 2017 GRA

	23, 2018		NL Hydro 2017 GRA
4	Page 77		Page 79
1	actually 10.64 cents? Can someone undertake		MR. HAYNES:
2	to do that? (UNDERTAKING)	2	A. No.
3	MR. YOUNG:	3	BROWNE, Q.C.:
4	Q. Is the undertaking to confirm today's rate?	4	Q. Is there any particular reason why Quebec
5	BROWNE, Q.C.:	5	was omitted and Manitoba and British
6	Q. Yes, today's rates.	6	Columbia were included?
7	MR. YOUNG:	7	MR. HAYNES:
8	Q. Okay.	8	A. I'm not aware of why they would be excluded.
9	BROWNE, Q.C.:	9	I know Hydro Quebec is largely hydro based.
10	Q. And so there's no confusion.	10	Traditionally, we've always looked at
11	MR. YOUNG:	11	Atlantic Canada as being comparative to
12		12	where we are because that's who we're
	Q. Yes, yeah.	1	
13	BROWNE, Q.C.:	13	competing with, but you know, from the point
14	Q. So, be that as it may, we'll say it's 10.64	14	of view of an industrial development of
15	cents because I have evidence to that. The	15	whatever. But Atlantic Canada has been a
16	rate we have here today is cheaper than all	16	typical comparator. So, Nova Scotia, Prince
17	these other jurisdictions, save Manitoba and	17	Edward Island and New Brunswick, it would be
18	British Columbia. You would agree?	18	common for us to compare to.
19	MR. HAYNES:	19	BROWNE, Q.C.:
20	A. Yes.	20	Q. Yeah, but Ontario, Manitoba and British
21	BROWNE, Q.C.:	21	Columbia are also included.
22	Q. And the average rate you have there for 2020	22	MR. HAYNES:
23	is 14.6 cents, based on projections. Who –	23	A. They're examples, yes.
24	once again, how were these projections	24	BROWNE, Q.C.:
25	realized? How did they come up with these	25	Q. Yeah. Do you know what the rate of
 -	Page 78	+=-	Page 80
1	numbers? Can Mr. Fagan, if Mr. Fagan is	1	electricity – what ratepayers are paying in
2	giving evidence, undertake to speak to that?	2	Quebec today, domestic ratepayers?
$\frac{2}{3}$	MR. HAYNES:	$\frac{2}{3}$	
1			
		1	MR. HAYNES:
4	A. Yes, he could. They would do a survey, have	4	A. No, I do not.
5	A. Yes, he could. They would do a survey, have to go back and look. There's obviously a	4 5	A. No, I do not. BROWNE, Q.C.:
l _	A. Yes, he could. They would do a survey, have to go back and look. There's obviously a lot of assumptions made in those things, but	4 5 6	A. No, I do not. BROWNE, Q.C.: Q. Do you have any idea?
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes, he could. They would do a survey, have to go back and look. There's obviously a lot of assumptions made in those things, but that would be the source of most of the information, I would suspect. Can I see the title of that actual presentation, if you go back to page 1? BROWNE, Q.C.: Q. It was the update. MR. HAYNES: A. Okay, fine. BROWNE, Q.C.: Q. Okay. So, it's the update of June 23, 2017. MR. HAYNES: A. Fine, thank you. BROWNE, Q.C.: Q. So, I guess we'll be getting another update at some point soon, because that's about a year ago. Anyway, we can go back to where	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. No, I do not. BROWNE, Q.C.: Q. Do you have any idea? MR. HAYNES: A. Not off the top of my head, no. BROWNE, Q.C.: Q. Can you undertake to provide that to us? (UNDERTAKING) MR. HAYNES: A. I'm sure that's a matter of public record, yes. BROWNE, Q.C.: Q. Okay. MS. GLYNN: Q. Noted on the record. BROWNE, Q.C.: Q. If the record would show that that was in the six cent range, would you dispute that, Mr. Haynes?
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April 23, 2018 NL Hvdro 2017 GRA

April 2	23, 2018				NL Hydro 2017 GRA
		Page 81			Page 83
1		are.	1		changed too. There's another company
2	BROWNE, Q).C.:	2		looking at it now, still with Hydro Quebec,
3	Q.	And we have no reason to not have included	3		but a different route.
4	ζ.	Quebec there, since it's closer to us, in	4	BROWNE, Q	
5		fact it borders with us, as opposed to	5	Q.	So, Nalcor wasn't successful there?
_		Ontario, Manitoba and British Columbia?	l .	MR. HAYNE	
6	MD HAVNI		6		
/	MR. HAYNE		7	A.	They weren't successful on that one, no.
8	Α.	Certainly.	8	BROWNE, Q	
9	(10:15 a.m.)		9	Q.	What long-term contracts have they been
10	BROWNE, Q	Q.C.:	10		successful on?
11	Q.	In terms of these rate projections and where	11	MR. HAYNE	S:
12		rates are headed, can we just go for a	12	A.	I'm not aware of any long-term contracts for
13		moment to IC-NLH-122, page 23 of 26? And	13		selling excess Muskrat Falls' power that
14		here we have rate mitigation measures. One,	14		they have right now, but that's also the
15		transmission infeed in advance of generation	15		excess Muskrat Falls' power, obviously, is
		_	l .		1 ,
16		and two, long-term contracts versus market	16		post Muskrat Falls. They've been selling
17		sales. Can you speak to the second one?	17		the recall in the external markets where
18		What long-term contracts are there in place	18		they can actually get access to market.
19		today in terms of selling Muskrat Falls'	19		That's what they've been doing for the -
20		power?	20	BROWNE, Q	.C.:
21	MR. HAYNE	ES:	21	Q.	So, it says long-term -
22	A.	My understanding of that particular at the	22	MR. HAYNE	S:
23		time was that Nalcor had entered into, you	23	A.	But some of these are longer term views in
24		know, prospective sales. For instance, one	24		the sense of post Muskrat Falls when the
25		that was in the news a while ago was the	25		crunch comes down to cost, obviously.
			23		<u> </u>
		Page 82	١.	DROWNE O	Page 84
1		Atlantic Link whereby they made a proposal	1	BROWNE, Q.	
2		to Massachusetts. There was an RFP called	2	Q.	But it's fair to say today they have no
3		for generation and they made a proposal	3		long-term contracts?
4		there to try to look at if they could	4	MR. HAYNES	S:
5		actually contract sales of excess Muskrat	5	A.	Not that I'm aware of. I don't think they
6		Falls' power outside the province on a	6		have any long-term contracts at this point
7		longer term basis, as opposed to just	7		in time for selling excess Muskrat Falls'
8		selling it on the market day to day.	8		energy.
9	BROWNE, 0		9	BROWNE, Q.	
		Who made the overture?	l .		
10	Q.		10	Q.	And they have one long-term contract and
11	MR. HAYN		11		that's with the people of the Province, the
12	A.	That would have been Nalcor.	12		ratepayers of the Province. That's probably
13	BROWNE, (13		true to say as well. Is that a fair
14	Q.	Nalcor through Emera or Nalcor solo?	14		comment?
15	MR. HAYN	•	15	MR. HAYNES	S:
16	A.	No, that would have been Nalcor directly to	16	A.	Newfoundland Hydro has an obligation to pay
-		the Massachusetts call for an RFP, which I	17	- 	for the cost of Muskrat Falls, yes.
17			l .	BROWNE, Q.	
17 18		think -	I IX		V
18	DD∪MME (think -	18	, ,	Now you gay transmission infeed in advance
18 19	BROWNE, O	Q.C.:	19	Q.	Now, you say transmission infeed in advance of generation. Can you tall us about that
18 19 20	Q.	Q.C.: And how did that go?	19 20	, ,	of generation. Can you tell us about that,
18 19 20 21	Q. MR. HAYNI	Q.C.: And how did that go? ES:	19 20 21	Q.	of generation. Can you tell us about that, how that works?
18 19 20 21 22	Q.	Q.C.: And how did that go? ES: At the end of the day, they were to Hydro	19 20 21 22	Q. MR. HAYNES	of generation. Can you tell us about that, how that works?
18 19 20 21	Q. MR. HAYNI	Q.C.: And how did that go? ES:	19 20 21	Q.	of generation. Can you tell us about that, how that works?
18 19 20 21 22	Q. MR. HAYNI	Q.C.: And how did that go? ES: At the end of the day, they were to Hydro	19 20 21 22	Q. MR. HAYNES	of generation. Can you tell us about that, how that works?
18 19 20 21 22 23	Q. MR. HAYNI	Q.C.: And how did that go? ES: At the end of the day, they were to Hydro Quebec and a consortium of transmission	19 20 21 22 23	Q. MR. HAYNES	of generation. Can you tell us about that, how that works? S: So, in the initial proposal for Muskrat

April 23, 2018 NL Hydro 2017 GRA
Page 85 Page 87

	Page 85		Page 87
1	Muskrat Falls Plant were expected to come	1	A. Generally speaking, but I think, you know,
2	online about the same time. What's happened	2	the fact that it is coming in advance has,
3	over time, because of delays with vendors or	3	you know, opportunities for us to avail of
4	whatever, is that the plant has fallen	4	from the point of view of saving some money,
5	behind the Labrador Island Link and the	5	which we need to jump on. I would also add
6	Labrador transmission asset, so if the	6	that there's also a few other benefits in
7	transmission line from Labrador to the	7	the sense that the transmission lines, a lot
8	Island can be put in service, then basically	8	of the wires would be up in the air for
9	we have the opportunity from the point of	9	three, if not four years prior to. So, any
10		10	
11	view of getting recall power to the Province	11	particular issue with respect to
12	in advance of Muskrat Falls, which is	12	construction would have been, you know,
1	obviously at .2 cents, which is a plus. So,	1	weened out at that particular time before we
13	we see that as being a form of rate	13	would have construction of a major infeed.
14	mitigation in the sense of our proposal for	14	The controls for the Lower Churchill – I'm
15	an off-island deferral account to assume	15	sorry, for the LIL would be advanced and
16	that we're going kind of a business-as-usual	16	operational. There are some intangibles, if
17	case where we're continuing to burn oil at	17	you will, in the sense of getting comfort
18	Holyrood and that we would put the proceeds	18	that the assets that have been built are
19	of that savings into an account that the	19	built, you know, first class; they're
20	Public Utilities Board have full control	20	reliable, and I don't think we should
21	over and the eventual how they would	21	undermine the benefit of that either. But
22	actually provide those monies back to the	22	the biggest thing, from a cost point of
23	customers to effect a smoother transition to	23	view, is the opportunity to avail of .2 cent
24	Muskrat Falls – post Muskrat Falls' rates.	24	energy versus 10.4 -
25	BROWNE, Q.C.:	25	BROWNE, Q.C.:
	Page 86		Page 88
1	Q. Now, that proposal says transmission infeed	1	Q2 cent energy, you're referring to recall
2	in advance of generation. Once Muskrat	2	energy from Labrador when you say .2 cent
3	Falls comes on stream and there is	3	energy?
4	generation and it's up and working and hand	4	MR. HAYNES:
5	to glove with all the systems that would	5	A. Yes.
6	stop; that deferral account would stop at	6	BROWNE, Q.C.:
7	that point?	7	Q. Okay. You're not referring to what you've
8	MR. HAYNES:	8	just purchased over the Maritime Link?
9	A. The deferral account would – once, you know,	9	MR. HAYNES:
10	yes, there's a different mechanism to pay	10	A. No.
11	for Muskrat Falls at the time. But the	11	BROWNE, Q.C.:
12	deferral account, you know, you wouldn't be	12	Q. That is not 2 cent electricity?
13	accruing revenue or net gains in that	13	MR. HAYNES:
14	account anymore. It would be eventually how	14	A. No, it's not .2 cents.
15	you actually provide that back to the	15	BROWNE, Q.C.:
16	consumer to effect, you know, a smoother	16	Q. What percent is that? What have we paid for
17	transition to post Muskrat Falls' rates.	17	that?
18	BROWNE, Q.C.:	18	MR. HAYNES:
19	Q. So, the only reason we're dealing with a	19	A. I think, you know, there's a request to the
20	deferral account is because the Project –	20	Board to have some of that stuff discussed
21	activital account to occurre tile I IUICU	l	
	<u>.</u>	1 / 1	III CONTIGENCE OF III — AND I WOUND SUSPECT
1	the generation project is behind the other	21	in confidence or in – and I would suspect that that would be the best approach for
22	the generation project is behind the other parts, the Maritime Transmission Link is up	22	that that would be the best approach for
22 23	the generation project is behind the other parts, the Maritime Transmission Link is up and ready whereas the rest of it isn't? Is	22 23	that that would be the best approach for that there.
22	the generation project is behind the other parts, the Maritime Transmission Link is up	22	that that would be the best approach for

April 23, 2018 NL Hydro 2017 GRA Page 89 Page 91 1 Why aren't ratepayers able to access that 1 have to run Holyrood at minimum load, if 2 2 information? require two machines on, for instance, under 3 3 MR. YOUNG: 70 megawatts and we will try to stay there. 4 4 Q. Madam Chair, there's a motion before the BROWNE, Q.C.: 5 Board on this. Now, I think it's best to be 5 And it's a matter of record that you're Q. 6 dealt with in legal argument. I don't know 6 getting this power from Nova Scotia? 7 7 if Mr. Haynes should be put to an answer on MR. HAYNES: 8 8 that point, given the sensitive nature of it It's coming in over Maritime Link, yes. A. 9 9 and the fact it is a matter of legal BROWNE, Q.C.: 10 10 argument. Are you purchasing it from Nova Scotia? Q. BROWNE, Q.C.: 11 11 MR. HAYNES: 12 12 0. Yes, we agree there's a motion before the A. It's being provided – to Hydro, it's being Board which we request to be put in because provided through Nalcor Energy Marketing. I 13 13 we don't see it as confidential, but there 14 14 think it's – it is coming via Nova Scotia, 15 is a procedure in place and it could very 15 but I don't know what particular plant or anything like that. It's energy that we're 16 well end up in Donovan Molloy shop up there. 16 17 So, we recognize that. But at the same 17 buying. 18 time, I'm just looking for general 18 BROWNE, Q.C.: 19 information here and -19 Is it coming from Cape Breton? Q. 20 20 CHAIR: MR. HAYNES: 21 I'm sorry, Mr. Browne. 21 A. I'm not sure. Q. 22 BROWNE, Q.C.: 22 MR. YOUNG: 23 23 0. - I just wanted to make the distinction – Madam Chair, again, this is the very subject Q. 24 24 matter of the confidential motion or the sorry. 25 CHAIR: 25 motion about the confidentiality. You know, Page 90 Page 92 1 Q. I was going to say, your question sounded 1 we're getting perilously close to 2 very specific though, so, to Mr. Young's 2 identifying suppliers and next it might be 3 point. I think if you're going to keep it 3 prices or specific plants. That information very well is likely to be confidential. I 4 on generalities, we'll let it go. 4 5 BROWNE, Q.C.: 5 think it's outside the scope of the cross-6 Mr. Haynes, where – what period of time have 6 examination of Mr. Haynes until this matter Q. 7 you gotten electricity over the Maritime 7 is resolved. 8 Link thus far? 8 BROWNE, Q.C.: 9 9 MR. HAYNES: 0. I think it's a matter of public record that 10 it was coming through Nova Scotia. It's The line came in service, I think, you know, 10 A. kind of commercially operable in February coming from Nova Scotia and it's a matter of 11 11 sometime and we took – I think the total public record that there's a confidentiality 12 12 13 13 agreement filed by Nova Scotia Power or right now is only about 20 or – less than 25 Emera, slash Emera, before the Nova Scotia 14 gigawatt hours. We do it on a – you know, 14 15 15 we – I'll say we missed the opportunity in Public Utilities Board. Is that correct? 16 January and February to bring in more 16 MR. HAYNES: 17 significant quantities of that particular 17 My understanding is the Nova Scotia Public A. Utilities Board have a process for reviewing 18 energy over the Maritime Link. We have used 18 19 those particular, you know, transactions it within the last two weeks to avoid 19 20 starting the Holyrood gas turbine, for 20 between Nova Scotia and others, but that's instance, and we do that on a daily - that's 21 21 my familiarity with it, that they do have a 22 looked at. Whenever we can avail of it, we 22 process before the Board to ensure 23 do it right now. But we're not – we don't 23 confidentiality and that's -24 have long-term supplies of energy that we've 24 BROWNE, Q.C.: 25 - we're not doing it every day. We still 25 And if it were, say hypothetically, if it

April 23, 2018 NL Hydro 2017 GRA

April 2	23, 2018		NL Hydro 2017 GRA
	Page 93		Page 95
1	were coming from Nova Scotia Power/Emera,	1	they have a small group there. They are
2	Nova Scotia Power/Emera is a business	2	technically proficient. It's—they have the
3	partner with some of the Nalcor affiliates	3	skillset. They have some rights, Nalcor had
4	on the island, is it not?	4	some rights, I guess on transmission and so
5	MR. HAYNES:	5	that Hydro does not have. So, it would be a
1 .			
6	A. It is, yes.	6	duplication of effort to do it. And I don't
7	BROWNE, Q.C.:	/	think that if we were competing against
8	Q. Okay. So, hypothetically you could be	8	Nalcor, I think you know, the—I think the
9	buying this from your partner? Is that	9	proposal to use NEM is sound and solid. I
10	possible?	10	don't think it would be cost effective to
11	MR. HAYNES:	11	have two marketing groups from that
12	A. It's not Hydro's partner, but it could be	12	perspective, one for Nalcor and one for
13	bought from, you know, an Emera subsidiary.	13	Hydro doing that. And I think what—well, I
14	BROWNE, Q.C.:	14	think what's purposed is reasonable.
15	Q. Sure.	15	BROWNE, Q.C.:
16	MR. HAYNES:	16	
17	A. Sure.	17	currently paying for Nalcor Energy
18	BROWNE, Q.C.:	18	Marketing's internal cost of providing
19	Q. Can we go to CA-NLH-54, page 1 of 1, and	19	service." I note the operative words,
20	there the question was posed, "Would it be	20	"Hydro is not `currently' paying."
21	more cost effective for Hydro to directly	21	MR. HAYNES:
22	solicit opportunities for energy purchases	22	A. Um-hm.
23	from other jurisdictions rather than	23	BROWNE, Q.C.:
24	contract with Nalcor Energy Marketing to do	24	Q. Are there plans that Hydro would be paying
25	so?" Then we ask, "Is Hydro paying any of	25	
		1 /.)	Naicor Energy Marketing's internal cost/ - 1
		23	Nalcor Energy Marketing's internal cost?
1	Page 94	1	Page 96
1	Page 94 the costs associated with Nalcor Energy	1	Page 96 MR. HAYNES:
1 2	Page 94 the costs associated with Nalcor Energy Marketing?" Then was asked, "What's	1 2	Page 96 MR. HAYNES: A. Obviously, Nalcor Energy Marketing does have
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April 23, 2018

Page 97

NL Hydro 2017 GRA

Page 99

NL Hydro 2017 GRA

Page 99

I was hat—if that's a significant factor

1 MR. HAYNES: 1 sure what—if that's a significant factor. 2 2 A. It's possible the outcome of the discussions BROWNE, Q.C.: 3 3 and dialogue between Hydro, and Nalcor and Q. I'd like to move on to the deferral account. 4 4 Nalcor Energy Marketing – what you call a deferral account. And it 5 5 BROWNE, Q.C.: seems to be sort of a general description of 6 Q. Yes. And down below, at line 15 it says, 6 this deferral account at its genesis. 7 7 "Given the confidential nature of You're bringing electricity in right now 8 8 negotiations with the exception of Nova through the Maritime Link, presumably 9 Scotia Power which has disclosed that 9 because it's cheaper than burning oil at 10 commercial discussions with Nalcor are 10 Holyrood, and therefore, there is a saving ongoing to the Nova Scotia Utility and there. We're not using Holyrood as much. 11 11 12 Review Board, Hydro is unable to provide 12 Is that generally the concept? 13 details regarding market participants by 13 MR. HAYNES: Nalcor Energy Marketing." 14 14 Α. The concept is, yes, that basically we have 15 MR. HAYNES: 15 an opportunity to bring in power, you know, That's correct. primarily over the Labrador Island Link. 16 16 A. 17 BROWNE, Q.C.: 17 It's much cheaper, obviously, than our 18 Q. And of course, that led to our previous 18 avoided costs at Holyrood. And the proposal 19 discussion which would lead one to probably 19 is to isolate those savings on, you know, on 20 20 that versus kind of business as usual as if conclude reasonably that Hydro's purchase 21 21 was through an entity under the jurisdiction the line wasn't there, to put it in a 22 of the Nova Scotia Public Utility Board. 22 deferral account that the Public Utilities 23 That would be a fair comment? 23 Board would have full, you know, means to 24 24 disburse it there, what they see best fit to MR. HAYNES: 25 25 A. That's a fair comment, yes, on that, yes. smooth the way to post-Muskrat Falls rates. Page 98 Page 100 BROWNE, Q.C.: BROWNE, Q.C.: 1 1 2 2 Q. And just taking that a little bit further, Q. Yes, but what's new there? Because here, we 3 Nova Scotia is—if we can put it, it has not 3 have the rates stabilization plan. If Hydro a lot of hydrology. Nova Scotia is into 4 is not utilizing Holyrood, say, because it's 4 5 5 coal-burning generation still through Cape warmer winter, say for other factors, and 6 Breton Island, that's correct I think? Is 6 the amount of oil is not being in use, that 7 that fair to say? 7 would go to the Rate Stabilization Plan, 8 8 would it not? (10:30 a.m.)9 9 MR. HAYNES: MR. HAYNES: 10 10 They still burn coal, but I'm not sure—I If we didn't burn the oil, it would go A. A. don't know if it's Cape Breton coal, but 11 11 through the rates stabilization plan and 12 they still burn—they still have thermal 12 eventually result in--likely a potential 13 generation, obviously, and wind, and they 13 reduction in the rates in the short term, have some hydro, but I'm not sure of the 14 14 15 15 BROWNE, Q.C.: extent. 16 BROWNE, Q.C.: 16 Q. So-MR. HAYNES: 17 So, it's not inconceivable that the energy 17 Q. 18 you're getting through the Maritime Link 18 A. But basically, you're avoiding—we're not 19 comes from coal-burning generation? 19 looking—we have to look four or five years 20 20 down the road to see where the rates are MR. HAYNES: going to go. And how do we transition to 21 21 A. It's possible, but I'm not quite – 22 22 BROWNE, Q.C.: that rate? And you know, rate smoothing is 23 Yes. 23 a perfectly--you know, a method to actually Q. 24 24 MR. HAYNES: ease that transition for the customers. And

we're not -

You know, whether it's coal or oil, I'm not 25

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A.

April 23, 2018 NL Hydro 2017 GRA Page 101 Page 103 1 BROWNE, Q.C.: 1 through the Maritime Link, is used to But this Board -2 2 displace the cost of fuel at Holyrood, that Q. 3 3 MR. HAYNES: is a rate stabilization issue? That is why 4 And Hydro doesn't keep the money. The money 4 we have the Rate Stabilization Plan. A. 5 5 still goes back to the customer. MR. HAYNES: 6 BROWNE, Q.C.: 6 The Rate Stabilization Plan primarily looks A. 7 7 Q. Oh no, granted Hydro doesn't keep the money. at the utilization of fuel in Holyrood, but 8 8 It's not Hydro's money to begin with, but it there's—I think what we're proposing is 9 9 goes into the Rate Stabilization Plan. something different. We're proposing to, 10 Would it not be there? Wouldn't that be—if 10 assume that we are burning oil from the 11 you haven't burned sufficient fuel at 11 point of view of our projections to take 12 Holyrood according to your projections, 12 advantage of recapture primarily, because 13 consumers could anticipate that they would 13 that the biggest difference in cost, to 14 get a rebate out of the Rate Stabilization 14 accumulate those monies in an account for 15 Plan in ordinary times, but because you're 15 two or three years, and then, to, with the 16 bringing it in through the Maritime Link, 16 Board's direction, to actually disburse 17 and displacing fuel that way, you're saying 17 those back to the customer to smooth their 18 that's not the same thing. I – 18 transition to post-Muskrat Falls as opposed 19 MR. HAYNES: 19 to making a step change even bigger. If all 20 20 those savings, you know, on the—what's We have proposed – Α. 21 BROWNE, Q.C.: 21 termed as the expected, I think, scenario, 22 22 Q. Please correct me. It sounds the same to that would, you know, that would likely 23 23 impact where the rates would actually go 24 24 MR. HAYNES: down, and the step change to post-Muskrat 25 25 A. We have proposed to isolate the savings from Falls would be even steeper. And it is a Page 102 Page 104 1 the point of view of recapture versus oil 1 large bough-wave that we're—that's coming 2 2 into a separate account that we use for rate towards us. So, we do need to plan for that smoothing. Your Rate Stabilization Plan 3 3 more than a year ahead. We need to plan 4 would be, you know, relooked at every July 4 for, you know, post-Muskrat Falls and what 5 5 if you will, or you know, in the spring, to we can do to mitigate the rates. 6 6 BROWNE, Q.C.: look at what the rates are going to be on 7 the following year based on whether there's 7 Q. So, there would be nothing preventing under 8 8 a balance or deficit in that particular the jurisdiction of the current regulator 9 9 account. There are two different accounts that this displacement of fuel is just 10 with two different reasons. I would add as 10 something else that they have to factor in when considering the Rate Stabilization Plan 11 well that on the, you know, the current 11 12 12 and then it would be up to the Board to proposal we did factor down the amount of 13 13 decide in terms of what-where those actual oil that we expected to burn in Holyrood to 14 not build up a fictitious amount or, you 14 funds should go, should they go to the next 15 15 know, a huge surplus in the Rate Rate Stabilization Plan or where they should 16 Stabilization Plan. So, we have factored

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that out. We think that this is an

Falls.

BROWNE, Q.C.:

Q.

appropriate way to go to help smooth the

rates for the customers and to avoid, you

know to a degree that we can, as much rate

shock that's going to happen post-Muskrat

But you would agree with me that if this

fuel, this electricity you're bringing

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go?

MR. HAYNES:

A. It's certainly under the Board's purview and we're open to anything that would actually effect a smoother transition of post-Muskrat Falls. We think that it's in the best interest of people to avoid as large a stepchange as we can, to try to keep that smaller, you know, and what we put forward, we think is a reasonable way to do that with

April 23, 2018 NL Hydro 2017 GRA Page 105 Page 107 the tools that we have. 1 think, you know, there may have been any 1 2 2 BROWNE, Q.C.: assumptions made under the Rate 3 3 Q. You mentioned the word "rate shock" a few Stabilization Plan, but we don't control the 4 times now. Just what's your definition of 4 cost of fuel obviously, and it is going up, 5 5 rate shock? What percentage would there right, these days as well. So – 6 need to be to cause rate shock, and what do 6 BROWNE, Q.C.: 7 7 you feel the implications of rate shock 0. Yes, but to the -8 8 MR. HAYNES: would be? 9 9 MR. HAYNES: A. What we put forward right now is $7\frac{1}{2}$ percent 10 I don't have any specific numbers for rate 10 for 2018 and 9.4 I believe for 2019. A. BROWNE, Q.C.: shock, but I do know that we're going to—we 11 11 12 12 are going to have a significant increase in Q. But to the end consumer, the person paying 13 rates post-Muskrat Falls without doing out there, the consumer really makes no 13 14 something. You know, I think rate shock 14 distinction of where the money is going. 15 will depend on the person's ability to pay. 15 They're just looking at 23 percent. Is that I mean, I know that, you know, ten percent 16 16 a fair comment? 17 is a number that people use, but basically 17 MR. HAYNES: 18 post-Muskrat Falls, we're talking about a 18 A. I think if you want to do down to the 19 much bigger number than that. So, we have 19 mechanics of the numbers, it's best to have 20 to adapt to that in my opinion. And all 20 that discussion with Mr. Fagan, but I don't 21 we're saying here is that as opposed to 21 think 23 percent was ever, you know—there's 22 reducing rates or letting the rates, you 22 a whole bunch of things that affect the 23 know, actual decrease, that step-change is 23 rates. Rate Stabilization Plan would be 24 going to be bigger. This is a way to 24 one, as you already mentioned, if it goes up 25 actually, you know, walk up those steps in a 25 or down. There are lots of drivers for Page 106 Page 108 little bit better way. Ideal? No, but 1 1 that. The cost of fuel obviously is a big 2 2 it's—basically, it's what we do have to—what factor. So, there are a bunch of mechanisms 3 we think is a reasonable way to approach it 3 there to do that, but -4 4 from this perspective. BROWNE, Q.C.: 5 5 BROWNE, Q.C.: Q. In terms of – 6 6 So, you came before this Board suggesting a MR. HAYNES: Q. 7 rate increase of over, I think it was an 18-7 - the current proposal is $7\frac{1}{2}$. A. 8 8 month period, it might even be lesser than BROWNE, Q.C.: 9 9 that, of 23 percent. 0. In terms of rate shock and Muskrat Falls and 10 MR. HAYNES: 10 the projections we saw earlier which are all I don't think -11 A. upward bound, and I agree with you, will 11 12 BROWNE, Q.C.: 12 certainly cause rate shock and all its 13 Would that cause rate shock? implications. Has Hydro undertaken with Q. 13 MR. HAYNES: 14 14 economists, elasticity studies to make any 15 15 determination of if the rates to a certain A. I don't think we ever asked for 23 percent. 16 What we actually filed now is 7 1/2 percent 16 point, will people leave the system, the 17 for 2018, and I think it was 9.4 then to the 17 electric space heating customers? Have you 18 18 end consumer for 2019. That's what's, you had studies undertaken showing that? 19 19 know, before the Board now. MR. HAYNES: 20 20 BROWNE, O.C.: A. I wouldn't be—I wouldn't say that we've had 21 So, the 23 percent is no longer before the 21 studies. We have looked at from the point 0. 22 Board? 22 of view what the load forecast implications 23 MR. HAYNES: 23 are. The thought is, based on the 24 I don't know if we've ever asked for 23 24 discussions, is that basically around the A. 25 18-cent range would be—there would be—people percent as such. I don't think we did. I 25

April 23, 2018 NL Hydro 2017 GRA Page 109 Page 111 1 will always take action. Typically, they go 1 be conscious of an electricity bill coming 2 2 down, then they come back up a little bit. in where you're selling electricity at 18 3 And 18 cents was thought to be a number 3 cents a kilowatt, plus HST. And when you 4 whereby it would be—there's obviously some 4 look at--I think I saw a statistic recently 5 loss of load for that, but it would recover. 5 saying the average household income in the province, two people working in one house 6 That is the assumption that is used, that 6 7 7 the 18 cents--17 or 18 cents would be a is—will be \$79,000, and people's debt load 8 8 is always factored in. So, if electricity reasonable number to mitigate any major loss 9 of load, but there will be, I'm sure, a 9 were to—their electricity rates were to 10 short-term loss of load, but people tend to, 10 double, as would be envisaged according to 11 you know, take action. There's a lot of 11 some of the numbers we're seen here, in 12 fearmongering on the go now with the rates, 12 fact, they would—they could triple according to some of the numbers from what we have 13 and some of that is valid, but people are--13 14 you know, the load forecast right now is not 14 here. From what we have right now, 15 what it was, but for—certainly not what it 15 according to the number that you presented on the chart previously, consumers, it's 16 was for sanction. The more energy we sell 16 17 on the island, the better, obviously, or you 17 fair to say, consumers will leave the 18 know, within the province, the better from 18 system. They will go and get other forms of 19 that perspective as opposed to selling it in 19 space heating than what—they will find 20 the external markets or market rates. 20 cheaper sources. And the oil companies 21 BROWNE, Q.C.: 21 might be all too willing to oblige, right? 22 22 MR. HAYNES: Q. And some economists would say you're going 23 in the wrong direction. Some economists 23 They may, but I mean oil right now is on the A. 24 might even say if you kept rates the way 24 three-year high. So, I mean, that is a bit 25 they are and tried to sell more electricity 25 of, you know, predicting chaos as well. Page 110 Page 112 1 to the base you have, that the results 1 Obviously, the choice of consumers will take 2 2 ultimately might be productive for everyone. to move away from electricity would depend 3 MR. HAYNES: 3 on what their alternatives are, whether it's 4 They might be. We certainly would welcome 4 wood heat or exchange from a mechanism or Α. 5 any increase in loads from that perspective 5 converting to oil. Those are all decisions 6 6 because basically they would—and the that people will make obviously. 7 prevailing rates that we have and that would 7 BROWNE, Q.C.: 8 8 be beneficial. You know, so there are—I It seems to me this is a pretty closed Q. 9 9 mean, there are considerations on the go process. Someone says--you said, "If it 10 with respect to an increase in the load from 10 goes to 18 cents, people might leave the system." 11 some of those things, converting facilities 11 12 or whatever, but those are being looked at 12 MR. HAYNES: 13 13 by the provincial government as well, yes. A. Um-hm. 14 We haven't gone out and—we haven't gone out 14 BROWNE, Q.C.: 15 looking for a huge increase in electric 15 Q. Well, who says that? Is there a committee 16 utilization. We are concerned about people 16 in place? How—can you tell us what's going 17 17 moving away from electric heat, certainly, on here? because you know, it means that there'd be MR. HAYNES: 18 18 19 less energy used here and more for the 19 I'm sorry. I don't understand your A. 20 export which is not going to recover as much 20 question. BROWNE, Q.C.: 21 money from the—which does not recover as 21 22 much from the point of view of what was 22 Eighteen cents. You mentioned before that Q. 23 required to pay for Muskrat Falls. 23 at 18 cents people would leave the system. BROWNE, Q.C.: 24 24 Who is saying that, that at 18 cents people 25 25 Q. Consumers are generally savvy. They would would leave the system?

April 23, 2018 NL Hydro 2017 GRA

Aprii 2	23, 2018				NL Hydro 201 / GRA
		Page 113			Page 115
1	MR. HAYNES		1	A.	No. No.
2	A.	I think you just said it from the point of	2	BROWNE, Q.	.C.:
3		view of the economists and the elasticity of	3	Q.	None?
4		load. Eighteen cents.	4	(10:45 a.m.)	
5	BROWNE, Q.O	C.:	5	MR. HAYNES	S:
6	Q.	But you told us that you didn't have an	6	A.	First of all, I would say that basically the
7		economist.	7		decision is made. Muskrat Falls is not
8	MR. HAYNES	·.	8		something we can avoid. It's going to
9	A.	Eighteen cents was the number that we	9		happen. So, it's a matter of how do we
10		thought that we could mitigate that was	10		mitigate rates down to the most reasonable
11		thought—felt that we could mitigate to	11		level we can? And Hydro cannot do it on its
12		before there would be a major loss of	12		own. We can do—we can bring—this is one
13		customers, but now, I don't have an academic	13		aspect to bring forward that we can control.
14		paper or whatever saying that. I don't. I	14	BROWNE, Q.	•
15		don't have that. It was a number which was	15	Q.	Yes, sure. And you said, you made reference
16		better than 22.89 and it was obviously worse	16	Ψ.	I think in your evidence yesterday to some
17		than the 11 or 10.6 that you mentioned.	17		committee in which you are a part?
18	BROWNE, Q.	•	18	MR. HAYNES	, ,
19	, ,	But how did you come up with the number?	19	A.	There's a Rate -
20		Did—how was that contrived? Is it just	20	BROWNE, Q.	
21		something—you say that you "felt." Is it a	21	Q.	To study this.
22		feeling? Is there –	22	MR. HAYNES	
$\frac{22}{23}$	MR. HAYNES	-	23	A.	There's a Rate Mitigation Committee chaired
24		o. No, I think it was –	24	A.	by the provincial government which basically
25	BROWNE, Q.		25		comprises of the provincial government which
23	DROWNE, Q.		23		
1	0	Page 114	1		Page 116
		Or is there some science to this?	1		basically comprises of provincial
2	MR. HAYNES		2		government, people from Natural Resources,
3		I don't think there's any science to that	3		Finance and Hydro and Nalcor, and I'm on
4		there. I mean, there's lots of studies down	4	DROWNE O	that committee from a Hydro perspective.
5		and basically the numbers are—the price of	5	BROWNE, Q	
6		elasticity has varying results depending on	6	Q.	So, you're on the committee?
7		who did the study. They're all over the	7	MR. HAYNE	
8		map. I won't say all over the map, but	8	Α.	I sit on the committee, yes.
9		they're variable. It depends on the	9	BROWNE, Q	
10		jurisdiction; it depends on what people's	10	Q.	Who else is on the committee?
11		options are.	11	MR. HAYNE	
12	BROWNE, Q.		12	A.	The other folks on the committee are
13		So, you have elasticity studies?	13		assistant deputy-minister of Natural
14	MR. HAYNES		14		Resources, John Cowan; the deputy minister
15		I don't have elasticity study for 18 cents,	15		of Finance, Craig Martin; and people from
16		no. I'm not aware of one.	16		Nalcor; and from the Investment Evaluation
17	BROWNE, Q.	C.:	17		folks of Dave Jones and Aborn Warren.
18	Q.	Do you have any elasticity studies?	18	BROWNE, Q).C.:
19	MR. HAYNES	S:	19	Q.	So, it's Nalcor and the government?
20	A.	I've read papers by various people who have	20	MR. HAYNE	
21		published them over time, but –	21	A.	It's a government committee looking at rate
22	BROWNE, Q.	•	22		mitigation, and it's looking at the broader
23	, ,	But you haven't commissioned any in	23		aspects. So basically, Hydro is there, but
1 24		· · · · · · · · · · · · · · · · · · ·	1 24		
24		reference to this particular situation?	24		what can flydro do? This particular proposar
24 25	MR. HAYNES	•	25		what can Hydro do? This particular proposal on the deferral account is one thing that we

April 23, 2018 NL Hydro 2017 GRA Page 117 Page 119 thought could actually aid the mitigation at 1 As I said, the committee is a committee that 1 A. 2 2 least the smoothing part to get to the was set up by the provincial government 3 transition. That's what we have. We have 3 under their chairman and they chair the 4 access. We have a contract with CF(L)Co. 4 meetings (phonetic). 5 5 for the recapture of power and we can bring REPORTER: 6 it to the table and you know utilize to the 6 Just a minute, please. Sorry, sir, with Q. 7 7 best of our ability to help build an amount that answer. His microphone is gone. 8 8 of money to help the process of mitigating MR. HAYNES: 9 9 rates to post-Muskrat Falls. A. Yeah, I kicked it off. Sorry about that. BROWNE, Q.C.: 10 10 REPORTER: 11 Q. So, the committee consists of government and 11 Q. It's working again, thank you. Nalcor. That sounds all vaguely familiar. 12 12 MR. HAYNES: 13 Are there no—are our friends at Newfoundland 13 A. Sorry. 14 Power invited on the committee? 14 BROWNE, O.C.: 15 MR. HAYNES: 15 Q. The whole problem that we got ourselves into or others got us into with Muskrat Falls had 16 16 A. Not at -17 BROWNE, Q.C.: 17 to do with closed committees. There was no 18 Q. They certainly would have an interest in 18 open transparent process say in part for 19 19 what was brought to this Board by the this. 20 MR. HAYNES: 20 government of the day to concoct questions 21 Not at the moment, no, they're not. 21 that they were limited to answering, and A. 22 BROWNE, Q.C.: 22 then according to their own evidence, didn't have enough information to answer. And now 23 23 0. They're not invited. Are the industrial 24 customers invited? 24 it seems that--are we not back at it again? 25 MR. HAYNES: 25 We've got Nalcor and the government, and all Page 120 Page 118 1 A. Whether they made representations to the 1 the other parties here who have valid 2 2 government, I cannot speak to them, but interests are not at the table. Should 3 basically the committee is a government and 3 there not be—have you considered or can you 4 Nalcor, Hydro committee and this point in 4 take the message back to the committee that 5 time. 5 there could be an open transparent 6 BROWNE, Q.C.: 6 accountable process where economists can 7 7 come forward, and people talk about Q. Have the consumers been requested to bring 8 8 elasticity, and where recommendations can be representation on the committee? 9 9 MR. HAYNES: made, so everyone can get into it? Maybe Not at this point in time that I'm aware of. 10 10 this Board should be the proper conduit. A. It is what can Hydro do? What can Nalcor They're into regulating electricity, and 11 11 they have their own experts. Has that been 12 do? What do the government do to actually 12 13 13 considered? help mitigate rates down to the 17 and 18-MR. HAYNES: 14 cent range? 14 15 15 BROWNE, Q.C.: I mean, I can take the discussion back to A. 16 Q. But it's inherently conflicting, is it not? 16 the committee, yes. 17 You need the rates to go to a certain amount 17 BROWNE, O.C.: in order to pay for the bills I guess, and Sure. 18 18 Q. 19 the government is looking it from a tax 19 MR. HAYNES: 20 perspective, but there are other interests 20 A. I'll certainly do that. I'm sure they're 21 here who—and there's certainly a lot of 21 reading transcripts anyway, but from the point of view of the immediate problem that 22 interest to—may have something to bring to a 22 23 process. Have you thought that through, 23 we have, it's that, you know, the decision 24 that committee, properly? 24 on Muskrat Falls is made. There's a cost 25 MR. HAYNES: 25 that we have incur. There are orders in

April 23, 2018 NL Hydro 2017 GRA Page 121 Page 123 council and things that kind of restrict 1 have no rate of return and just provide the 1 2 2 some of the things that we can do and can't service? Has that been considered? 3 3 do. And basically, we have to make the best MR. HAYNES: 4 of the situation that we're dealt with. And 4 Right now, there's--a government direction A. 5 5 from the point of view of rate mitigation, on that there, that would require a 6 there's only one way that you can do rate 6 government direction to change that and that 7 7 mitigation, you increase the load or the would be up to the government. And I would 8 money has to come from somewhere to effect a 8 not—I wouldn't suggest that any company 9 9 could have no rate of return. We still have lower rate than what otherwise happens. 10 BROWNE, Q.C.: 10 to borrow money. We have to do things in 11 Q. Now, is the committee considering what—your 11 the market, but that's a government—that's 12 12 focus seems to be on consumers and how much the government's prerogative. 13 consumers can pay, but have you considered 13 BROWNE, Q.C.: 14 other options? Go to CA-NLH-007 please. 14 Q. But is that something that you brought 15 And the question there posed is, "Has Hydro 15 forward to the committee as a possibility? and its parent, Nalcor Energy, considered MR. HAYNES: 16 16 17 altering the Muskrat Falls Power Purchase 17 As I said, I do not want to speak to the A. 18 Agreement as an alternate way to help future 18 things that are before the committee. It's 19 ratepayers following any rate increases that 19 not a committee of Hydro; it's a committee 20 may be triggered by the commissioning of 20 of government. What we've brought forward 21 Muskrat Falls?" And the answer is, "There 21 to the PUB, the Public Utilities Board, is 22 22 have been no discussions between Hydro and what we feel that we can contribute at this 23 23 Nalcor with regard to revising the Muskrat point in time to effect some start with the 24 Falls Power Purchase Agreement." Is that 24 process of rate mitigation and rate 25 something that should be considered in your 25 smoothing. Page 122 Page 124 view, Mr. Haynes? BROWNE, Q.C.: 1 1 2 2 MR. HAYNES: Q. What has Hydro done itself? You're looking 3 From a rate mitigation point of view, you 3 to the consumers to pay for all of this. A. 4 know the Rate Mitigation Committee are 4 You're not looking at these two other 5 looking at various things, but I don't feel 5 possibilities and there may be others, but 6 that I'm privy to speak to any of those from 6 when we looked to Hydro, Hydro comes forward 7 that perspective. What we propose to the 7 with a budget for which they are seeking 8 8 Public Utilities Board is the fact that we approval on operating costs and fulltime 9 9 think that we can avail to contribute some positions and loads of overtime, but we're 10 rate mitigation aspects by using the 10 into a bit of a pickle here, aren't we? Why deferral account and the—and particularly hadn't Hydro come forward to show some real 11 11 12 the recaptured energy to actually make that 12 cost-cutting measures? What is Hydro's happen. The overall Rate Mitigation contribution to the dilemma in which 13 13 14 Committee and what they've looked at, 14 consumers are faced? MR. HAYNES: 15 they've looked at a number of things and I'm 15 16 really not privy to speak to those. 16 A. What we put forward is an operating budget 17 BROWNE, O.C.: 17 that we feel that we require to deliver the 18 Q. service that we're expected to require. We In terms of your rate of return, you're 18 19 guaranteed a rate of return even though you 19 have, you know, as I think we mentioned the 20 20 don't earn it. You're guaranteed a rate of other day, we have started some productivity 21 return of-to mimic Newfoundland Power's rate 21 initiatives to save costs. We put forward a 22 of return, a private company with all the 22 budget that basically absorbs, you know, a 23 efficiencies that come with that private 23 number of people that we had to—that we 24 24 needed to hire in the Energy Control Centre, company. Has a consideration been given to 25 lower your rate of return or for a period to 25 the NLSO. We've absorbed those. We've

April 23, 2018 NL Hydro 2017 GRA Page 125 Page 127 1 already in the Settlement Agreement, you 1 there to incent people, if you will, to work 2 2 know, volunteered to reduce another 15 FTEs at that in a beyond-the-clock sort of a 3 in that particular process, but basically, 3 timeframe. 4 4 there's an amount of money required to BROWNE, Q.C.: 5 operate the system with the expectation of 5 And can you go to CA-NLH-134, please? And Q. 6 reliable service. And what we put forward 6 here we're dealing with overtime and there's 7 7 is that we are looking at our budgets, we a listing of all "Hydro employees 2016 8 are controlling those. We have gone back on 8 overtime payment pf \$40,000 or greater." 9 9 And there's other requested matters. overtime. There's a lot more reporting 10 done. There's a lot more scrutiny of all 10 Overtime, just when we looked at it and looked at the figures you've given, and those things being done and we are making 11 11 progress, but they're—you know, some of 12 12 there's no need to go into them all now and 13 things take time, but we are at that. We're 13 the personalities. I'm—we're not stating 14 looking at lots of things from the point of 14 they haven't worked overtime, but it seems 15 view of the overall, you know, productivity 15 between bonuses and overtime, and it seems like we're just into business as usual at group that we're doing. And you know, 16 16 17 there's lots of stuff like that that's 17 Hydro at a time of crisis. What is Hydro 18 happening. And I don't have that at the top 18 really doing to cuts its costs here? 19 of my tongue, but we are generating a list 19 MR. HAYNES: 20 20 of possibilities. And you know, that We've done, in our application, we have put 21 particular group is under Ms. Hutchens, but 21 in a one-million-dollar productivity 22 from the over—from the point of view of 22 allowance we've imposed upon ourselves. We 23 23 have—we scrutinized travel, training. We've cost, we have, you know, we have gone back 24 24 and looked at cutting. We've trimmed gone back to all those things, and you know, 25 travel. We've trimmed lots of things. And 25 some of the things that were taken out in Page 126 Page 128 1 1 from an overtime point of view I don't think the 2016 timeframe were things that are 2 2 we have an epidemic of overtime overall from unsustainable. What we're looking for which 3 the budget point of view. We have pockets 3 takes some time to generate is sustainable 4 savings over time. And we have, as I 4 where there's a challenge, but some—a lot of 5 that is on the East Coast. There's a lot of 5 mentioned, we have—we do have a team 6 construction on the go the last couple of 6 structured to look at that there, and to 7 years, particularly, and we are looking at, 7 examine all those different aspects. We 8 8 you know, getting that back down to an even have put forward, you know, the budget which 9 9 better level. basically—I don't want to repeat myself too 10 BROWNE, Q.C.: 10 much. We have absorbed a number of 11 Can you go to CA-NLH-136? And here we're positions that we had to increase in the 0. 11 talking about bonuses. "What is the total 12 12 Energy Control Centre. We didn't look for 13 amount of Hydro's bonus payments in 2016?" 13 that. We actually traded that off other And the answer, "The total amount of Hydro's 14 14 vacant positions, wrote some out. We're 15 payments for short-term incentives, 15 reviewing travel, we're reviewing training. 16 performance contracts, for Executive and 16 We put in a lot more overtime reporting, so 17 Senior Leadership for 2016, which was paid that people actually have the information. 17 And you know, an easier to go back and 18 in 2017, is \$640,000." Will there be 18 19 similar bonuses in 2018? 19 challenge. They're all, those transferred 20 MR. HAYNES: 20 in costs, are being checked and challenged. 21 Yes, there—we still have a short-term 21 There's a whole host of things like that A. 22 incentive program which basically is 22 that are being done to actually mitigate the 23 triggered off, you know, our financial 23 cost or to reduce and hold the cost. 24 targets, our reliability targets. There are 24 BROWNE, Q.C.: 25 a number of different components that are in 25 But you haven't brought in an outside

April 23, 2018 NL Hydro 2017 GRA Page 129 Page 131 company, Deloitte's or these companies that 1 (RESUME - 11:31 a.m.) 1 2 2 do these things, to examine Hydro, CHAIR: 3 3 department by department, and to see what Okay, Mr. Browne, back to you. Q. 4 efficiencies could be brought in to your 4 BROWNE, Q.C.: 5 5 operations. You haven't done that, have Q. Thank you, Chair. Thank you, Mr. Haynes. 6 6 You mentioned previously that the more 7 7 MR. HAYNES: electricity you can get, the better, because 8 8 you will be able to sell it into markets, We have done that years gone by. We brought A. 9 9 via the Maritime Link, has Hydro considered 10 BROWNE, Q.C.: 10 embarking upon an intense conservation plan whereby consumers will be encouraged to use 11 Q. Years. 11 12 MR. HAYNES: 12 less electricity, or being encouraged to get 13 Yeah, in years. We have two or three times 13 heat pumps or similar, to bring down their A. 14 over my career we brought in the folks to 14 own usage so that the end result will be 15 actually do that. And from the point of 15 favourable to Hydro to sell more electricity view of—and there's been some savings, but through consumer conservation into, across 16 16 17 they have not been demonstrable. I think 17 the Maritime Link, has that been talked 18 what we have right now is we have a group of 18 about? 19 in-house people who we've trained up in Lean 19 MR. HAYNES: 20 Six Sigma to go back and look for all those 20 A. I don't think that I said—when I said, I'm 21 things. I think we'll deliver a better, 21 not sure what I said exactly right now, but 22 22 more sustainable product long term by doing the context of what I said – BROWNE, Q.C.: 23 it internally. We know where the costs are, 23 24 24 and those folks will actually mine that No, and I'm not either, I'm quoting you Q. 25 information and help us on a go-forward 25 generally, to be fair to you. Page 130 Page 132 basis. I don't see—I see little value—there 1 1 MR. HAYNES: 2 2 have been people engaged by—for instance, A. No, no, I know, but you implied, at least to 3 you know, looking at transferred in cost or 3 what I just heard what you said was that I 4 4 allocated costs in, that said, well, they're implied or said that—I just lost track – 5 5 reasonable the way we do it. But going back BROWNE, Q.C.: But you got the gist of the question. 6 and challenging and looking for all those 6 0. 7 pieces of gold that are out there, that's 7 MR. HAYNES: 8 8 what we're doing. And I think the folks in Yes, I know, but what I had said was that Α 9 9 the shops in-house know that better than the more power that we sell within the 10 anybody else. I don't think there's any 10 province, the better, because our rates are 11 merit in spending hundreds of thousands of obviously more than what the market prices 11 12 dollars on an external consultant to come in 12 are. The way you put it was kind of the and help with that. I think it's a waste of 13 13 other way around, that's the way I heard it. 14 money, personally. 14 You know, the government has a program to 15 15 BROWNE, Q.C.: help people buy heat pumps or mini splits or 16 Q. Maybe we'll break right here? 16 whatever. We haven't embarked upon that as 17 CHAIR: 17 a conservation demand thing, you know, the 18 conservation demand program was great for Okay. 18 Q. 19 BROWNE, Q.C.: 19 curtailing, you know, load at a certain

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Q.

BROWNE, Q.C.:

Q.

CHAIR:

It's that okay, Chair?

Thank you.

Thank you, Mr. Browne.

(BREAK - 11:00 a.m.)

period of time, and we obviously have a lot

areas, but on the Interconnected system, the

rate, would be more than we would anticipate

getting on the market, you know, if they're

more energy that we sell at our regulated

more to benefit in the Isolated diesel

April 23, 2018 NL Hydro 2017 GRA Page 133 Page 135 1 selling it to Nova Scotia or New England or 1 the rates as best we can, but Hydro only has 2 2 whatever. The rates, the market prices down control of so much. 3 3 there are lower than what our rates are from BROWNE, Q.C.: 4 4 an energy point of view. So we haven't Because it seems that this is something that Q. 5 5 embarked on any major conservation program you've considered, but I don't know how you 6 in the island. In fact, you know, there's 6 came up with the answer. We can go to CA-7 7 an air again to encouraging whatever NLH-031, and the question posed "If improved 8 8 regional electric load that we can have on conservation reduced customer and demand by 9 9 the island, whether it's electric vehicles 5 percent in 2021, what would be the impact 10 or, you know, converting buildings to 10 of the expected customer rate in 2021, a 26.32 cents per kilowatt?" And, "The answer 11 electric heat, as long as there's a process 11 12 there and that would be actually 12 to the question poses a scenario of a 13 advantageous because our load would actually hypothetical reduction in customer demand of 13 14 increase. 14 5 percent, Hydro has assumed that the 15 BROWNE, Q.C.: 15 reduction and demand in this question refers 16 And the public would be advantageous to 16 to reduced customer energy consumption in Q. 17 consumers in terms of listening to what is the island Interconnected. Hydro also notes 17 18 happening here and elsewhere, in terms of 18 that the 2021 rate of 26.32 cents a 19 their fear of rising electricity rates, 19 kilowatt, cited in a question as the 20 there probably might be a way of addressing 20 forecast rate for island Residential 21 some concerns so that you can retain your 21 customers, inclusive of 15 percent tax." 22 customer who can conserve more, and it could 22 And then it goes on to say, "A 5 percent 23 23 be a net benefit to both Hydro and the reduction in customer energy consumption 24 24 would reduce retail energy bills from customer. 25 MR. HAYNES: 25 customers by approximately 5 percent" and it Page 134 Page 136 It could be. We obviously want to retain 1 A. 1 goes on to discuss that, but ends up saying 2 the customers that we have, we'd like to 2 that it mightn't be overly helpful to Hydro 3 grow the customer base, in fact, but the 3 in the final analysis. How would this 4 other things that the consumers that have to 4 hypothetical situation that was posed and 5 look at when they actually convert is, you 5 your answer to it, on what basis would that 6 know, what are the impacts of the carbon tax 6 answer be constructed? You're saying if 7 and so on. So it's not a straight forward 7 consumers reduce demand, presumably you 8 8 decision from that perspective, but the would have more electricity to sell, but yet 9 9 folks, I mean we were very concerned, you're saying that it could end up costing 10 obviously, about the rates, we're very 10 more to consumers? concerned about the folks who would find it MR. HAYNES: 11 11 12 very difficult to, you know, put in an 12 A. I think the premise of that, Mr. Fagan's 13 alternate heating system or whatever the 13 department would have actually done that case was. They're the ones who are going to 14 14 analysis, but in a nutshell we have a 15 be—I'm not concerned about me and quite 15 revenue requirement that, you know, from the 16 frankly, I'm not concerned about your 16 point of view of our O&M cost, we have a 17 17 ability to pay, but I am concerned about the revenue requirement that we expect from the 18 ability of, you know, you talked about the 18 Lower Churchill Muskrat Falls Project as a 19 average income, well there are a lot of 19 whole, and if you reduce our delivery to the 20 people out there with less than that. They 20 island at, you know, 10 or 12 or 14, 15, 20 21 are a concern. 21 cents, or in this case the 20 cents, we are 22 BROWNE, O.C.: 22 not going to sell the excess power on the 23 23 market for that price, so there would be an Q. Well it's average, right. 24 MR. HAYNES: 24 incremental cost. So we still have a fixed

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So we need to do whatever we can to mitigate

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A.

cost more or less that we have to recover.

April 23, 2018 NL Hydro 2017 GRA Page 137 Page 139 1 The less energy we sell to a consumer that 1 MS. GLYNN: pays our prevailing rates at the time, 2 2 Q. We note that on the record. BROWNE, Q.C.: 3 versus what's going to be on the export 3 4 4 market, I would think would rationalize that Q. Okay, thank you. But I'd like to move to 5 5 answer, but again, Mr. Fagan would actually Labrador, and I know we're discussing 6 be the mechanic behind the numbers, if you 6 Labrador issues later in this hearing, but I 7 7 would be remiss not to deal with Labrador at will 8 8 BROWNE, Q.C.: all. Can we go to IC-NLH-122, page 3 of 26? 9 9 Because some prognosticators have stated and Okay, we have a map here to guide us and Mr. Q. 10 10 written that electricity prices are not Haynes, you will be familiar with this, no expected to go much beyond two cents a doubt. 11 11 12 kilowatt and we're into a situation here 12 MR. HAYNES: 13 where more discoveries are being made all of 13 A. Yes 14 the time in terms of battery and wind power 14 BROWNE, O.C.: 15 and the combination of the two. So the 15 Q. In terms of the map itself, let's just go to 16 likelihood of selling a lot of electricity, 16 the components of that for a minute. The 17 beyond two cents a kilowatt, isn't great. 17 Labrador Island Transmission Link, the LIL, where does that begin and where does it end, Do you have any thoughts on any of that? 18 18 19 MR. HAYNES: 19 Mr. Haynes? 20 20 I did look at a while ago what the MR. HAYNES: A. 21 projections are for next year, on the New 21 Α The LIL itself starts in Muskrat Falls and 22 England market it was in the four, five cent 22 it ends at Soldiers Pond for the Labrador 23 range and that's the energy only part, that 23 Island Link itself. 24 24 doesn't include, you know, delivery, BROWNE, Q.C.: 25 25 transmission cost, et cetera, et cetera. Q. Okay, the Labrador Island Link, and it Page 140 Page 138 BROWNE, Q.C.: 1 includes the underground tunnel, the 1 2 2 underground cable? Q. Sure. 3 3 MR. HAYNES: MR. HAYNES: 4 And certainly technology is always a 4 Yes, it does. A. A. 5 5 challenge and the battery technology is BROWNE, Q.C.: 6 moving, it's not cheap and I don't know the 6 The undersea cable, I should say. 0. MR. HAYNES: 7 quantum of numbers but basically it's 7 8 expensive. So there are other factors 8 It would also include the converter stations Α 9 9 at Muskrat Falls and at Soldiers Pond. affecting that, you know, carbon tax and all those things affect it as well, so there's a 10 10 BROWNE, Q.C.: lot of moving variables in that particular 11 Okay, so that's the Labrador Island 11 0. 12 analysis, but I don't think the two cents, 12 Transmission Link. Now, who owns the 13 that's a very low, I haven't heard that 13 Labrador island Transmission Link? number, certainly in the projections, you MR. HAYNES: 14 14 15 know, the four, five cent range on the New 15 There is a—I do not remember all the Α. 16 England market now, for energy only, without 16 companies that were set up for this 17 all the other things that have to get it to 17 particular thing, but basically it is Nalcor 18 18 and I think Emera has a share in that as customer. 19 19 (11:39 a.m.) well. 20 20 BROWNE, O.C.: BROWNE, O.C.: 21 21 I'll undertake to provide the article to When Muskrat Falls was first presented to Q. 22 22 yourself and to participants here. the public, as I recall, Emera would have a

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(UNDERTAKING)

MR. HAYNES:

A.

Thank you.

29 percent interest in the Labrador Island

Transmission Link, does that hold true

today?

7 Ipin 2	23, 2018		NL Hydro 2017 GRA
	Page 141		Page 143
1	MR. HAYNES:	1	Q. It's been exempted.
2	A. I don't think so, but I can't speak to the	2	MR. HAYNES:
3	specific numbers of what their share is.	3	A. Yes.
4	(11:41 a.m.)	4	BROWNE, Q.C.:
5	BROWNE, Q.C.:	5	Q. So this whole area from Muskrat Falls to
6	Q. Can you undertake to provide us the number?		Soldiers Pond is outside the jurisdiction of
1	(UNDERTAKING)	6 7	the Public Utilities Board?
7	,		
8	MR. HAYNES:	8	MR. HAYNES:
9	A. I don't know if that's available to me or	9	A. It's been exempted, that would also include
10	not, to be quite frank with you.	10	the 315kV lines from Churchill Falls to
11	MR. YOUNG:	11	Muskrat Falls. That transmission link from
12	Q. Not sure if it's relevant to the matter	12	Churchill Falls basically to Soldiers Pond
13	either, for Mr. Haynes to provide that	13	at the end of the day is covered under the
14	information of the particular shareholdings	14	order-in-council, from my understanding.
15	or ownership interest in that for the	15	BROWNE, Q.C.:
16	inquiry. In fact, it's probably outside	16	Q. And the company that owns the Labrador
17	because of the exemption order if the Board	17	Island Transmission Link, is that company
18	wants to dig into it, and it may be a matter	18	entitled to a rate of return, do you know?
19	of public record, I'm not sure, in which	19	MR. HAYNES:
20	case we would certainly provide it.	20	A. I would expect so, but I have not delved
21	BROWNE, Q.C.:	21	into the contracts. I would imagine if
22	Q. Anyway, do what you can there. I think it	22	they've invested money, they expect a
23	is relevant for reasons which will become	23	return, but that's as far as I go. I have
24	apparent as our case develops.	24	not gotten into the weeds of those
25	MS. GLYNN:	25	contracts.
25			
1	Page 142	1	Page 144
	Q. So the undertaking is accepted?	1	BROWNE, Q.C.:
2		_	, ,
1 1	MR. YOUNG:	2	Q. And are you familiar with a term of the
3	Q. The undertaking is accepted as long as I	3	Q. And are you familiar with a term of the contract which states the Labrador Island
4	Q. The undertaking is accepted as long as I don't have to get that from a confidential	3 4	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use
5	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're	3 4 5	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the
4 5 6	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're outside the realm of today's hearing. But	3 4 5 6	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the jurisdiction of the Board?
4 5 6 7	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're outside the realm of today's hearing. But if it's a public matter that we can get	3 4 5 6 7	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the jurisdiction of the Board? MR. HAYNES:
4 5 6 7 8	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're outside the realm of today's hearing. But if it's a public matter that we can get fairly quickly, we certainly will provide	3 4 5 6 7 8	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the jurisdiction of the Board? MR. HAYNES: A. Yes, I read that in what you've provided,
4 5 6 7 8 9	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're outside the realm of today's hearing. But if it's a public matter that we can get fairly quickly, we certainly will provide it.	3 4 5 6 7 8 9	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the jurisdiction of the Board? MR. HAYNES: A. Yes, I read that in what you've provided, but I also understand it's exempted.
4 5 6 7 8 9 10	Q. The undertaking is accepted as long as I don't have to get that from a confidential source, because in that case, I think we're outside the realm of today's hearing. But if it's a public matter that we can get fairly quickly, we certainly will provide it. MS. GLYNN:	3 4 5 6 7 8 9 10	Q. And are you familiar with a term of the contract which states the Labrador Island Transmission Link, that Nalcor would use best efforts to bring the link under the jurisdiction of the Board? MR. HAYNES: A. Yes, I read that in what you've provided, but I also understand it's exempted. BROWNE, Q.C.:
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April 23, 2018 NL Hydro 2017 GRA Page 145 Page 147 1 when you say 700, does that include or 1 the Muskrat Falls' plant. To optimize, we 2 2 exclude transmission loss? basically say right now there's about 4900 3 MR. HAYNES: 3 gigawatt hours available at the Muskrat 4 That would be some impacts of, you know, the 4 Falls plant which we will bring to the A. 5 island and, you know, use what we need and winter operating reservoir level and 5 6 transmission losses, like what's important the rest will go on, or go west or south. 6 7 7 is what's deliverable to Soldiers Pond. From the point of view of the capacity, I 8 8 BROWNE, Q.C.: don't think we will be in a position 9 9 anywhere that we cannot serve and replace Q. So your best estimate, including 10 transmission loss of what is deliverable to 10 the 465 megawatts that we've taken out to Soldiers Pond would be what then? 11 11 Holyrood, so—but the actual, the legal 12 MR. HAYNES: 12 situation of those agreements right now, any 13 I do not recall the number, but that number 13 court challenges, I'm not aware of where A. 14 is available, and I can undertake to that 14 they stand at the moment. 15 that specific number. 15 BROWNE, Q.C.: 16 (11:45 a.m)16 If for argument sake or hypothetically you Q. 17 BROWNE, Q.C.: 17 couldn't access the water in the reservoir, 18 Q. Can you undertake to get it for us? 18 what would that mean to the project? 19 MR. HAYNES: 19 MR. HAYNES: 20 20 A. Yes, certainly. I don't think it's conceivable that we would Α. MS. GLYNN: 21 21 not be able to access the water in the 22 Noted on the record. 22 Q. project. What may happen is that the ability 23 BROWNE, O.C.: 23 to sell some export sales would be more of 24 In terms of Muskrat Falls itself, we've sort 24 an energy component than a megawatt Q. 25 of lost sight of the Water Management 25 component, but you know, you obviously Page 148 Page 146 Agreement and the issues surrounding the 1 1 generate megawatts and kilowatt hours or 2 2 Water Management Agreement, and I think the megawatt hours at the same time. In the 3 last time I looked, that was tied up in some 3 wintertime, Hydro Quebec has been, 4 court in Quebec. Has there been an 4 typically, upon fairly high load to 5 agreement between Hydro Quebec and Nalcor so 5 Churchill Falls, the water has been 6 the water management issue is no longer in 6 discharged. I wouldn't anticipate any 7 play, or is it still in play, can you tell 7 issues meeting our customer requirements 8 8 us that? because of that. You may not optimize the— 9 9 MR. HAYNES: Nalcor may not be able to optimize the total 10 I can't speak to that. There is a Water 10 value of the Muskrat Falls, Churchill Falls A. Management Agreement that's been, you know, 11 11 reservoirs, but I don't think it's going to between Muskrat Falls and Churchill Falls, 12 12 have any impact, significant impact on 13 but the status of court challenges, I'm not 13 Hydro. BROWNE, Q.C.: 14 aware of the current standing. 14 15 BROWNE, Q.C.: 15 So you're saying they don't need the Water Q. 16 Q. So with all this on the go, you don't know 16 Management Agreement? 17 with certainty if that is or is not still an 17 MR. HAYNES: 18 issue? 18 I think the Water Management Agreement 19 19 MR. HAYNES: allows—the Water Management Agreement will 20 A. One of the aspects of the Water Management 20 allow Muskrat Falls, as a whole, to optimize 21 Agreement was to optimize that particular 21 the production and I think from a social 22 river, you know, between the Churchill plant 22 point of view it would be, the intent is to 23 and the Muskrat Falls plant. What I can 23 optimize the total water in that river to

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tell you is that any water that is stored in

Churchill Falls' reservoir will pass through

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maximize energy production and the Water

Management Agreement is critical to make

April 23, 2018 NL Hydro 2017 GRA Page 149 Page 151 1 that happen because there will be, you know, 1 right now is just not there, I would agree 2 2 gallons of water in the Churchill reservoir with that. 3 3 MR. YOUNG: that at times will be actually belonged to 4 4 Muskrat and vice versa. You just want to Q. With respect, Mr. Browne, just to end up 5 5 where he left off there, he said there's no optimize the plants. The same as we do now 6 on a regular basis at Bay D'Espoir, we 6 jurisdiction, but this Board has established 7 7 optimize the plants on that common river the Water Management Agreement under the 8 system between Bay D'Espoir, Granite Canal 8 Electrical Power Control Act, so there are 9 9 and Upper Salmon. We look at trying to obviously exemptions with respect to the 10 manage that river to get the most kilowatt 10 Board's jurisdiction over some aspects of 11 hours that we can out of that particular 11 that project; everyone understands that. 12 facility, the same thing with—the Water 12 But with respect to the Water Management 13 Management Agreement is intended along the Agreement, the Board has established it and 13 14 same lines in Labrador which is a bit 14 I'm not sure if I understand what the 15 different because they're two different 15 undertaking is because the premise of the 16 entities. In Hydro's case, you know, we own 16 question appeared to be, and I'll ask Mr. 17 those assets from the Bay D'Espoir watershed 17 Browne to correct me if I'm wrong here, that 18 and we optimize them all the time. That's a 18 there is some speculation about some 19 daily occurrence, they optimize overall 19 potential court challenges and I don't think 20 production from the reservoirs. 20 we have anything that we can address in an 21 (11:50 a.m.) 21 undertaking to address that question. 22 BROWNE, Q.C.: 22 (UNDERTAKING) 23 23 BROWNE, O.C.: Can you undertake to do your best efforts so Q. 24 24 that the Board, as a regulator, can be I guess you can undertake to give the Board Q. 25 updated on that situation with the Water 25 an update. I agree with you, the Water Page 150 Page 152 Management Agreement because it certainly 1 1 Management Agreement is really no agreement does have implications to what is 2 2 at all because they couldn't get signatures 3 transpiring here? 3 to it, so it is actually a Board order, it's 4 4 (UNDERTAKING) an order of this Board. It comes without 5 CHAIR: 5 signatures, CF(L)Co could not sign on to it; 6 6 Mr. Browne, does it have implications for hence we are in the court over it all, so, Q. 7 the application that is before us? 7 but it's critical, I think, to the project, 8 8 BROWNE, Q.C.: as some prognosticators would say it's 9 9 Q. I think it does. They're telling us they're extremely critical to the project. I think 10 going to get a load of recall power from 10 where we're into this situation, I think Churchill and it has implications for it's an opportunity to update the Board as 11 11 12 Labrador and so on. I think it is relevant. 12 to where it is. If the Board doesn't 13 but if the Commissioner thinks it's not 13 consider it relevant or if Hydro doesn't 14 relevant, if the Water Management Agreement 14 consider it relevant or important in 15 is not relevant, that's fine, but I think it 15 reference to this, well so be it. 16 can be. I think these are early days, 16 MR. YOUNG: 17 Commissioner. 17 Well Madam Chair, if the Board's decision 0. 18 CHAIR: had been challenged or the subject of 18 19 Early days, but I just wanted you to explain 19 litigation, I think it would be relevant, Q. 20 the relevance. 20 but there is no such litigation of the sort BROWNE, Q.C.: 21 21 Mr. Browne is referring to. The order of 22 But I agree that your jurisdiction in terms 22 the Board hasn't been appealed and to my Q. 23 of that Muskrat Falls Labrador Island 23 knowledge hasn't been challenged in any 24 Transmission Link, which comes from Muskrat 24 direct way at all in any litigation. I'm 25 25 not sure what he's referring to. It's not Falls to the Province, your jurisdiction

April 23, 2018 NL Hydro 2017 GRA Page 153 Page 155 that we're trying to be obtuse here, I just 1 honest, I would agree with Mr. Brown if that 1 2 2 don't know what the undertaking, what we can was squarely out there and there was 3 3 something ongoing that was contentious, that do to satisfy the undertaking. 4 4 BROWNE, Q.C.: would be information I'm sure the Board 5 5 would want to know about. I'm just wondering if it's still an issue 0. out there, or if it is tied up in the Quebec 6 6 CHAIR: 7 7 courts. Q. Absolutely. 8 8 MR. YOUNG: MR. YOUNG: 9 9 Because it addresses the Board's order under Q. I don't think the Quebec courts have any Q. 10 jurisdiction over it with respect to that, 10 a different piece of legislation, but and to my knowledge we've never been joined nonetheless, I will confirm one way or the 11 11 12 12 in any litigation with respect to the Water other, absolutely. CHAIR: 13 Management Agreement, so – 13 14 BROWNE, Q.C.: 14 Q. And if it is, the nature of and the status? 15 Q. So you're saying it's not into the Quebec 15 MR. YOUNG: 16 court at all, is that it? 16 Q. Yes, absolutely, and just, you know, to 17 MR. YOUNG: 17 finish off on that, it has been raised in 18 0. There has been things in the Quebec courts, 18 certain places in the media that there were 19 but not the Water Management Agreement, and 19 things going on in some litigation that in 20 I'm, you know, I should hasten that I'm not 20 some way could be affecting this and I think 21 counsel at the present time for Nalcor with 21 some of those media reports, they may have 22 22 been inaccurate, but with respect to the respect to that, but I'm not privy to any 23 information with respect to that, I think I 23 Water Management Agreement itself, it's not 24 would have heard if the Water Management 24 been challenged and I will confirm that. 25 Agreement itself, which was established by 25 CHAIR: Page 156 Page 154 Thank you, Mr. Young. Is that satisfactory, 1 this Board, if it had been challenged. 1 Q. BROWNE, Q.C.: 2 2 Mr. Browne? 3 3 So you're providing the undertaking, or BROWNE, Q.C.: Q. 4 aren't you? 4 Yes, that's fine, thank you, we all look Q. 5 5 CHAIR: forward to the answer. In terms of Labrador 6 I'm with Mr. Young on this, I'm still not 6 itself, Labrador, according to the evidence, Q. 7 quite sure what it is you're looking for. 7 has 300 recall and the Twinco block is 225, 8 8 BROWNE, Q.C.: so Labrador, is that correct, they have 525? 9 9 Q. I'm looking for an update to see if the MR. HAYNES: 10 Water Management Agreement is still an issue 10 Yes, there is an adjustment on the recall to A. or if it is subject to litigation or tied up reflect it back at a 230kV bust, so it's 11 11 12 in Quebec courts directly or indirectly. 12 probably, you know, I'm going to say 332 is 13 (UNDERTAKING) 13 the number I have in my head because we've MR. YOUNG: 14 14 taken advantage of the losses on the 735kV 15 15 line through the Quebec boarder. Q. We can confirm essentially what I have just 16 confirmed, if that's what Mr. Browne is 16 BROWNE, Q.C.: 17 17 looking for. Q. Okay, so it's 332 and 225, so my math says 18 CHAIR: 18 that's 557. Now, of the 557 – 19 Okay, let's start with that. Can you find 19 MR. HAYNES: Q. 20 20 out whether or not the Water Management A. Sorry, it's 307 plus 225. 21 BROWNE, Q.C.: Agreement is the subject of some litigation, 21 22 22 It's 307 plus 225? please? Q. 23 MR. YOUNG: 23 MR. HAYNES: 24 24 Q. Litigation in the Quebec courts. That can A. Yes. 300 megawatt recaps are at, sorry, at 25 25 be addressed and I don't think, to be 90 percent load factor and the 7 megawatts

April 23, 2018 NL Hydro 2017 GRA Page 157 Page 159 1 is to reflect the savings in losses. 1 Q. And in the winter, is it fair to say that 2 2 BROWNE, Q.C.: most of the recall and what is required in 3 3 Q. Okay, so your math tells you what, what is terms of the Twinco block is used in 4 4 Labrador, there's not much available in the 5 5 MR. HAYNES: winter or what is available in the winter? 6 So it's 542—I'm sorry, 532. 6 MR. HAYNES: A. 7 7 BROWNE, O.C.: A. Well in the winter what we have put forward 8 8 532, okay, great, 532. before was about 110 megawatts that's Q. 9 9 MR. HAYNES: available, basically, and that is the peak 10 My apologies, reluctantly doing math. 10 load, that is the peak load of the day. A. BROWNE, Q.C.: There in the evening, during the night, 11 11 12 there's a lot more energy, a lot more 0. At 532 we know IOC, according to the 12 megawatts available, so you have a peak 13 evidence, is using up to 260, is that 13 14 correct? 14 load, there's a lot of energy that can be 15 MR. HAYNES: 15 brought down to the island that we can manage with the resources that we have to do 16 They have used that high. 16 A. 17 BROWNE, Q.C.: 17 that. 18 Q. So that's 260. We know the Interconnected 18 BROWNE, Q.C.: 19 system, the townships in Labrador that are 19 And it's your plan to bring that 110 down to Q. 20 the island in the winter? part of the Interconnected system, they use 20 21 how much, Mr. -21 MR. HAYNES: 22 MR. HAYNES: 22 A. To bring the 110 or whatever surplus 23 23 Labrador needs, we'll bring to the island in I think the Goose Bay load is in the order A. 24 of 77 to 80 megawatts and the Labrador West, 24 the winter and in the off-peak day, during 25 I do not recall off the top of my head what 25 the day, it will be even higher again Page 158 Page 160 1 1 the load is there right now, but I'm saying because it's still energy that we can 2 2 in the order of about 70 to 75 megawatts, I displace fuel with. 3 3 think, but I don't know the forecast off the BROWNE, Q.C.: 4 4 top of my head. And you mentioned as well that you could Q. 5 BROWNE, Q.C.: 5 have access, if necessary, to Hydro Quebec 6 6 I think that's there in the evidence, we can power coming through Labrador, did you Q. 7 refer to that after. 7 mention that? 8 8 MR HAYNES: MR HAYNES: 9 9 A. It probably is. A. I think we have said that we would be 10 BROWNE, Q.C.: 10 looking for any other power that we can get, 11 In terms of Labrador itself, there is some whether it's from Hydro Quebec or others 0. 11 12 discussion that the mine is to reopen in 12 that is available to load that line up to Wabush and they traditionally have used 45 13 its ability, which is roughly 225 megawatts, 13 as long as we can still serve and meet our 14 megawatts. 14 15 15 MR. HAYNES: reliability targets on the island. There 16 A. 45 to 50 megawatts. 16 may be times that we can't load it up anyway 17 BROWNE, O.C.: 17 because other operating scenarios on the 18 system, but our intention is to, what we've Q. 45 to 50 megawatts. And the expansion that 18 19 IOC is undertaking there, are there any 19 put forward in our proposal is what we know, 20 we know we have access to the recapture. figures on that, what they will require? 20 21 MR. HAYNES: we've identified how much energy that we 21 22 I'm not, I do not recall the numbers right 22 think we can get down over that line during A. 23 now. I think it's a fairly modest increase, 23 those periods and there is still recapture

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I don't think they're upping it very high.

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BROWNE, Q.C.:

beyond that that we can't get there to the

island because of system configuration or

April 23, 2018 NL Hydro 2017 GRA Page 161 Page 163 1 whatever, so we're pretty comfortable that 1 MR. HAYNES: 2 2 we can get down in the short term in the A. No, it's more than two cents, but it's not 3 3 next couple of years a fair bit of energy to seven cents. When you add in the other 4 4 actually displace fuel at Holyrood. And, affected things to provide service, I don't 5 5 you know, depending on the price of oil, recall a specific number, but probably in 6 that would be the avoided cost, if you will. 6 the order of four cents or less. 7 7 BROWNE, Q.C.: (12:00 a.m.) 8 8 BROWNE, Q.C.: What is the position of Hydro on data Q. 9 9 And, of course, the whole Muskrat Falls centres, are you—there's evidence there of Q. 10 concept was to displace fuel at Holyrood 10 expansion of data centres into Labrador. We from an island perspective? saw there's only 110 to bring down to the 11 11 12 12 island in the winter. Data centres MR. HAYNES: 13 Yes, it was, yeah. 13 presumably need firm power year-round. A. BROWNE, Q.C.: 14 14 MR. HAYNES: 15 Q. Is any Muskrat Falls power to be used in 15 A. The data centres that we've had so far, the Labrador? 16 request and there's a couple in service, 16 17 MR. HAYNES: 17 basically right now they are low megawatt numbers, but we have had requests for higher 18 A. The premise for the agreement says that 18 Muskrat Falls was built to displace, you 19 19 ones. The 110, I just want to go back to the 110, the 110 megawatts is over peak. In 20 know, to offset the island purchase and I 20 21 think the contracts and so on basically is 21 the off peak period there's a lot more than 22 more for, you know, use on the island, but 22 110; in the middle of the night, there might 23 technically there is not a reason why it 23 be 150 or 180 and, you know, there had been 24 24 can't be used in Labrador, but it would be some discussion with some of the proponents, 25 obviously a huge price increase over the .2 25 can they manage their load, can they Page 162 Page 164 cent energy that they're currently enjoying. 1 1 actually curtail load during the peak period 2 BROWNE, Q.C.: 2 and so that's an ongoing discussion. The 3 And also is there an economic caveat there 3 whole data centre question is an industry Q. issue right now, the fact that they're 4 because it's the Island Interconnected 4 5 customers who are paying for Muskrat Falls? 5 looking for, you know, a huge amount of 6 MR. HAYNES: 6 power across the continent from that 7 Yes, that's under the order. 7 perspective and it's a challenge. We're A. 8 8 BROWNE, Q.C.: exploring what our options are, we've 9 9 Q. Within Labrador itself, there is evidence reviewed legislation. We have not taken the position that we can say no to a data centre 10 that you are looking to build more 10 structures because of the growing demand in question any more than we can for hooking up 11 11 12 Labrador for data centres. What would data another store, a corner store, whatever. 12 13 13 Depending on the size, there are studies centres be paying for power up in Labrador? MR. HAYNES: 14 required, if you know, for a one megawatt in 14 15 15 a residential area on a side street or in an The data centres are covered under the, the Α. 16 ones that we've had to date, are covered 16 old, not an old abandoned warehouse, but a 17 17 under a general service rate and I don't building there, we would have to go look at 18 remember the rate off the top of my head, what it would cost us to upgrade the 18 19 but Mr. Fagan could actually, you know, 19 distribution system to do it. It may fall provide those numbers, but it is a part of 20 back, depending on the total number of 20 the rate sheet, whatever the prevailing rate 21 21 megawatts required to fall back on the 22 is as a general service customer. 22 transmission system, and eventually it may 23 BROWNE, Q.C.: 23 fall back into the supply system, you know, 24 24 where do we get the next megawatt hour from. Q. So it's two cents, that's the general

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service rate.

So, you know, if there's a capital

April 23, 2018 NL Hydro 2017 GRA Page 165 Page 167 1 investment required by Hydro, you know, if 1 Maine, New Brunswick, Nova Scotia and it 2 2 it's a larger one, even if it's a would have to pay a transmission tariff 3 3 contribution in aid of construction, we right through. If you wanted 100 megawatt 4 would have to come back to the Public 4 hours, you would have to buy more than that 5 5 Utilities Board to have that approved. If because you'd have to account for losses 6 it's one that would actually drive 6 that are designated by each particular 7 7 transmission structures or, you know, or a transmission organization and they vary all 8 8 over the place, but probably 10 or 15 larger investment somewhere else in the 9 9 system and we had to buy transformers and percent losses as well. You have the 10 things like that, it would likely trigger 10 exchange rate to look after, so even though 11 another capital application to the Public 11 we mentioned before, if there was four or 12 Utilities Board for approval to actually 12 five cents in New England, that's not what 13 spend that, but we haven't, we are concerned 13 our delivery price would be, it would be 14 about what this does to recapture energy, 14 considerably higher. 15 but we have not found a way to say no in 15 BROWNE, Q.C.: 16 16 that sense, and we look at it basically, you Yes, I appreciate it. I'm going to, my 0. 17 know, a customer comes, we put them in a 17 colleague, Stephen Fitzgerald has some 18 queue and we look at the load requirements 18 questions in reference to these matters, so 19 and we go back and this is what it takes, 19 I'll just give the mic over to him. 20 20 MR. FITZGERALD: what it requires to do it. It may generate 21 capital applications to the Board, depending 21 Q. Thank you, Mr. Haynes. I just have a couple 22 22 of issues. If we can go to your testimony on the size, right. But it is a concern, 23 23 of April 17th, page 4, okay, down at line 14, but I would add it's a concern for a whole 24 24 host of utilities right across the country. I believe it is, and you were asked by Mr. 25 There are a lot of requests for data 25 O'Brien, "I wonder from an engineering Page 168 Page 166 1 centres. 1 perspective once the LIL is energized, would 2 2 BROWNE, Q.C.: you consider the project near 3 3 And we will be discussing Labrador issues commissioning?" And what was your answer to Q. 4 4 later on and I don't want to steal IOC's that? 5 5 thunder or indeed, the Interconnected MR. HAYNES: 6 6 Actually, I'm just looking for – solicitors who are acting for the A. MR. FITZGERALD: 7 7 Interconnected systems and to raise 8 8 particular concerns on that issue. In terms Q. Yeah, I know, it's hard to navigate through 9 9 of when we look at this map here, it's an the -10 10 interesting map, if you were to buy MR. HAYNES: electricity, if Nalcor Energy was to buy 11 11 A. "I wonder from an engineering perspective 12 electricity from the New England once LIL is energized, would you consider 12 13 marketplace, is it fair to say they will the project near commissioning?" And I said 13 have to pay wheeling costs through New 14 14 yes, basically the Labrador Island Project 15 Brunswick and Nova Scotia and there would be 15 or the whole Muskrat Falls thing really 16 cost components? 16 comprises three major projects. There's the 17 MR. HAYNES: 17 Labrador Transmission Assets, then there's 18 the Labrador Island Link and there's a I don't think they call it wheeling costs 18 19 19 anymore, but the effect is the same. If Muskrat Falls Generating Station, so there 20 20 Nalcor were to buy power from New England. are three discreet components, they were 21 21 they would have to get it through all the intended to come together the same time, but 22 different transmission system operators to 22 that has obviously drifted off its schedule 23 actually get it to, you know, in our case to 23 and, you know, complications of construction 24 Bottom Brook, so if it was brought in, you 24 and whatever, but you know, that particular 25 know, New England would have to come through 25 Labrador Island Link will be commissioned

April 23, 2018 NL Hydro 2017 GRA Page 169 Page 171 1 for mono-pole operation mid year and 1 is in service, the AC part we already avail 2 2 eventually walk its way to full bi-pole of, but the major part of the Labrador 3 3 operation and it will be used and useful to Island Link basically is the line and the 4 Hydro to displace fuel. So I consider it to 4 converter stations, that is nearing 5 5 be, you know, it is near commissioning, the completion, but once we start to get 6 line itself. 6 meaningful supply of power over that line, 7 7 from my perspective it is essentially, you MR FITZGERALD: 8 8 The line itself, but not the project? know, near commissioning, it's reasonable to Q. 9 9 MR. HAYNES: pay those costs in my opinion. 10 10 A. Not the Muskrat Falls Plant, obviously but MR. FITZGERALD: Yes, but again I guess the issue is what is LIL and the Labrador Transmission Assets, 11 11 12 12 near commissioning. I understand that, the vou know, are no different that TO267 from 13 that perspective, it's in service, it's 13 energize is done or the line is going to be 14 providing value to the customers. 14 energized in July, but we understand that 15 MR. FITZGERALD: 15 the project itself is not going to be 16 finished until 2021, I think. Right, I guess though generally, we won't go 16 Q. 17 there right now, but we have been talking 17 MR. HAYNES: about OC-2013-343 and we can go to it, but I 18 18 Α The overall project, including the Muskrat 19 think generally we understand that that 19 Falls Plant won't be until 2021 when it's 20 order-in-council prohibits the recovery of 20 finalized. 21 any costs related to the project until the 21 MR. FITZGERALD: 22 project is commissioned or near 22 But it's your position, correct me if I'm Q. 23 commissioning, would you agree? 23 wrong, that the fact that the LIL is nearing 24 24 commissioning, that entitles Hydro to MR. HAYNES: 25 A. That's what it says, but you know, near 25 recover costs at this point? Page 170 Page 172 commissioning is vague and there are three 1 1 MR. HAYNES: specific projects within that particular 2 2 Α We have proposed to put those costs actually 3 overall project, the LTA, the LIL and the 3 in a deferral account to net that off Muskrat Falls Plant. 4 4 against the savings that we have against 5 5 MR. FITZGERALD: Holyrood because the asset is used and 6 6 Okay, so you believe that even though I useful, the ratepayer will see benefit. Q. 7 think you said earlier that the Muskrat 7 That's my perspective. 8 8 MR. FITZGERALD: Falls project is not nearing commissioning, 9 9 are you suggesting that there's an argument 0. Right. I understand. So, just – not to 10 10 belabour the point, but it isn't your that it could be near commissioning? evidence that the commissioning of the LIL 11 MR. HAYNES: 11 12 12 A. In a process of commissioning, the Labrador means that the Project itself is nearing 13 13 Transmission Assets, if I can speak to that, commissioning? that's a fairly, I'm going to say, I won't 14 MR. HAYNES: 14 15 say routine because it's fairly large, but 15 Not the Muskrat Falls Plant. A. 16 it's fairly normal utility practice, 16 MR. FITZGERALD: 17 basically they put in a terminal station at 17 Okay. Maybe we should -0. 18 Churchill Falls, they put in a terminal 18 MR. HAYNES: 19 19 stations at Muskrat Falls, they've installed I look at those as three specific pieces of A. 20 20 work. They are three – you know, but I lines, you know, AC breakers, et cetera and 21 that AC line, you know would be put in 21 mean, the transmission – LIL and LTA kind of 22 22 service and used and useful. The Labrador come together naturally because it's just 23 23 the breaking point happens in Muskrat Falls Transmission Assets, the line itself is 24 24 Plant, but the generation components are erected, it's not delivering service yet. 25 25 definitely separate, in my opinion, from the The AC portion in the Soldiers Pond Station

April 23, 2018 NL Hydro 2017 GRA Page 173 Page 175 1 water side to the -1 well, but the – you know, so I take it your 2 2 MR. FITZGERALD: evidence is that because the LIL is used and 3 3 0. I understand. Can we go to OC-2013-334? useful, Hydro is entitled to recover those 4 4 I'm sorry, I think that's – it's CA-NLH-35 costs now? 5 5 is where we'd find that. Just scroll down MR. HAYNES: 6 through the foot of that document, little 6 We propose to put those costs in a deferral A. 7 7 account to net them against the savings that further. Okay, just back one, please. 8 8 Okay. So, and I'm sure you're familiar with we would build up based on avoiding oil at 9 9 this and reading there at subparagraph 3, it Holyrood. So, it would go into the deferral 10 10 says "notwithstanding Sections 1 and 2, no account and that would be - you know, it amounts paid by Newfoundland and Labrador would be recovered later on in that sense. 11 11 12 Hydro described in those sections shall be 12 MR. FITZGERALD: included as costs" et cetera, et cetera, and 13 13 So, in your – in Hydro's current Q. 14 if we could scroll down to the foot of the 14 application, there's – I think it's an 15 document now, and B. "In any event, in 15 amount of 52 million, I believe, or it's – sorry, 27 million is being included in the 16 respect of each of Muskrat Falls, the LTA or 16 17 the LIL, until such time as the Project is 17 application for 2018 cost of the operational 18 commissioned or nearing commissioning". So, 18 maintenance costs for the LIL. 19 I take that to mean that no costs are 19 MR. HAYNES:

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MR. HAYNES: A. That's your interpretation. I just feel

Would you agree?

recovered by Hydro until the Project, not

individual components thereof, but the

Project itself is nearing commissioning.

Α.

Α.

Yes, yeah. MR. FITZGERALD:

Q. And it's 52 million next year. I'm wondering what the logic is of isolating just the O&M. Why is Hydro just taking that portion? If the Project is nearing

commissioning, why wouldn't you try to

Page 176

Page 174 1 2 3

recover all of the costs at this point? MR. HAYNES:

personally, and I'm not going to get into a legal argument about words because I'm not competent to that, but the LIL and the LTA are used and useful for us to deliver power and from my perspective, I think it's rational and reasonable that we actually, you know, pay for the operating costs of those assets and then when Muskrat Falls is finished and completed, they will roll into the longer term cost recovery mechanics. I mean, I want to take advantage of those assets to save the customer money, which we propose to put into the deferral account to aid in rate mitigation and smoothing. MR. FITZGERALD: No, I understand, I'm just wondering if

There's a – I do not understand all the financial, you know, implication of how that's done, but from the point of view of the cost of operating and maintaining, which would require us to do, you know, to - if they don't do that, then we can't get delivery of energy, take advantage of Muskrat – of the, I'm sorry, the recapture energy. So, I mean, that's a cost that they will legitimately incur. I suppose one could argue that, you know, the Order says that all costs associated with Muskrat Falls will be recovered somewhere. So, I mean, maybe this is a little bit early. There's still a cost to park it. So, it's – you know, from my perspective, it's not unreasonable for us to pay the O&M costs that are required to actually facilitate

delivery of recapture energy to the Island.

MR. HAYNES:

Q.

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A. I'm really not – I really can't speak to the legal interpretation. I'm sure there's an argument both ways, but that's -

that there may be.

there's a legal impediment and it appears

MR. FITZGERALD:

Q. Well, we'd be interested in hearing that as MR. FITZGERALD:

(12:15 p.m.)

April 23, 2018 NL Hydro 2017 GRA Page 177 Page 179 1 Q. Yeah, no, I understand your evidence. You 1 answered this and forgive me if you have, 2 2 would believe it's reasonable. I think most but who in fact will own that operation? 3 3 people would agree it's reasonable, but it MR. HAYNES: 4 4 doesn't appear to be borne out by what NLSO is a department of Newfoundland and A. 5 5 you're permitted to do, and I know you've Labrador Hydro. It's under the Transmission 6 already answered that. That's the legal 6 Distribution, NLSO section, headed up by Mr. 7 7 LeBlanc. So, basically, I'll just go back question. 8 8 and explain a little bit. People may be MR. HAYNES: 9 9 familiar with the term before of the Energy Yeah. Α. 10 MR. FITZGERALD: 10 Control Centre. Well, the NLSO is the Energy Control Centre. It's got a few extra 11 Q. Okay, all right. At page – moving on from 11 12 12 that now, if we can go to page 196 of your bodies to facilitate the reliability and the April 17th testimony, transcript. Yeah, and 13 13 DC line, but basically it is pretty well I believe generally here, you may recall, 14 14 what was there before, but it's been 15 Mr. O'Brien was bringing you through costs 15 structured out to actually facilitate, you and one of the costs mentioned here is the know, that we have open access transmission 16 16 17 cost of TL267. You indicated, you know, 17 so that we can, you know, take part of the 18 which needs to be maintained and I got the 18 benefits or people can use our system if 19 impression from your answer, rightly or 19 they so see fit and see a profit obviously. 20 wrongly, that the O&M costs for this new 20 So, it's not a major change in the sense of, 21 asset were significant. 21 you know, creating a whole new division or 22 MR. HAYNES: 22 department. Basically it's kind of an evolution of the Energy Control Centre to be 23 23 Well, it's a – you know, I think last year A. 24 what other control centres in North America we spent – I mean, the whole project is 24 25 roughly 300 million dollars. There's 25 have with respect to open access Page 178 Page 180 obviously interest and depreciation expense, 1 1 transmission. So, and we have added 2 2 but from the point of view of the O&M, there approximately six – I think six people to 3 are incremental costs of actually, you know, 3 that there to look after the additional 4 maintaining that asset. In the short term, 4 scope of work with respect to the Labrador 5 there'd be very little from a replacement 5 system and the Labrador Island Link and so 6 point of view, but there would be, you know, 6 on, and there's also a person there with 7 surveillance and inspections and so on, 7 respect to reliability and commercial 8 8 stuff like that. But we haven't increased things. 9 9 our budget from the point of view of Human MR. FITZGERALD: 10 10 Resources to facilitate that. We'll do that And they will be Hydro employees? Q. with the crews that we have. MR. HAYNES: 11 11 12 12 MR. FITZGERALD: A. They are all Hydro employees, yes. MR. FITZGERALD: 13 13 0. So, are those costs included in this 14 application? 14 Q. Is that – is there any contemplated change 15 15 MR. HAYNES: there? 16 A. Yes, the costs that are there to date I 16 MR. HAYNES: 17 think are included, but again, if you're 17 A. In the sense of moving it to different -18 going to down there, I would prefer to have 18 MR. FITZGERALD: 19 19 that dialogue with Ms. Hutchens on the Q. Yes. 20 20 MR. HAYNES: financial side. But there is a recovery of 21 cost in there in our application for TL267, 21 Not that I'm aware of, no. I think it's A. 22 the money that we've spent to date. 22 quite appropriate where it is. I think, you 23 MR. FITZGERALD: 23 know, it works and basically, they are 24 24 performing the same operations they always 0. Okay. Just moving quickly then to another 25 25 had for the Integrated System and even issue, the NLSO. And you may have already

April 23, 2018 NL Hydro 2017 GRA Page 181 Page 183 though it may not be part of the bulk 1 Customer Group, the three most significant 1 2 2 system, which is basically 230kV and above, Industrial Customers on the island of Hydro. 3 3 they still manage the 138kV lines, you know, First of all, I want to start with Hydro's 4 the Northern Peninsula and so on. They 4 communication strategy, if I can call it 5 5 still do all the things they did before, but that, with its Industrial Customers and I 6 they've tacked on the open access component 6 don't think there's any need to go to it, 7 7 of it, and you know, and the transmission but in Order P.U.49(2016) out of the last 8 8 costs are tariff is basically based on the GRA, Hydro was ordered to take certain steps 9 bulk electrical system, which is basically 9 to implement what Hydro was referring to as 10 230kV and above. 10 an account management framework. A report was filed January 13th, 2017 further to that. 11 MR. FITZGERALD: 11 12 Okay. Okay, thank you, Mr. Haynes. Thank 12 And what I do want to turn to is the Q. 13 13 evidence of Hydro at page 2.5, Chapter 2. BROWNE, Q.C.: 14 14 And you'll see there, there's – and I'll 15 Q. Thank you too, Mr. Haynes. I recognize you 15 give you an opportunity perhaps, Mr. Haynes, came out of retirement and you didn't expect just to quickly scan through it. There's a 16 16 17 to end up here, I'm sure. Thank you very paragraph talking about the account 17 18 much and thank you for your efforts. 18 management framework. Are you familiar 19 MR. HAYNES: 19 yourself, as President of Hydro, with the 20 20 A. Probably inevitable. Thank you. account management framework? 21 CHAIR: 21 MR. HAYNES: 22 22 Q. Thank you, Consumer Advocate. Industrial A. Yes, we had established a position in the 23 Customers, are you ready to proceed? 23 Customer Service group called Key Account 24 MR. COXWORTHY: 24 Manager, who basically does a lot of contact 25 We are, Madam Chair. Just a preliminary 25 with all the Industrial Customers and Page 182 Page 184 1 matter. I had filed, as of Friday 1 including Newfoundland Power, I might add, 2 2 electronically and this morning hard copies, and from the point of view of meeting their 3 some documents that I may put to the witness 3 needs. I've had several meetings with the 4 for cross-examination today. I do want to 4 gentleman and I've had a few meetings with 5 5 note that the copies I provided to my some Industrial Customers, some more than 6 6 colleagues had highlighting reproduced in others, not all at this point in time. But 7 the photocopies. I hadn't realized until I 7 from the point of view of the – the premise 8 looked at them that my assistant had 8 was that basically he would look after, in 9 9 photocopied in such a way, I guess, with this case it's a he, he would look after 10 colour photocopying that the highlighting 10 basically any interventions or any, you was still there. So, I apologize for that. know, requests for information from the – 11 11 12 That may be to their benefit or detriment, I 12 not from a regulatory point of view, but any 13 don't know. But I do want to say to them communication with the customers in the 13 14 that the copies I've filed with the Board, 14 sense of, you know, discussing certain 15 once I realized that, I had new copies made 15 things or customer outages or events that 16 that don't have that highlighting there. 16 we've had that may cause customers grief. 17 17 And my understanding is the feedback has So, I just wanted to point that out before 18 been very positive; that he has been doing a we start. 18 19 CHAIR: 19 good job of that there. But, he'll also, 20 20 We can proceed, Mr. Coxworthy. vou know, included in his discussions or MR. JAMES HAYNES, CROSS-EXAMINATION BY MR. PAUL 21 21 bringing that back to Hydro, who in Hydro 22 22 needs to be dealing with certain things, **COXWORTHY** 23 MR. COXWORTHY: 23 whether it's, you know, a Planning 24 24 department or an Engineering department or, 0. Good afternoon, Mr. Haynes. I'm Counsel

Paul Coxworthy for the Island Industrial

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you know, review of a protection outage that

April 23, 2018 NL Hydro 2017 GRA Page 185 Page 187 1 we had or any things like that there. He 1 specifically assigned, the cost of it, to an 2 would coordinate that from an internal Hydro 2 Industrial Customer, does that information 3 3 point of view to go back as kind of the - I make its way to the Manager Key Accounts so 4 4 won't say necessarily the single point of that the Manager Key Accounts can discuss 5 5 contact, but a key contact with respect to that or raise that with the Industrial 6 that. They know who to call if there's an 6 Customer? 7 7 issue. MR HAYNES: 8 8 MR. COXWORTHY: It should. I would expect it does, but if A. 9 9 And what's the name of this individual? it doesn't, it will, because it is a two-way 0. 10 MR. HAYNES: 10 communications obviously. It's not only us to do it. But I mean, in the meantime, I 11 A. Robert Coish is his name actually. 11 12 12 MR. COXWORTHY: would say that I have attended meetings with And can you say how long he's been in that 13 13 a couple of Industrial Customers with Mr. 14 position? 14 Coish talking about things or issues that 15 MR. HAYNES: 15 they may have had and whether they were – He was in that position when I came, so I'm you know, is there another way to do it, and 16 A. 16 17 going to say heading towards a couple of 17 some of it had been specifically assigned. 18 years anyway, but Ms. Dalley could answer 18 Some of the meetings had to do with 19 you specifically. 19 reliability or events that we had that 20 MR. COXWORTHY: 20 caused them grief and so on. So, I have I was going to say Ms. Dalley, I expect, can 21 Q. 21 attended meetings like that. So, it is not 22 provide some more detail around his 22 a one-way street. It certainly is bilateral 23 23 communications. position. 24 MR. COXWORTHY: 24 MR. HAYNES: 25 A. Yes. 25 I will reserve, I think, any further Page 188 Page 186 MR. COXWORTHY: questions I might have down this line with 1 1 2 2 Ms. Dalley. Q. You did say though that he was a place of 3 contact. As I understood it, if an 3 MR. HAYNES: 4 4 Industrial Customer had an issue that the Okay. A. 5 5 Industrial Customer wanted to have answered MR. COXWORTHY: 6 that could go to Mr. Coish and Mr. Coish 6 Thank you. I wanted to move on, and this is Q. 7 then could identify within the organization-7 with reference to the cross-examination 8 8 MR. HAYNES: materials that were filed electronically on 9 9 A. Yes, that's primarily – he does a lot, Friday and hard copy today, to Item 5 which obviously, independently, but basically he 10 10 is the understanding Muskrat Nalcor Energy, would coordinate any internal ask or request February 15, 2018 document, and I would ask 11 11 12 or discussion, assemble a meeting if that that be entered in as – I'm not sure 12 13 required, to how to refer this, how do we 13 what Information number we're up to now – respond to the Industrial Customer's ask. 14 14 and a copy perhaps provided to Mr. Haynes. 15 MR. COXWORTHY: 15 MS. GLYNN: 16 Q. And what I was interested in is in the other 16 Q. And it will be entered as Information No. 6. MR. COXWORTHY: 17 direction. When there's an issue within 17 18 Hydro that's arisen internally that could 18 Q. Thank you. Mr. Haynes, I believe you have a 19 19 copy of Information No. 6? have an impact on an Industrial Customer and 20 20 the Industrial Customer may not know MR. HAYNES: anything about it at that point. Do people 21 21 A. I do, yes. 22 22 within Hydro know to go to Mr. Coish to say MR. COXWORTHY: 23 "look" – to give a specific example, if 23 Q. Are you familiar with this presentation? 24 there's going to be a capital budget project 24 MR. HAYNES: 25 that is going to be proposed to be 25 Yes, I've seen it before.

April	23, 2018		NL Hydro 2017 GRA
	Page 189		Page 191
1	MR. COXWORTHY:	1	was prepared, perhaps the information
2	Q. And earlier in the proceedings, I think	2	predates February 2018, the LIL is shown as
3	there was put to you – and a document has	3	99 percent completed. The LTA, at page 19,
4	been put to you several times now – the	4	99 percent completed. So, the last piece of
5	Attachment 1 to IC-NLH-122, which is an	5	information in both then is the degree of
6	update what's styled as a Muskrat Falls	6	completion with respect to the Muskrat Falls
7	Project Update that was done in June 23rd,	7	Project itself, the – when I say the Muskrat
8	2017 by Nalcor. This document, Information	8	Falls, the hydroelectric plant and dam. And
9	No. 6, is certainly not identical to the	9	if you turn to page 9 of IC-NLH-122,
10	Muskrat Falls Project Update, but there is	10	Attachment 1, it showed that that portion of
11	some similar information, updated of course,	11	the project was 66 percent complete as of
12	provided in the Information No. 6 document,	12	May 2017 and then then, to compare again, in
13	and I just wanted to – and unfortunately, I	13	Information No. 6 at page 6, the equivalent
14	don't think we can do split screen on the	14	figure appears to be, as of the February
15	screens we have here, but I wanted to walk	15	2018 report, 78 percent construction
16	through these two documents and perhaps	16	complete. I wanted to go through that and
17	highlight some of the differences as well as	17	perhaps go back then to the original
18	some of the things that have not changed	18	percentages I showed to you or brought to
19	from one document to the other as we go	19	your attention, Mr. Haynes, and this would
20	through. The February 15th, 2018 document –	20	be at page 2 of Information No. 6, the 89
21	well, perhaps I'll go through it before I	21	percent construction complete. Given the
22	comment on it any further.	22	fact that these three different components
23	So, if we could turn to page 2 of	23	of the project have different percentages of
24	, 1 0	24	1 5
	Information No. 6 and I wanted to compare	25	completion attached to them, would it be
25	that to page 5 of 26 of the IC-NLH-122	23	reasonable to assume that that 89 percent is
,	Page 190	,	Page 192
	attachment. And these are pages, again		an amalgam of those three percentages?
$\frac{1}{2}$	they're not identical, but they both speak	2	(12:30 p.m.)
3	to a percentage of construction completion.	3	MR. HAYNES:
4	Unsurprisingly and encouragingly, the	4	A. That certainly seems to be the case.
5	February document indicates 89 percent of	\int_{0}^{2}	MR. COXWORTHY:
6	construction complete as opposed to 75	6	Q. And so, you would accept that. I'd also
/	percent in June. There's also, I think,	/	like to turn now to – in terms of these
8	some other percentages that feed into this	8	percentages apologize, Madam Chair, I'll
9	89 percent, and perhaps I can take you	9	just be a moment – to Information No. 2, and
10	through those starting with in IC-NLH-122.	10	I believe this was a document, Mr. Haynes,
11	If we could turn to page 7 of 26, and you	11	that's also been put to you in your previous
12	will see – sorry, page 8, I apologize, of	12	testimony. And if we could turn to page 10
13	26. And there are percentages ascribed	13	of the Liberty Report, and Liberty, at page
14	there, Mr. Haynes, you'll see for the	14	10, under Management's Ability to Answer
15	completion of the LTA as of May 2017 and the	ı	Questions, in the second paragraph of the
16	LIL as of May 2017 of 95 percent and 81	16	summary, comments on, I guess what I'll
17	percent.	17	characterize it as, the methodology that
18	MR. HAYNES:	18	they view the people they've spoken to
19	A. Yes.	19	and the way they refer to the people they
20	MR. COXWORTHY:	20	spoke to in the report is that they spoke to
21	Q. I just want to compare those, if you'll bear	21	Hydro/Nalcor leadership management. So, to
22	with me. In Information No. 6, if you would	22	the extent to which they were speaking to
23	turn to page 16 and 19, starting with 16,	23	Nalcor versus Hydro people is not
24	sorry. And you'll see now where as of	24	delineated, but that's how they've said it.
25	February 2018 or perhaps when this document	25	So, in that paragraph, the second
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April 23, 2018 NL Hydro 2017 GRA Page 193 Page 195 paragraph under the summary on page 10, they 1 know, but I certainly accept the fact. 1 2 2 speak to – and this is about midway through MR. COXWORTHY: 3 3 - "supervisors assigned to in-progress Q. Sure. As a matter of good engineering 4 4 activities weighting representing their practice is either way an acceptable way of 5 5 measuring the percentage completion of a views of what portion of such activities has 6 been completed. Thus, for example, if 80 6 project? 7 7 percent of a set of activities remain in MR. HAYNES: 8 8 progress, if they are all 90 percent I think both are depending what the question A. 9 9 complete, then the measure of completeness is. If the measure of project is when 10 is not 20 percent, but actually the sum of 10 you're online delivering power, I think the 20 percent completed plus 90 percent of end game is it. But if you're measuring -11 11 their remaining 80 percent." if you have a plan and you have it all laid 12 12 13 So, as I understand it, Liberty is 13 out and they're appropriately planned out in 14 saying that what the supervisors who are 14 the sense that the – and I'll be a little 15 assigned to monitor the progress of 15 facetious, that you don't have a one-day activities, in terms of what is left to be 16 16 exercise in there as being one component and 17 done, use a formula of, to use their 17 you have another component that takes three 18 example, the 20 percent completed plus they 18 months to get, they're not comparable. So, 19 will add to that a percentage that reflects 19 it needs to be done on that basis, right. 20 20 how much of the outstanding work, what MR. COXWORTHY: 21 percentage of it is completed to arrive at a 21 So, the -0. 22 higher percentage than 20 percent. Would 22 MR. HAYNES: 23 23 you agree that that's what they're A. So, it depends on what you're measuring. 24 commenting on there? 24 MR. COXWORTHY: 25 MR. HAYNES: 25 0. Sure. Page 194 Page 196 1 A. It seems to be. I'm not – I don't have any 1 MR. HAYNES: 2 2 information on how they actually do it and A Whether it's to date or final in-service 3 all their metrics, but there are a host of 3 date. 4 MR. COXWORTHY: 4 metrics to measure a capital project, 5 5 whether it's in our Human Resources expended Q. And your first example then was, you know, 6 or capital expended or miles completed. 6 if you're driving towards a certain date, 7 There are a host of different metrics. I 7 for instance, for first Muskrat Falls' power 8 8 will say that you really need to go down in to be brought on the Island, and then that's 9 9 the detail to understand the metrics of how in the last quarter, I believe, of 2019. 10 10 they're doing that and I do not know that MR. HAYNES: Yes. 11 detail, but I understand what's there, that 11 A. 12 you know, are you measuring to plan or are 12 MR. COXWORTHY: you measuring to total project. But that's 13 13 Q. Let's say that's the date, a date that we're – I think that's what they're saying. If 14 14 driving for. Is the better methodology then 15 you plan to have 80 percent of – or you 15 the one where you say look, the more 16 know, if you have planned to be at 80 16 conservative one, it's to use the example 17 percent of total project and you have 90 17 that's used by Liberty here, it's only 20 percent of all those milestones to get 18 percent complete and we have 80 percent left 18 19 there, to get to that 80 percent, yes, 19 to go? 20 there's another factor beyond for total 20 MR. HAYNES: project completion. So, it depends on what 21 21 Personally, my personal opinion, I would A. they're measuring, you know, schedule to look at the overall project from that 22 22 23 date or the end game when it's actually 23 perspective, but I think, you know, you need

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complete and online. And I'm not – I do not

have the detail of that, but I under – you

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to be clear on what you're saying in the sense that if it is 89 percent of our

April 23, 2018 NL Hydro 2017 GRA Page 197 Page 199 1 current schedule, that's very valid if 1 know, what is it? Because I am concerned 2 that's the schedule. If it's 89 percent of 2 that a one-day effort, you know, and a 3 3 three-week effort are being weighed the same total overall project, it's probably a 4 different number. I think you need to 4 and they're not. If they're all nice pieces 5 qualify percentage with what the basis is. 5 and chunks, it makes it comparable. So, you 6 MR. COXWORTHY: 6 have to look at it in a little bit of 7 7 Q. Would it be fair to say when that 89 percent details sometimes to understand where it is 8 8 figure appears in the Nalcor presentation of MR. COXWORTHY: 9 9 February 2018, you don't know what Q. And to be clear or to understand your methodology was being used for that? 10 10 answer, Mr. Gardiner though is not interfacing with the Nalcor people who are 11 MR. HAYNES: 11 12 12 I don't know, but what I go by is assurances coming up with these percentages? Α. 13 that the project, based on the schedule, is 13 MR. HAYNES: 14 still on schedule; that we'll have the 14 A. Not directly on those particular 15 Labrador Island Link in service by mid – you 15 presentations and updates, no. That would be the Lower Churchill Project itself. 16 know, mid-2018, we'll have it to the 16 17 capability that we can get over that line 17 MR. COXWORTHY: 18 and that the plant is still on – the first 18 Q. IF there are no other witnesses that are 19 is still on schedule for the fall of 2019. 19 going to be called from Hydro that interface 20 Those are the key dates that I look at and 20 with Nalcor with respect to methodologies 21 I've been assured that they're there. I've 21 for these percentages, is there anyone 22 read the reports. I am involved in a couple 22 within Hydro who would be doing that, do you 23 of meetings occasionally updating where 23 know? 24 MR. HAYNES: 24 those things are and they are at that with a 25 vengeance trying to make sure that they 25 A. Well, the only one – you mean on the Lower Page 198 Page 200 1 actually deliver on those dates. They're 1 Churchill Project? 2 2 very focused on delivering those dates. MR. COXWORTHY: 3 MR. COXWORTHY: 3 Q. Yes. 4 4 MR. HAYNES: Is there anyone who'll be called as a Q. 5 5 witness subsequent to yourself in this A. No, other than the fact that it's 6 6 proceeding, Mr. Haynes, that would have more information we receive and, you know, we've 7 detailed information about the methodologies 7 met with them and we ask a question 8 8 that are being utilized to arrive at dates occasionally, but basically, it's their 9 9 project to deliver. The focus mostly is the and timelines for completion of the project? 10 10 MR. HAYNES: end date. MR. COXWORTHY: Not on the project, no, but from the point 11 11 A. of view of the way we do projects and the 12 12 Q. So, Hydro's information, for instance, as to 13 way we do measurements. Mr. Gardiner whether the project should be considered to 13 14 actually tracks our projects on – they have be 89 percent complete – I believe that's 14 15 a plan. They do track their performance on, the – on the February – yes, I'm sorry, in 15 16 you know, the safety, cost, schedule date. 16 the Information No. 6, Hydro has no better 17 MR. COXWORTHY: 17 information than that? 18 So, he could speak to what – if this was a 18 MR. HAYNES: 0. 19 19 Hydro project -No, but I do know there's a lot of effort in A. 20 MR. HAYNES: 20 generating those numbers by the folks over 21 On principles, yes. On Hydro projects, he 21 there. There's a lot of scrutiny and a lot A. 22 could speak, but I'll be honest with you, 22 of questions, but that's as far as I go. 23 that I've still challenged him as well that 23 MR. COXWORTHY: when you look at an S-card, you need to look 24 24 You're relying – I understand. You're Q.

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at the mechanics of that kind of thing, you

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relying on the people at Nalcor to be

April 23, 2018 NL Hydro 2017 GRA Page 201 Page 203 1 providing you with accurate information, but 1 you'll have a four-unit plant operating with 2 2 you don't have any independent oversight? one unit, you should be at a very high load 3 3 MR. HAYNES: factor, you know, energy throughput. 4 4 No, but I do take a fair bit of comfort that MR. COXWORTHY: A. 5 5 And then full power in the third quarter of the project, from the point of view of when Q. 6 this was presented and the delivery date of 6 2020, that is, I guess, the – I'm not sure 7 7 mid-year 2018 for the LIL and the project if nameplate is the right terminology to 8 8 2019 which was predicted last year, my use, but the 800 plus megawatt figure in the 9 9 understanding, that has not changed, which I winter and 700 plus – perhaps I have them 10 10 think is basically the fact that they've reversed now. actually made a lot of progress that they 11 11 MR. HAYNES: weren't making otherwise. So, they have 12 12 A. Reversed, yeah. MR. COXWORTHY: 13 picked up that and sticking to schedule, if 13 14 you will. 14 Q. Thank you. 15 MR. COXWORTHY: 15 MR. HAYNES: 16 If we could turn now, this is in Information 16 It would be nameplate. 0. A. 17 No. 6, to page 5, and I wanted to refer to 17 MR. COXWORTHY: 18 the projected in-service dates there, Mr. 18 Q. 700 plus megawatt figure, and that would be 19 Haynes, as of June 2017. So, it appears 19 considered to be full power? 20 20 MR. HAYNES: that this February 2018 presentation, at 21 least in some respects, is still relying on 21 A. Full commissioned plant, yes. 22 the information that Nalcor had as of June 22 MR. COXWORTHY: 23 23 2017 and presumably was found in IC-NLH-122 And is your information any different than Q. 24 But that information, even as of February 24 this today, in terms of both the amount of 25 2018, is still first power in the last 25 power deliverable by those dates and those Page 202 Page 204 1 dates or those time periods? 1 quarter 2019, full power in the third 2 2 quarter of 2020. MR. HAYNES: 3 MR. HAYNES: 3 My understanding is that the scheduled date A. 4 4 put forward last year they're working Correct. A. 5 5 MR. COXWORTHY: towards and it's retained. I don't have any 6 6 And as the recipient of this power, Hydro, information – and matter of fact, at the AGM Q. 7 what is your understanding of first power in 7 the other day, it was kind of the schedule 8 terms of the amount of power that will be 8 is still what we had last year, so, which is 9 9 deliverable in Q4 2019? encouraging. 10 10 MR. HAYNES: MR. COXWORTHY: 11 Depending on when it comes in, basically 200 11 Do you know, as President of Hydro, whether A. 12 megawatt will be available and they'll have there's another update scheduled at least 12 internally to Hydro of these percentages 13 all the water, so it should be – as long as 13 it's commissioned, there are no operational 14 completion, these timelines for completion 14 15 15 issues or teething issues, we should be able and first power and full power? 16 to get a fairly high amount of energy from 16 MR. HAYNES: 17 that particular unit. 17 I'm not sure if there's a session scheduled A. 18 MR. COXWORTHY: from the point of view of the update or if 18 19 200 megawatts or up to 200 megawatts? 19 it's just basically the last update it was 0. 20 MR. HAYNES: fine. I do not have that answer at 20 21 21 Up to 200 megawatts, but at a fairly high particular time. 22 22 load factor because basically there should MR. COXWORTHY: 23 be ample water to run that plant, right. 23 You don't know. So, it's not as if you've Q. 24 That'll come down as you get four machines 24 been told "from here on out every three

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because of water issues, but basically

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months we're going to update the figures for

April 23, 2018 NL Hydro 2017 GRA Page 205 Page 207 1 you, Hydro, so you can plan"? 1 on a May 2017 load forecast whereas the one 2 2 MR. HAYNES: that was filed with IC-NLH-122 is May 2016. 3 3 A. No. I mean, what I take encouragement from MR. HAYNES: 4 is the fact that basically everything is 4 Um-hm. Α. 5 5 still on track looking to it, and so, you MR. COXWORTHY: 6 know, these are the dates that we're working 6 The Information No. 6 is based on a targeted Q. 7 7 towards and we expect to have those things rate of 18 cents per kilowatt in 2020 and of 8 8 course that's a rate increase, or I'm sorry, in service. 9 9 MR. COXWORTHY: a rate that you've referred to previously in 10 So, unless you hear otherwise, you'll assume 10 your testimony as being perhaps a target Q. that means that those dates – there has been 11 11 rate? 12 12 no slippage? MR. HAYNES: MR. HAYNES: 13 13 A mitigated rate, yes. A. MR. COXWORTHY: 14 Α. Yeah, I would assume that and I know there's 14 15 a lot of focus by Nalcor folks on the 15 Q. Mitigated rate in 2020. And a year ago, in schedule. June of 2017, that was at 15.4 cents per 16 16 17 MR. COXWORTHY: 17 kilowatt hour. So, that is one example of 18 Q. And is there, even at an informal level, any 18 this particular Information 6 updating 19 sort of follow up by Hydro with Nalcor to 19 information from the situation in June of 20 ensure that, you know, "can we still rely on 20 2017. Would you agree? these numbers?" 21 21 MR. HAYNES: 22 MR. HAYNES: 22 A. Yes, from that perspective, but the thing 23 23 that I'm most interested in obviously is the There are informal updates, yes. There's A. 24 sessions here and there with respect to the 24 delivery dates, when we can have power, when 25 Transition to Operations folks of where 25 we can park Holyrood, if you will, as a Page 206 Page 208 1 things are going and so on, and you know, at 1 thermal plant and take delivery of 2 the meetings with the CEO, which are recapture. But, I mean, you know, the load 2 3 3 monthly, there's usually a very brief things forecast changes and cost would obviously are on tap, if there's any major issue affect all that as well. But that's the 4 4 5 5 coming forward and so on, but I don't have load forecast, so that's an update there. 6 6 any understanding at this point in time that MR. COXWORTHY: 7 there's any significant change in the 7 So, the difference between 15.4 cents per Q. 8 schedule, of any slippage certainly. 8 kilowatt hour in the June 2017 document 9 9 MR. COXWORTHY: versus 18 cents per kilowatt hour in the 10 And no expectation of a specific update on 10 Information No. 6, do you attribute that to Q. the progress? change in load forecast? 11 11 12 12 MR. HAYNES: MR. HAYNES: Not off the top of my head, no. 13 13 A. A. I'm not sure of the details. I would – I think probably the better person to answer 14 (12:45 a.m.) 14 15 MR. COXWORTHY: 15 that would be Kevin with respect to that 16 Q. If we could turn to page 25 of Information 16 there, from the point of view -No. 6 and the equivalent page in IC-NLH-122 17 17 MR. COXWORTHY: I believe is page 19 of 26. I do want to 18 18 Kevin Fagan? Q. 19 note before asking any questions about this 19 MR. HAYNES: 20 that there are some differences between the 20 A. - of what the cost of service is based on two. Some of them are obvious obviously. and so on, but I'm thinking that, yes. 21 21 22 22 The lines that are plotted on obviously have MR. COXWORTHY: 23 a slightly different configuration. But if 23 It's reasonable to assume that this Q. 24 24 you look at the note at the bottom, the note information, unlike some of the other

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at the bottom of Information No. 6 is based

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information's presentation, would have come

April 23, 2018 NL Hydro 2017 GRA Page 209 Page 211 1 from Hydro? 1 it's meant to refer to something else. 2 MR. HAYNES: 2 Perhaps you know or think – or if you don't, 3 The load forecast would. We take input from 3 A. certainly we can leave that to perhaps Mr. 4 4 Newfoundland Power and the Industrial Fagan. 5 5 Customers and we generate a load forecast on MR. HAYNES: 6 that basis, yes. 6 I do not know why there's a .2 percent A. 7 7 MR. COXWORTHY: difference in the load forecast. 8 8 Is there any aspect of what we're looking at MR. COXWORTHY: Q. 9 at page 25 of Information No. 6 or page 19 9 I'd like to move on in Information No. 6 to Q. 10 of 26 in IC-NLH-122, is there any of that 10 page 28 and the equivalent page in IC-NLHthat wouldn't be Hydro input? 122 is page 20 of 26. I've looked at these 11 11 12 12 two several times now and although I stand MR. HAYNES: 13 I'd have to go back and look at the page 13 to be corrected, I think they're identical. A. 14 again, the other page you referenced. 14 MR. HAYNES: 15 MR. COXWORTHY: 15 A. Just scanning the document, yes, they Sure, and I'm sorry, I have them both in certainly seem to be the same. 16 Q. 16 17 front of me all the time and you don't, and 17 MR. COXWORTHY: please remind me of that. If you could, 18 18 Q. My first question is when we go back to what 19 yes, compare both of them, and is there 19 we were just looking at, which was the NL Hydro Island Interconnected sales, it 20 anything in either one of them that doesn't 20 21 represent Hydro input, as opposed to Nalcor 21 appears that there's been some change in the 22 or some other input? 22 projected sales from June 2017 to what's 23 23 MR. HAYNES: reported in the February 2018 document. 24 No, I mean, the Island Interconnected sales 24 Given the nature of the table or the graph, Α 25 or the load forecast is generated by Hydro 25 I'm not sure I'm going to try and estimate Page 210 Page 212 1 or guestimate or speculate on the nature of 1 people in Mr. LeBlanc's shop actually by the 2 2 gentlemen down there who coordinates all the that change or the extent of it, but there 3 does appear to be some change. Would you load forecast and puts – and generates that 3 4 particular supply forecast or load forecast, 4 agree? 5 5 I should say. MR. HAYNES: 6 6 MR. COXWORTHY: From a load forecast point of view, there A. 7 And Mr. Fagan, you believe, would be the 7 seems to be some change. Q. best person to speak to? 8 8 MR. COXWORTHY: 9 9 MR. HAYNES: 0. And am I wrong in thinking that that might 10 be expected to have impact on the island On the rates part. On the actual generation 10 A. of the load forecast itself, Mr. LeBlanc's interconnected domestic rate projections? 11 11 12 department actually does that and provides 12 MR. HAYNES: that information and has an input to all the 13 13 It could, depending on the total amount, but A. other things that happen. I'm not sure what the underlying analysis 14 14 15 15 provided here, but there may have been a MR. COXWORTHY: 16 Q. Thank you. The other difference between 16 small change that may have been considered 17 these two documents, and again I'll give you 17 to be immaterial from that point of view, I 18 a moment if you don't have them both in don't know, but from the point of view of 18 19 front of you, is in the Information No. 6, 19 the 22.89 and the interaction with Mr. 20 the targeted rate, as I understand it, is 20 Fagan's department on the numbers we escalating at 2.2 percent thereafter whereas 21 21 provided and where investment evaluation has 22 22 in the IC-NLH-122, the June 2017 document, to make their projections, there's a slight 23 it's shown as escalating at two percent 23 difference in the modelling. They have a 24 thereafter. I'll confess I'm not quite sure 24 less specific model longer term than – and

whether that escalation is in the rate or

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we don't run the cost of service out that

April 23, 2018 NL Hydro 2017 GRA Page 213 Page 215 many years. From that perspective, a 1 generates and gets to the actual rates. 1 2 2 slightly different purpose, so there are MR. COXWORTHY: 3 assumptions made. I do not know the basis 3 Q. Fair enough, thank you, Mr. Haynes. Before 4 of the assumptions. 4 we leave these two pages, though, the middle 5 5 band is NLH Other in the island-MR. COXWORTHY: 6 And when you say the assumptions underlying 6 interconnected domestic rate projections. Q. 7 what we're looking at at page 28 of 7 The middle band, if I can call it that, is 8 8 Information #6, the island interconnected the NLH Other band in terms of the 9 9 domestic rate projections, you don't components that will go into projected 10 MR. HAYNES: 10 rates? I don't know, but -MR. HAYNES: 11 Α. 11 12 12 MR. COXWORTHY: Yeah. Α. 13 You don't have access to all the 13 MR. COXWORTHY: 14 assumptions? 14 Q. There's the MF purchase cost band, which 15 MR. HAYNES: 15 I'll call sort of the bottom band, and I wouldn't say I couldn't get it if I went 16 A. 16 there's the middle band of NLH Other, and 17 looking for it, but I don't have it and I 17 then the top band is Newfoundland Power 18 haven't reviewed that, but I would suggest, 18 cost? 19 though, and I'll just repeat something I 19 MR. HAYNES: 20 said the other day, that the quantum of the 20 Yes. Α. MR. COXWORTHY: 21 Muskrat Falls impact, whether it's 22.89 or 21 22 23 or 21, is a problem, and, you know, to 22 Now again I don't know with this type of Q. 23 spend a lot of time, not that it's not 23 graph to what degree of precision small 24 changes in the bands, what they reflect. 24 warranted to actually go back and understand 25 the mechanics, but at the end of the day the 25 Certainly there's an attempt to reflect Page 216 Page 214 magnitude of the problem is so substantial 1 1 cents per kilowatt hour in the left hand 2 2 and so big that what we put forward on the axis. So presumably there's some numbers 3 3 deferral account is what we can do, utilize that someone could pull out of this, but 4 would you agree that of these three bands, the recapture energy to actually help that 4 5 5 is what we're proposing, but, you know, it the NLH Other ones, the only one that Hydro 6 won't, I don't think, materially change the 6 has any control over in terms of keeping 7 impacts on those proposals that we put 7 cost to a minimum, mitigating rate 8 forward to help that process. 8 increases? 9 9 MR. COXWORTHY: MR. HAYNES: 10 Having said that, and I understand, Mr. 10 That is the biggest one that we have, 0. A. Haynes, and I certainly agree that basically, which is our own cost, so 11 11 12 regardless, we have a problem here that actually, you know, what Hydro imposed at 12 13 hopefully can be mitigated, but does it 13 the end of the day on the customer is the stand to reason that the island interone that we do control. 14 14 15 MR. COXWORTHY: 15 connected domestic rate projections from 16 June, 2017, that that is information that 16 Q. Hydro can't impact the Muskrat Falls 17 will need to be updated, that information 17 purchase power cost? If there's a way of 18 may no longer be accurate as of today? changing that, it's not within Hydro's 18 19 19 control? MR. HAYNES: 20 20 A. The proposal that we put forward from the MR. HAYNES: point of view of the cost of service model, 21 21 Not solely, no. A. I would really – I would really urge you to 22 22 MR. COXWORTHY: 23 take that line of questioning up with Mr. 23 And Newfoundland Power, I guess, other than Q. 24 24 Fagan, who is actually intimately familiar to the extent you could intervene in their 25 with what's in the forecast and how it 25 rate proceedings and might influence, you

April 23, 2018 NL Hydro 2017 GRA Page 217 Page 219 1 don't have direct control over that band 1 No, I'm not aware of any updates. A. 2 2 either? MR. COXWORTHY: 3 3 MR. HAYNES: 0. Is that something Hydro would customarily do 4 4 from time to time, compare its forecast A. No. 5 5 rates to other jurisdictions, such as the MR. COXWORTHY: jurisdictions in this table? 6 But the NLH Other – so would it stand to 6 Q. 7 MR. HAYNES: 7 reason that the information in that band. 8 8 the NLH Other, came from Hydro? They are done from time to time. I wouldn't A. 9 9 say they're done on a regular basis, but MR. HAYNES: 10 A. That would be a part of our operating budget 10 they are looked at from the point of view of and any proceeds we get from, you know, where we sit and how we compare it from that 11 11 12 sales that we – that would be our operating 12 perspective, but, basically, oftentimes 13 budget and the things that we control, yes, 13 you'll see that information in trade 14 that would be our input. That would be 14 magazine where somebody does a cross country 15 normal. 15 or cross continent profile of where rates MR. COXWORTHY: are. You know, we all tend to look at that 16 16 17 Could I have an undertaking to have filed 17 and see where we sit, if you will. Q. 18 the information that was provided to 18 MR. COXWORTHY: 19 generate that middle band? I can restate 19 The 18 cent target rate or mitigation rate Q. 20 20 that if that's not clear enough. that you testified to earlier, in arriving 21 MR. HAYNES: 21 at that you were asked whether there were 22 I don't know what it takes to produce it, 22 any elasticity reports or other sort of A. 23 but we'll certainly look for it. 23 expert reports that were commissioned to 24 24 arrive at that rate, and my understanding is MR. COXWORTHY: 25 0. Well, obviously, some information was 25 there weren't? Page 218 Page 220 1 provided to the maker of this graph, you 1 MR. HAYNES: 2 know, whoever that was. 2 I'm not aware of any specific study that A. 3 MR. HAYNES: 3 said that's the tipping point, no. 4 4 MR. COXWORTHY: Yeah. Α. 5 5 MR. COXWORTHY: Q. Was the 18 cents, I'll suggest or speculate, 6 I'm not interested in who it is – or this 6 perhaps chosen as a rate that is close to, 0. 7 7 although still in excess of, the projected table, but what information was provided. 8 8 rates in 2019/2020 for Nova Scotia and MR. HAYNES: 9 9 Prince Edward Island? A. Okay. 10 10 MS. GLYNN: MR. HAYNES: A. Certainly it's lining up with that Atlantic 11 The undertaking is accepted and noted. 11 0. (UNDERTAKING) Canada look, yes, excluding New Brunswick, 12 12 13 (12:55 P.M.) 13 which are a bit lower. MR. COXWORTHY: 14 MR. COXWORTHY: 14 15 15 Thank you. Before we leave Information #6 – You don't specifically recall that being a Q. Q. 16 I'm sorry, it wasn't in Information #6. It's 16 factor in arriving at the 18 cents? 17 IC-NLH-122, Attachment 1, Page 22, and the 17 MR. HAYNES: consumer advocate, I think, has already 18 18 A. No. The intention, you know, even years ago 19 referred you to this particular chart. This 19 Hydro always looked at what the rates were in Atlantic Canada compared to where we 20 is information as of June, 2017. Are you 20 21 aware of whether there's been any update 21 were. We wanted to be competitive,

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provided to Hydro or performed by Hydro

forecasting these electricity rates for this

time period?

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MR. HAYNES:

obviously. You know, Muskrat Falls puts us

ahead of that a bit, but we certainly look

at those rates.

MR. COXWORTHY:

April 23, 2018 NL Hydro 2017 GRA Page 221 Page 223 1 Q. So the extent to which mitigation achieves 1 During the construction timeframe, that A. 2 2 whatever mitigation plans or measures are basically supply chain was not utilized to 3 implemented, and one of them, of course, is 3 actually support the construction, but over 4 being proposed in this GRA, the offshore 4 time we will move from an operational 5 purchase deferral – off-island, sorry, 5 maintenance point of view, the intent is 6 purchase deferral account, but whatever 6 that our supply chain folks will actually do 7 7 mitigation measures are implemented, that, purchasing on behalf of all Nalcor, in fact, 8 8 others, is the measure of the success of not only LIL and LTA, but others. That 9 9 those whether they achieve the 18 cents? department is a single department that looks 10 MR. HAYNES: 10 after all purchases for Nalcor. 11 Α. I think that would be the target that we 11 MR. COXWORTHY: 12 And, Mr. Haynes, thank you for the broader have is the 18 cent range, and that 12 0. 13 basically was, you know, the provincial context, but I want to focus on 2018 and 13 14 government through various - there was talks 14 2019 and certainly I don't want to limit 15 given by various people actually talking 15 your answers to that, but I do want to focus about the 17/18 cent range as being a number 16 16 on 2018, 2019. In 2018, 2019, will Hydro be 17 that was desirable to get there. The 17 providing O&M services in respect of the LIL 18 mechanics of getting there are yet to be 18 and LTA? Hydro personnel or Hydro 19 determined because there's a lot of input 19 resources? 20 required from Nalcor and maybe the 20 MR. HAYNES: 21 provincial government as well. I'm just 21 Okay, so not supply chain, O&M services. A. 22 22 Okay, we are open to discussion on some of going back and repeating myself, what Hydro 23 has brought forward is what we think we have 23 that there. We have done some O&M with 24 the ability to control and contribute, but 24 respect to the assets that they do have. 25 that alone does not mitigate the rates to 18 25 They are reviving an organization whereby Page 222 Page 224 1 cents. 1 they plan to be self-supporting in that 2 2 sense, but we are continuing to do that as MR. COXWORTHY: 3 Is it fair for me to suggest that the 3 required, but basically the intention is Q. that by and large, for the most part, they 4 offshore – off-island purchase deferral 4 5 5 account by itself, even if it operates as will actually supply their own resources. 6 forecast by Hydro in the GRA, that that 6 There may be pockets, for instance, you know 7 won't get us to the 18 cents by itself? 7 where there is not enough justification for 8 8 a fulltime person that they may use our MR. HAYNES: 9 9 A. It will not. resources. You know, maybe the Strait of 10 MR. COXWORTHY: 10 Bell Isle because they don't have bodies up there from that perspective. They may or 11 0. Mr. Haynes, I want to move on to a somewhat 11 may not at the end of the day, but from the 12 different topic. The operations and 12 13 maintenance costs that Hydro will be paying point of view of the regular O&M stuff, we 13 for use of the LIL, LTA assets in the 2018, have some technicians who are involved, but 14 14 15 2019 period, and in your previous evidence 15 basically they have hired their own people, 16 you spoke about how there are still some 16 they're training people and when they get up 17 intercompany costs between Hydro and Nalcor to speed, we won't be doing very much of 17 and Nalcor subsidiaries. I've jotted down that as it stands right now. And on the DC 18 18 19 some notes here, you referred to things like 19 assets, I'll go a little bit further, on the 20 supplies, payroll, supply chain, which may 20 DC lines where we don't have any expertise be the same as supplies or an adjunctive of 21 21 or experience, that they basically were 22 that. Does Hydro provide any services in 22 self-sufficient from the get-go and they 23 relation to the LIL, LTA operations and 23 will have contractors in place while they're 24 maintenance? 24 getting up to speed, if you will. 25 25 MR. HAYNES: MR. COXWORTHY:

April 23, 2018 NL Hydro 2017 GRA Page 225 Page 227 1 Q. Will they still be getting up to speed 1 MR. HAYNES: 2 2 through the 2018, 2019 period? A. Yeah. 3 3 MR. COXWORTHY: MR. HAYNES: 4 4 Well they're still commissioning, you know, And are you going to have the ability to A. Q. 5 5 they're still in the process of actually track that, what goes in, what's attributable to capital, what isn't, and 6 moving the LIL and the DC controls up to a 6 7 7 full fledged bi-pole system that brings all what comes back to you? 8 8 the controls that it can, so I'd say there's MR. HAYNES: 9 9 probably a bit of both, but I do not know We are tracking basically all costs that A. 10 the specifics. 10 come into Hydro from another, you know, Nalcor entities, we are tracking all of that 11 MR. COXWORTHY: 11 12 12 So the LIL, LTA won't be considered to be and they are questioned on those costs and Q. they have to back them up and they have to 13 fully commissioned during the 2018, 2019 13 validate them. So they should be fully 14 period? 14 15 MR. HAYNES: 15 visible of what they are or we'll go back 16 and ask for justification. 16 No, not fully commissioned, no, because A. 17 basically it will not be at the bi-polar— 17 MR. COXWORTHY: they won't be up operating as a bi-pole 18 18 Q. Is the O&M costs that Hydro is going to be 19 which gives us the best benefits from the 19 paying in 2018, 2019 and that are going to 20 20 point of view of reliability and redundancy. be put in as a line item in the off-island 21 MR. COXWORTHY: 21 purchase deferral account, to be as specific 22 And to the extent that Hydro is providing 22 as I can, who is Hydro paying that to? Q. 23 some personnel, some assistance on O&M on 23 MR. HAYNES: 24 24 the LIL and LTA during the 2018, 2019 We are paying that to Nalcor, to what we Α 25 period, will that be charged then as an 25 call a, considered a power supply group, Page 226 Page 228 intercompany charge by Hydro to Nalcor or an 1 1 it's basically to look after the operation 2 2 Nalcor entity? of maintenance of LIL and those LTA assets 3 3 MR. HAYNES: and eventually the Muskrat Falls assets. 4 4 All costs are Hydro sends to any Nalcor MR. COXWORTHY: Α. 5 5 entity is fully recovered and vice versa, Q. So all those amounts are paid to Nalcor? 6 6 you know, the intention is that all MR. HAYNES: 7 intercompany charges are all, you know, 7 A. That would be, yes. 8 8 cause altered, they are what they are and MR. COXWORTHY: 9 9 are billed. 0. Will be starting – MR. HAYNES: 10 MR. COXWORTHY: 10 11 And then to follow through, I think 11 Yeah, once it's accepted for, you know, A. 12 logically, although you may perhaps say I'm operation at the limited amount of power 12 13 not following the logic of it, what you 13 that we can get over LIL in the short term. charge to Nalcor and a Nalcor entity for the 14 Once it's accepted that it's not a July 1st 14 15 services that Hydro provides to assist with 15 hard date, it is when it basically, when 16 O&M and LTA, will that just be charged then, 16 it's commissioned to the fact that we can 17 back to Hydro and the O&M costs? 17 get some reliable supply over that line and 18 MR. HAYNES: 18 it's deemed to be, you know, available for 19 19 If it's a capital, it won't. If it's a commercial service, we will start paying off A. 20 capital, it will go into the finalized 20 best cost.

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MR. COXWORTHY:

2018?

Q.

MR. HAYNES:

capital costs of the project. If it's an

back, yes.

Some of it will.

MR. COXWORTHY:

Q.

operating assistance, it would likely come

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So it doesn't necessarily start on July,

If the line is energized, for instance on

April 23, 2018 NL Hydro 2017 GRA Page 229 Page 231 1 July 1st and it takes them two weeks, three 1 we talked about the 240 megawatt reserve. 2 2 weeks or a month to commission it to the that all of a sudden becomes our N minus 1 3 point of view that, okay, now we can take, 3 situation where we can lose a lot more power 4 you know, 100 megawatts for two months or 4 in that sense, you know, and if you adopt 5 three months, yes, okay, it's available, but 5 the same principle, then the reserve may 6 they have to get up to that particular, you 6 have the increase in the short period of 7 7 know, reliability, sustainability point. time, or we may even make a conscious 8 8 decision we don't run it any more than 170. MR. COXWORTHY: 9 And I was going to ask you this later but 9 What we want is the energy out of it. The Q. 10 perhaps now is a good time to get into this, 10 other constraints would be from the point of when you say "energized" in your earlier 11 11 view of assuming that there are no, you 12 testimony, does that mean that it's at the 12 know, physical issues with the line, there's 13 point where you could transport any amount 13 no trips or whatever the case was, there is 14 of power over the LIL LTA and get it down to 14 a transition period to get from simple 15 Soldiers Pond? 15 controls, which is what is going in, to our MR. HAYNES: sophisticated controls which is slated for 16 16 17 There are some restrictions on the amount of 17 the fall, and I would not want to be taking A. 18 power that we can get over LIL in the short 18 a chance on doing, you know, complex 19 term, basically the studies that have been 19 commissioning or changing a forelle 20 done by the transmission planning folks 20 (phonetic) system when we're delivering 150 21 basically said that we can get about 225 21 megawatts, I would want it back down to a 22 megawatts, 200 to 225 megawatts, depending 22 lower load that we would actually survive an 23 on system conditions. The line is designed 23 under frequency (unintelligible) event, for 24 for 8 or 900 megawatts. We won't be able to 24 instance. But those were planned events, 25 deliver that kind of power until you get a 25 but I'm not aware of any other technical Page 230 Page 232 constraint once it's there. The 200, 225 1 number of machines commissioned at Muskrat 1 2 2 Falls because you can't see the converters, megawatts is a number that we can deliver, 3 you can't -3 depending on, you know, other resources that 4 MR. COXWORTHY: 4 are available for frequency mitigation in 5 5 But the focus perhaps in July 2018 and the sense of other frequency loads. 6 6 perhaps the first six months of 2018, I MR. COXWORTHY: 7 understand the maximum before Muskrat Falls 7 And if you allow me to put it this way, Mr. Q. 8 8 Haynes, so if on July 1st, 2018 for argument comes on line that you can bring over the 9 9 LIL LTA is 220, 225 megawatts. sake, the line, LIA LTA is considered to be 10 MR. HAYNES: 10 energized and there just happened to be 225 megawatts in Labrador, you wouldn't just 11 A. Yes, yeah. 11 12 12 MR. COXWORTHY: fire that over the line, all 225 megawatts 13 13 Q. So that's a given, but in the first six and sort of keep your fingers crossed that – 14 14 MR. HAYNES: months of 2018, are there other constraints 15 15 that you're aware of on how much power can No. We would look at, Ms. Williams' group A. 16 be brought in over the LIL LTA? Let's 16 would look at where that sits on our 17 assume it's available in Labrador, that 17 available generation, where's our water 18 there is 225 megawatts there, just for situation to, do we need it? If we don't 18 19 assumption say, is there any other 19 need it, can it be actually sold down south, 20 20 constraints in getting that over the line in that's another situation later on, from that 21 the first six months? 21 perspective, so -22 MR. HAYNES: 22 MR. COXWORTHY: 23 Well we would look at the reserve and how it 23 And apart from need, though, aren't there A. Q. 24 24 some technical considerations to be taken affects the reserve because if 225 megawatts 25 25 is over a bi-pole, then basically the, when into account in terms of whether it's

April 23, 2018 NL Hydro 2017 GRA Page 233 Page 235 1 prudent to send over 225 megawatts over the 1 because we'd probably be spilling where we 2 2 didn't need to spill. So you have to look LIL LTA? at the whole picture and it is being looked 3 3 MR. HAYNES: 4 In the sense of? 4 at from that whole coordination point of Α. 5 5 MR. COXWORTHY: view. 6 In the sense of the systems, the Island 6 MR. COXWORTHY: Q. 7 7 system's capacity to receive that power, I I'm sorry, when you say it's being looked 8 8 mean, there's certain constraints you've at, Mr. Haynes, who within Hydro has that 9 9 talked about, for instance Holyrood and you responsibility? 10 have to run at a certain minimum. 10 MR. HAYNES: 11 MR. HAYNES: 11 Α. Ms. Williams would look at, from the point 12 12 of view what a production profile is and so That's possible. Α. MR. COXWORTHY: 13 13 on, that's typically what she would look at. MR. COXWORTHY: 14 Q. If the Maritime Link frequency converter is 14 15 in place or not, you know, so quite apart 15 So, the types of questions I'm asking you Q. from whether the Island customers can use here now it would be -16 16 17 that power -17 MR. HAYNES: 18 MR. HAYNES: 18 Α Yes, they look at -19 No, it's not just math, it's what we can 19 MR. COXWORTHY: A. 20 absorb in the system, given our constraints, 20 Q. I don't want to say more productive, but it 21 given our generation availability, our 21 would be productive for me to ask, refer as 22 outage plans, maintenance plans, all that 22 well. comes into play. 23 23 MR. HAYNES: 24 24 MR. COXWORTHY: Exactly. They would look at, you know, A. 25 25 0. And does that have to be tested, I mean in generation requirements, gas turbine Page 234 Page 236 1 1 terms of different scenarios. What happens requirements, how do we actually serve the 2 when we bring 50 megawatts over, you know, 2 load that we expect for that day, that week. 3 3 what does that mean for Holyrood, how MR. COXWORTHY: quickly can we shut down one unit when that 4 4 Thank you, Mr. Haynes. If we could turn to— 0. 5 5 happens? as that sort of went a little bit off on a 6 6 MR. HAYNES: by-way that wasn't intended to get into, but 7 But from the point of view of the planning 7 we've gone there now—PUB-NL-18, if we could A. 8 folks, the transmission planning folks who 8 have that brought up. So, Mr. Haynes, I 9 9 look at what it means from the point of view assume you're familiar with this table. of losing a certain load or what the 10 10 MR. HAYNES: implications are, they generally look at Yes, I've seen this, yes. 11 11 A. that and they're given a, you know, it's MR. COXWORTHY: 12 12 13 looked at from an integrated point of view 13 0. And this would have been information that between generation planning and transmission 14 14 would have been filed some time ago. 15 15 planning to what they can safely and MR. HAYNES: 16 reliably absorb into the system. You know, 16 A. Yes. 17 we haven't put in that, you know, ideally if 17 MR. COXWORTHY: you're only just looking strictly at fuel 18 18 Q. In the initial round of the RFIs. I don't displacement and you had 225, you'd load it 19 19 believe it's been updated since. up, but in the summertime, our load is very 20 20 MR. HAYNES: low, we can't absorb all that. Now we can 21 21 A Not that I'm aware of. 22 22 park it in the water in the reservoir for MR. COXWORTHY: 23 later on, depending on what the reservoir 23 Q. Would you have any reason to think that the 24 levels are, but if we were, you know, near 24 information here might need to be updated, 25 full, that wouldn't necessarily make sense 25 if not now, at some point in the course of

April 23, 2018 NL Hydro 2017 GRA Page 237 Page 239 1 the GRA? 1 MR. HAYNES: 2 MR. HAYNES: 2 A. Absolutely, well, we think it's our 3 3 obligation to challenge the numbers. We A. If it's available during the course of the 4 GRA, but I would offer that the figures of 4 have to comfortable that the numbers are 5 27.3 and 52.9 in particular, they are being 5 reasonable from the point of view of the 6 scrutinized by Hydro as to what those costs service that we want, but at the end of the 6 7 are. They are being questioned and so on. 7 day, in the longer term, we don't have a lot 8 8 And at the end of the day, the numbers that of control over what goes in there, but it 9 9 are there—it's not a lump sum amount. doesn't mean that we won't be looking for 10 Basically it will be—on a cost incurred 10 validation, rationalization of why we're basis, there's probably a true up period doing things this way or whatever. 11 11 there which I understand will be done every 12 MR. COXWORTHY: 12 13 guarter or so. So, it will be the actuals. 13 Well, you have some control to the extent Q. And when those numbers were generated, they 14 14 that you are providing some of your own 15 were early numbers obviously based on the 15 forces. information they had. They are refining MR. HAYNES: 16 16 17 that and there are some things in there 17 Yes, but that's on a cost recovery basis, A. which may not happen which will reduce the 18 18 whatever that cost is -19 cost. And I'm pretty positive there's 19 MR. COXWORTHY: 20 nothing there to push up the cost. 20 To the extent that there could be economies Q. 21 Hopefully, it's going to go the other way, 21 achieved there, would Hydro try and achieve 22 but that's a work in progress. 22 that? 23 MR. COXWORTHY: 23 MR. HAYNES: 24 24 Is there a Hydro witness that will be called In a sense like on supply chain we are Q. A. 25 to be able to speak to that in greater 25 achieving those economies. We don't have Page 238 Page 240 two supply groups. If there are 1 detail, to the table and the components of 1 opportunities where we can provide service 2 this detail and whether it needs to be 2 3 3 updated? to them and do it at a lower cost, we are 4 MR. HAYNES: 4 open to that discussion any day. 5 5 Well. I think the financial folks are MR. COXWORTHY: A. 6 actually going down through, looking at, 6 Because you've mentioned as well that 0. 7 trying to dig under the covers, if you will, 7 they're using contractors. Now, that may be 8 as to what constitutes all those perspective 8 more for the DC piece. 9 9 costs. MR. HAYNES: 10 10 MR. COXWORTHY: A. Yes, and more of an evolution to get to a comfort place where it's all new technology 11 Ms. Hutchens or -0. 11 12 MR. HAYNES: 12 to get there and that's not uncommon, to 13 13 actually use contractors to, you know, get a A. Ms. Hutchens, yes, primarily, yes, but obviously there's a lot of input and 14 little bit of experience with respect to the 14 15 dialogue with the Nalcor folks of what 15 folks and make sure they're in -16 16 MR. COXWORTHY:

comprises those costs. Are they valid, you know, do we really need to be doing all those things and they are being challenged on that

20 (1:15 p.m.) 21

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MR. COXWORTHY: 22 You've said that these are being scrutinized Q.

23 and will continue to be scrutinized. You've 24 used the term that you're going to challenge 25 Nalcor on these numbers.

component.

Q.

MR. HAYNES: No, not that I'm aware of. I mean, our A. transmission planning folks, they have the models for the DC, but that's just all technical studies primarily.

So, Hydro is not providing any of the labour

or the expertise in relation to the DC and

O&M that could be attributed to the DC

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April 23, 2018 NL Hydro 2017 GRA Page 241 Page 243 1 MR. COXWORTHY: 1 0. Mr. Havnes, in response to a question from 2 2 Q. Can you give us any perspective on this Mr. O'Brien, you were asked how you could 3 table here, there's an entry for operating 3 know, how Hydro could know whether power 4 labour and salaries and then there's one for 4 purchased by Nalcor marking for Hydro—so 5 labour and salaries. Do you know why 5 thing would be over the Maritime Link, I 6 there's a distinction? 6 presume, although I guess there's potential 7 7 for it over the LIL if they purchase from MR HAYNES: 8 8 Hydro Quebec, is that right? A. No, I don't, but that line is blank though, 9 9 MR. HAYNES: isn't it? 10 10 MR. COXWORTHY: A. Or they purchase from others west, Hydro Yes, the labour and salaries line is blank. Quebec or west, yes, they could load up the 11 Q. 11 12 12 MR. HAYNES: link. 13 So, I'm not – 13 MR. COXWORTHY: A. 14 MR. COXWORTHY: 14 Q. How would Hydro determine whether that was Makes you wonder why it's there at all, of 15 15 the lowest cost? And I guess this is Q. 16 relevant over, well perhaps primarily for course 16 17 MR. HAYNES: 17 2018/2019 at least for the purposes of my 18 Α That I don't know. 18 questions. So, let's focus on that. And 19 MR. COXWORTHY: 19 your response is that that was a quite 20 20 Okay, and again perhaps Mr. Hutchens may be technical thing to determine, whether it was Q. 21 able to provide some more insight on this. 21 lowest cost. Who is responsible within 22 22 Hydro for determining that? MR. HAYNES: 23 23 Yes. MR. HAYNES: A. 24 24 MR. COXWORTHY: The lowest cost—basically there's a—I mean, Α 25 25 Thank you, Mr. Haynes. We'll move onto, I power purchases basically come under Ms. Page 242 Page 244 think, a different area here now. If you Hutchens, I'm sorry, my apologies, Ms. 1 1 2 could turn to Information No. 1, Table 317. 2 Williams, as a supply cost. Any decisions made by them are basically, you know, 3 I'm sorry I don't have a page number 3 4 reference for that, I apologize, page 23. sanctioned by Hydro from the point of view 4 5 Thank you, Mr. O'Brien. They Hydro 5 of buying, currently over the Maritime Link. 6 operating costs there that are showed for 6 You're also buying in the market, you know, 7 2018/2019, I just want to turn back to page 7 there may be potential for contacts later 8 8 one. It's still involvement from that 20 of IC-NLH-122. The NLH other band is not 9 9 just—and of course, that only goes up to perspective, but it's, you know, the 10 2019 and NLH-122 starts at 2021, but the 10 decisions that are made are nothing would be middle NLH other band in domestic rate, that more expensive that what we are currently 11 11 12 doing and strive obviously for least cost or is—operating costs are a part of that. 12 13 13 cost sharing arrangements if you have a MR. HAYNES: 14 longer term contract with folks. Those are A. Yes, they would be. 14 15 15 MR. COXWORTHY: all things that could be considered, but you 16 Q. But you would expect that there's other 16 know, if you're buying off of the market, 17 things in there as well. 17 first of all, it's variable from that 18 MR. HAYNES: 18 perspective. In the short term, obviously, 19 19 there's a few years where we're going to be A. Yes. 20 20 MR. COXWORTHY: buying whatever we can, post Muskrat Falls, 21 Capital—recovery of your capital cost, rate 21 maybe just for backup and other things. 22 22 of return, all of that. That may be a different contract all 23 23 together, but it does come under production MR. HAYNES:

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A.

MR. COXWORTHY:

I would imagine, yes.

costing under Ms. Williams from that

perspective.

April 23, 2018 NL Hydro 2017 GRA Page 245 Page 247 1 MR. COXWORTHY: 1 different complexities, is there going to be 2 2 Q. It seems to me there are quite a lot of much opportunity to bring lower costs – 3 variables or will be in 2018/19 period as to 3 MR. HAYNES: 4 4 how much to buy and whether it makes sense. I think there's -A. 5 5 MR. COXWORTHY: MR. HAYNES: 6 Yes, correct and basically from the point of 6 - power—purchase—I should say from Nalcor A. Q. 7 7 view of what we've asked from a confidential marketing. 8 8 basis, you know, we asked under the Act, MR. HAYNES: 9 9 request to the Board to actually look at I think there is, yes. I think to recapture A. 10 one—but there are other opportunities out that and provide some of those answers under 10 that particular process, if you will. there which they've been looking at which 11 11 12 MR. COXWORTHY: 12 may bring value to us, which if they do bring value, we want to participate. 13 And once Ms. Williams or her group 13 Q. 14 identifies an opportunity that they think is 14 MR. COXWORTHY: 15 one that is there, does that go back to you 15 Q. Mr. Haynes, I'm sort of jumping around a bit then for approval? here, but that's perhaps and I do think I'll 16 16 17 MR. HAYNES: 17 be asking a few more questions tomorrow. I'll try and be a bit more organized, but 18 Α Not unless it's something that's completely 18 19 different or whatever. 19 I'm just going on my notes in terms of 20 MR. COXWORTHY: 20 questions that were asked by others of you 21 Q. So, they're given certain parameters to work 21 today. You mentioned that there was a 22 22 Holyrood production plan that's prepared, I with. 23 MR. HAYNES: 23 think, annually? 24 They are given certain parameters, in that 24 A. MR. HAYNES: 25 sense there, basically, it's obvious we beat 25 A. It's prepared annually for budget purposes. Page 246 Page 248 our costs that we have right, and we go as 1 1 They said we look at where our hydrology is, 2 low as we can from the point of view of 2 what our average in flows are, what we can 3 wherever we buy it, but basically a lot of 3 do and look at the total system the folks out there selling power will be 4 4 requirements, roughly, I think about 7 ½ 5 looking out there and the more they know 5 kilowatt hours on the Island, we will do 6 about us, the know what our voiding cost is, 6 what we call a hydrothermal split. We look 7 so obviously they're going to want to stack 7 at what we can do with our hydro resources 8 it up as high as they kind. There's a lot 8 based on reservoirs in flows. And then we 9 9 of merit—there's a merit in the not having a look at our expected production from 10 lot of shared information from that 10 Holyrood is, and obviously, if we get a lot perspective, but it's a challenge. of rain, that goes down; if we don't get a 11 11 12 12 lot of rain, it goes up. It's a fairly tall MR. COXWORTHY: 13 13 number from Holyrood and that RSP takes care 0. It seems—you want to be somewhat nimble in terms of taking up the opportunities and 14 14 of that variation, yes. 15 reacting to system conditions that – 15 MR. COXWORTHY: 16 MR. HAYNES: 16 Q. And has that been filed for 2018? 17 If people are, for instance, you know if 17 MR. HAYNES: A. 18 utilities are spilling water because they 18 I don't know if the production plan has been 19 can't turbine it or they have no load for it 19 filed, certainly it would an integral part 20 and we can buy it for a cent or two cents, of our actual test year budget because that 20 21 then we'd like to, pardon my pun, fill our hydrothermal split would be key. And what I 21 22 did say was that the projections for the oil 22 boots. 23 MR. COXWORTHY: 23 that we would burn had been modified to, in 24 And are you confident, given the need to be 24 a subsequent filing, to, you know, assuming 0.

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that nimble and the need to react to those

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that the on a deferral account would be

April 23, 2018 NL Hydro 2017 GRA Page 249 Page 251 1 approved and then we can actually take 1 MR. COXWORTHY: 2 2 advantage, more so take advantage of the Q. This is a little different, perhaps it's 3 3 recapture, we would not burn as much oil. note related to the Holyrood production 4 So, rather than build up a—collect money 4 plan, but is there a protocol in place or, 5 from the customer right now based on 5 perhaps will be in place after July 2018 so 6 expected production of 1.6 terawatt hours 6 that the operators who are responsible for 7 7 deciding how many units should be on at out of Holyrood or 1600 gigawatt hours out 8 8 of Holyrood, we toned that back a bit to not Holyrood at any particular time and at what 9 9 build up an imaginary amount of money that rating, when they could decide to take a 10 would be returned. 10 unit down due to the availability of 11 MR. COXWORTHY: 11 recalled power, a certain amount of recalled 12 So, this plan, is it used operationally by 12 power over the LIL, LTA? Is there going to 0. 13 the people at Holyrood or is it really just 13 be a detailed written protocol that outlines 14 a budgeting exercise for Hydro? 14 this is when it's safe or prudent or 15 MR. HAYNES: 15 reasonable to take down one of the units. MR. HAYNES: 16 A. It's a budgeting exercise, but it's revised 16 17 occasionally from the point of view of the 17 The current thing would probably be revised A. system changes and so on, provide forecasts, 18 18 to include the imports from Maritime link or 19 19 LIL from that perspective. yes. 20 20 MR. COXWORTHY: MR. COXWORTHY: 21 21 Q. I would think the operations people would Q. That hasn't been done yet? 22 need to know at least, look, how much fuel 22 MR. HAYNES: 23 do we need to have on hand, for instance. 23 Not to my knowledge, but it would certainly A. 24 24 be a thing that would have to be done MR. HAYNES: 25 A. Yes, well, they look at the load forecast. 25 because basically need the operating Page 252 Page 250 They look at the expected utilization. We 1 1 guidelines, but the decisions on a daily 2 have a 28 delay delivery time for delivering 2 basis with respect to purchases and stuff 3 bunker C to Holyrood, so that's all part of 3 like that, they're made on a daily basis by 4 that. You always have to look at the load 4 involvement of the folks in hydro generation 5 5 forecast and expected production. and thermal generation. 6 6 MR. COXWORTHY: MR. COXWORTHY: 7 So, is the plan more of sort of a living 7 Q. I'm not sure whether the current operating Q. 8 document as opposed to a one time only here 8 guideline for Holyrood in this respect are 9 9 that's filed in January and on the record. If they're not, can I have 10 an undertaking to have them produced? MR. HAYNES: 10 I think from a point of view of the RSP, (UNDERTAKING) 11 A. 11 it's kind of reviewed annually from that 12 12 MR. HAYNES: 13 perspective, but on an ongoing basis, I 13 The Holyrood guidelines or how we dispatch A. generation can't tell you exactly how often it is, but 14 14 15 it is done on a regular basis. You know, 15 MR. COXWORTHY: 16 they hydrothermal split, there a re-forecast 16 Q. Oh yes, thank you for that, you're right. It's not just Holyrood, although that's my 17 done on a monthly basis with respect to, you 17 18 know, this is how much we delivered, this is focus, but overall, yes, the whole Island 18 19 system. What changes would you make to the what our load—if there's a decrease in our 19 20 20 Island system? What instructions would you expected total demand, say, from 21 Newfoundland Power and Industrial Customers. send out to the various operators if you're 21 22 that is reflected on a—there is a monthly 22 going to bring in 100 megawatts over the 23 forecast sheet. If it's not a large change, 23 recall, you know, what other things have to 24 it won't be adjusted, but if there's a 24 stand down and be modified? What's the

significant change, it will be tweaked.

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protocol or guidelines for that? If we

April 23, 2018 NL Hydro 2017 GRA Page 253 Page 255 1 could have the current—for the Island **CERTIFICATE** system. Thank you, Mr. Haynes for pointing 2 I, Judy Moss, do hereby certify that the foregoing is that out. I'm not going to suggest, Madam 3 a true and correct transcript of a hearing in the 4 Chair—I'm sorry. matter of the 2017 General Rate Application by 5 (1:27 P.M.) Newfoundland Hydro heard on the 23rd day of April, 6 GLYNN, Q.C.: 2018 at the Public Utilities Commission office, St. 7 Q. I'm just looking to Mr. Young because he has John's, Newfoundland and Labrador and was transcribed 8 a bit of question on his face. by me to the best of my ability by means of a sound 9 MR. YOUNG: apparatus from audio that was not recorded by 10 Q. I take some comfort in the fact that Mr. Discoveries Unlimited Inc.. Haynes just wrote that down because I was 11 12 wondering exactly what that is, but he'd Dated at St. John's, NL this know better than me. So, as far as I know 13 23rd day of April, 2018 we can provide that. If that's not correct, 14 15 I'll confirm otherwise. 16 GLYNN, Q.C.: 17 Okay, so the undertaking is noted. Q. Judy Moss 18 MR. COXWORTHY: Discoveries Unlimited Inc. I'm not asking for something to be 19 20 manufactured. If it exists; it exists. 21 MR. HAYNES: 22 It's basically the current guidelines for A. 23 actually dispatching of generators and – 24 MR. YOUNG: 25 Q. Right, the operating instructions. Page 254 MR. HAYNES: 1 2 Operating instructions, yes. A. 3 MR. COXWORTHY: 4 Sure, thank you. Madam Chair, I'm going to Q. 5 suggest now is a time to break. 6 CHAIR: 7 We'll come back to you in the morning. 8 Upon conclusion at 1:29 p.m. 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

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Abandoned - 164: Ability - 105:15, 117:7, 134:17, 134:18, 147:22, 160:13, 192:14, 221:24, 227:4 **Able -** 6:1, 9:21, 32:6, 43:11, 43:20, 89:1, 131:8, 147:21, 148:9, 202:15, 229:24, 237:25, 241:21 Aborn - 116:17 **Above -** 181:2, 181:10 Absorb - 233:20, 234:16, 234:21 **Absorbed - 124:25** , 128:10 **Absorbs -** 124:22 **AC -** 170:20, 170:21, 170:25, 171:1 **Academic - 113:13** Accept - 51:9, 192:6, 195:1 Acceptable - 195:4 **Accepted - 142:1**, 142:3, 218:11, 228:11, 228:14 Access - 83:18, 89:1, 96:5, 117:4, 147:17, 147:21, 160:5, 160:20, 179:16, 179:25, 181:6, 213:13 Accommodate - 2 9:7 Accordance - 35:5 According - 69:8, 101:12, 111:10, 111:12, 111:15, 119:22, 156:6, 157:12 **Account - 3:25**, 4:1, 4:9, 13:18, 13:19, 13:23, 16:5, 39:16, 85:15, 85:19, 86:6, 86:9, 86:12, 86:14, 86:20, 99:3, 99:4, 99:6, 99:22, 102:2, 102:9, 103:14, 116:25, 122:11, 167:5, 172:3, 174:13, 175:7, 175:10, 183:10, 183:17, 183:20, 183:23, 214:3,

221:6, 222:5, 227:21, 232:25, 248:25 Accountability - 4 2:19 Accountable - 120: Accounts - 3:22, 13:21, 102:9, 187:3, 187:4 **Accruing -** 86:13 Accumulate - 103: 14 **Accurate - 201:1**, 214:18 **Achieve -** 221:9, 239:21 **Achieved -** 239:21 Achieves - 221:1 Achieving - 239:25 Across - 42:23, 131:16, 164:6, 165:24 Act - 37:19, 151:8, 245:8 **Acting - 166:6** Action - 65:22. 109:1, 109:11 Activities - 193:4, 193:5, 193:7, 193:16 Actual - 11:9, 11:13, 12:16, 13:4, 25:3, 25:10, 27:9, 78:9, 104:13, 105:23, 147:11, 210:10, 215:1, 248:20 **Actuals -** 46:17. 51:20, 237:13 Adapt - 105:20 **Adapted - 56:22 Add -** 42:24, 47:16, 60:5, 71:11, 87:5, 102:10, 163:3, 165:23, 184:1, 193:19 Added - 180:1 Additive - 54:17 **Address - 25:6**, 53:7, 54:19, 62:13, 151:20, 151:21 Addressed - 16:11, 154:25 Addresses - 155:9 Addressing - 51:11 133:20 Adequacies - 71:9 Adequately - 16:11

Adjunctive - 222:2

1

Adjusted - 250:24 Adjustment - 76:2 0, 156:10 Admittedly - 94:15 **Adopt -** 231:4 Advance - 8:4. 13:12, 37:5, 81:15, 84:19, 85:11, 86:2, 87:2 Advanced - 87:15 Advantage - 103:1 2, 156:14, 174:11, 176:10, 249:2 Advantageous - 1 33:13, 133:16 Advocate - 181:22, 218:18 **Affect -** 7:11, 38:4, 107:22, 138:10, 208:4 **Affected - 163:4 Affecting -** 138:9, 155:20 Affects - 230:24 Affiliates - 93:3 Afternoon - 182:24 **Against - 95:7**, 172:4, 175:7 Aging - 62:17 **AGM - 204:6** Agree - 18:4, 76:10, 77:18, 89:12, 102:24, 108:11, 150:22, 151:1, 151:25, 155:1, 169:23, 173:23, 177:3, 193:23, 207:20, 212:4, 214:11, 216:4 **Agreed -** 71:10 Agreement - 38:18 , 92:13, 121:18, 121:24, 125:1, 146:1, 146:2, 146:5, 146:11, 146:21, 148:16, 148:18, 148:19, 148:25, 149:13, 150:1, 150:14, 151:7, 151:13, 152:1, 153:13, 153:19, 153:25, 154:10, 154:21, 155:23, 161:18 Agreements - 147: 12 **Agrees -** 72:7 **Ahead -** 104:3, 220:23 Aid - 54:15, 117:1,

165:3, 174:14 **Air** - 53:24, 54:16, 87:8, 133:7 Allocated - 130:4 **Allow -** 94:13, 148:20, 232:7 Allowance - 44:22, 127:22 **Allows - 148:19 Alone -** 63:21, 221:25 **Altered - 226:8 Altering - 121:17 Alternate -** 121:18, 134:13 Alternatives - 62:2 4, 63:5, 112:3 **Amalgam - 192:1 America - 179:24 Amount - 4:2**, 13:17, 36:7, 38:4, 38:6, 53:9, 100:6, 102:12, 102:14, 117:7, 118:17, 125:4, 126:13, 126:14, 164:5, 175:15, 202:8, 202:16, 203:24, 212:13, 228:12, 229:13, 229:17, 237:9, 249:9, 251:11 **Amounts - 3:21**, 3:24, 173:11, 228:5 **Ample -** 202:23 Analyses - 33:5 **Analysis - 17:10**, 18:10, 45:12, 49:18, 49:22, 61:14, 61:19, 70:25, 136:3, 136:14, 138:12, 212:14 Analyzes - 46:9 **Announcements -**42:16 **Annually - 247:23**, 247:25, 250:12 Anticipate - 18:14, 69:9, 101:13, 132:24, 148:6 Anticipated - 26:21 , 27:20, 31:20, 34:14, 51:9, 54:13, 144:13 **Anymore -** 86:14, 166:19 **Anyway -** 35:18, 54:13, 61:19, 78:22, 120:21, 141:22, 160:16,

Anywhere - 147:9 Apologies - 157:10 , 244:1 Apologize - 182:11 , 190:12, 192:8, 242:4 **Apparent - 141:24 Appealed -** 152:22 Appear - 177:4, 212:3 **Appeared -** 151:16 **Appears - 174:17**, 191:14, 197:8, 201:19, 211:21 Application - 3:20, 3:23, 8:5, 16:3, 16:21, 24:2, 25:3, 30:25, 33:10, 33:12, 127:20, 150:7, 165:11, 175:14, 175:17, 178:14, 178:21 Applications - 6:15 , 24:18, 24:23, 70:3, 165:21 Appreciate - 167:1 **Approach - 16:12**, 18:13, 88:22, 94:4, 106:3 Appropriate - 17:9, 24:19, 43:7, 102:18, 180:22 Appropriately - 19 5:13 Approval - 26:4, 124:8, 165:12, 245:16 Approved - 2:3, 24:20, 72:7, 165:5, 249:1 Approximately - 1 35:25, 180:2 **April -** 1:25, 57:14, 58:21, 58:22, 167:23, 177:13 Area - 3:20, 15:5, 48:2, 51:25, 54:3, 59:24, 143:5, 164:15, 242:1 Areas - 41:23, 46:21, 132:22 Aren't - 89:1, 124:10, 154:4, 232:23 **Argue -** 176:14 **Argument - 22:13**, 89:6, 89:10, 147:16, 170:9, 174:2, 174:22,

185:18

232:8 **Arisen -** 186:18 Arrangements - 35 :25, 244:13 Arrive - 44:24, 193:21, 198:8, 219:24 **Arriving -** 219:20, 220:16 **Article -** 67:23, 138:21 **Articles - 67:25 Ascribed -** 190:13 **Aspect -** 33:14, 34:6, 115:13, 209:8 **Aspects - 116:23**, 122:10, 128:7, 146:20, 151:10 **Assemble -** 186:12 **Asset -** 13:7, 13:8, 25:16, 52:14, 62:17, 62:21, 85:6, 172:5, 177:21, 178:4 **Assets -** 59:16. 84:25, 87:18, 149:17, 168:17, 169:11, 170:13, 170:23, 174:8, 174:12, 222:14, 223:24, 224:19, 228:2, 228:3 **Assigned -** 187:1, 187:17, 193:3, 193:15 Assist - 23:23, 226:15 Assistance - 225:2 3, 226:22 **Assistant - 116:13**, 182:8 Assisting - 61:22 Associated - 4:18, 94:1, 176:15 **Assumed -** 135:14 Assumption - 70:4 , 109:6, 230:19 Assumptions - 65: 18, 71:15, 78:6, 107:2, 213:3, 213:4, 213:6, 213:14 Assurances - 197: **Assured - 197:21 Atlantic -** 79:11. 79:15, 82:1, 220:11, 220:20 **Attached - 191:24** Attachment - 28:11 , 76:4, 189:5,

190:1, 191:10, 218:17 Attempt - 215:25 Attended - 187:12, 187:21 Attention - 32:13, 191:19 Attributable - 227: Attribute - 208:10 Attributed - 240:19 Attributes - 67:10 Avail - 87:3, 87:23, 90:22, 122:9, 171:1 Availability - 233:2 1, 251:10 Available - 14:12, 19:8, 36:11, 65:14, 141:9, 144:19, 145:14, 147:3, 159:4, 159:5, 159:9, 159:13, 160:12, 202:12, 228:18, 229:5, 230:17, 232:4, 232:17, 237:3 **Avalon - 3:9**, 14:20, 14:24, 15:1, 15:13, 15:14, 17:1, 17:21, 18:23, 21:6, 22:20, 25:16, 25:17, 28:15, 28:17, 28:23, 29:7, 30:8, 31:14, 36:8, 36:15, 36:17, 36:20, 37:22 **Avenue -** 94:14 **Average -** 5:14, 77:22, 111:5, 134:19, 134:23, 248:2 Avoid - 90:19, 102:19, 104:22, 115:8 Avoided - 33:23. 99:18, 161:6 **Avoiding - 100:18**, 175:8 Aware - 12:14, 16:10, 16:15, 24:24, 26:11, 28:8, 45:21, 49:22, 60:8, 79:8, 83:12, 84:5, 114:16, 118:10, 146:14, 147:13, 180:21, 218:21, 219:1, 220:2, 230:15, 231:25,

236:21, 240:22

Axis - 216:2

48:17 244:21 31:1 242:11 216:4 252:3 138:5 190:21 245:25

В Backed - 46:5. **Backup -** 55:16, **Badcock -** 54:23 **Balance - 17:15**, 35:19, 50:2, 102:8 Balances - 16:4, Band - 215:5, 215:7, 215:8, 215:14, 215:15, 215:16, 215:17, 217:1, 217:7, 217:19, 242:8, Bands - 215:24, Barrel - 29:24 **Base -** 28:15. 110:1, 134:3 **Based -** 4:25, 10:3, 11:2, 11:8, 12:3, 12:4, 12:8, 13:10, 26:14, 33:24, 42:6, 44:19, 44:20, 46:1, 65:4, 72:10, 77:23, 79:9, 102:7, 108:23, 175:8, 181:8, 197:13, 206:25, 207:6, 208:20, 237:15, 248:8, 249:5 Basis - 5:7, 15:8, 24:17, 40:5, 44:25, 46:13, 82:7, 130:1, 136:5, 149:6, 195:19, 197:5, 209:6, 213:3, 219:9, 237:11, 239:17, 245:8, 250:13, 250:15, 250:17, 252:2, **Basket -** 54:16 **Baskets - 53:25 Battery -** 137:14, **Bay -** 15:5, 20:2, 20:4, 20:5, 20:18, 21:8, 22:8, 22:14, 50:11, 149:6, 149:8, 149:17, 157:23 **Bear -** 12:23, **Beat -** 65:11. 122:8, 123:21, **Become - 141:23** 141:17, 142:21, **Becomes - 231:2** 143:7, 144:6, Behind - 85:5,

86:21, 137:6 **Belabour - 172:10 Bell -** 224:10 Belonged - 149:3 **Below -** 97:6 Beneficial - 110:8 **Benefit -** 17:9, 18:10, 47:21, 49:18, 49:21, 87:21, 132:21, 133:23, 172:6, 182:12 **Benefits -** 16:12, 87:6, 179:18, 225:19 Bi - 169:2, 225:7, 225:17, 225:18, 230:25 Big - 108:1, 214:2 **Biggest -** 52:8, 52:18, 65:24, 87:22, 103:13, 216:10 **Bilateral - 187:22 Bill** - 111:1 **Billed - 226:9** Bills - 118:18, 135:24 **Bit -** 18:19, 21:4, 21:10, 30:17, 30:18, 32:15, 41:7, 42:20, 43:4, 50:24, 54:11, 57:13, 66:25, 98:2, 106:1, 109:2, 111:24, 124:10, 149:14, 161:3, 176:17, 179:8, 199:6, 201:4, 220:13, 220:23, 224:19, 225:9, 236:5, 240:14, 247:15, 247:18, 249:8, 253:8 **Blank - 241:8**, 241:11 **Block - 156:7**, 159:3 **Board -** 16:10, 17:3, 17:19, 24:18, 26:5, 71:10, 72:7, 85:20, 88:20, 89:5, 89:13, 92:15, 92:18, 92:22, 97:12, 97:22, 99:23, 101:2, 104:12, 106:6. 106:19, 106:22, 119:19, 120:10,

149:24, 151:6, 151:13, 151:24, 152:3, 152:4, 152:11, 152:12, 152:22, 154:1, 155:4, 165:5, 165:12, 165:21, 182:14, 245:9 **Boarder - 156:15** Board's - 103:16, 104:18, 151:10, 152:17, 155:9 **Bodies -** 179:12, 224:10 **Bonus - 126:13 Bonuses - 126:12**, 126:19, 127:15 **Boots - 246:22 Borders -** 81:5 **Borne - 177:4 Borrow -** 123:10 **Both -** 133:23, 174:22, 190:2, 191:5, 195:8, 203:24, 209:16, 209:19, 210:18, 225:9 Bottom - 68:22, 69:6, 69:8, 166:24, 206:24, 206:25, 215:15 **Bough - 104:1 Bought -** 93:13 **Bound - 108:11 Break -** 130:16, 130:25, 254:5 **Breakers** - 170:20 **Breaking - 172:23 Breton - 91:19.** 98:6, 98:11 **Bridge -** 64:1 **Brief -** 9:24, 206:3 **Brings - 225:7** British - 77:18, 79:5, 79:20, 81:6 Broader - 116:22, 223:12 **Broken - 40:8 Brook -** 36:6, 166:24 **Brought - 16:3**, 119:19, 123:14, 123:20, 128:25, 129:4, 129:8, 129:14, 159:15, 166:24, 191:18, 196:8, 221:23, 230:16, 236:8 **Brown - 155:1 Bruneau -** 67:16

Brunswick - 79:17,

166:15, 167:1, 220:12 **Budget -** 2:2, 8:5, 13:9, 23:21, 23:24, 26:3, 124:7, 124:16, 124:22, 126:3, 128:8, 178:9, 186:24, 217:10, 217:13, 247:25, 248:20 Budgeting - 249:1 4, 249:16 **Budgets - 125:7 Build -** 62:2, 102:14, 117:7, 162:10, 175:8, 249:4, 249:9 **Building -** 164:17 **Buildings - 133:10 Built - 13:20**, 38:14, 69:22, 87:18, 87:19, 161:19 Bulk - 181:1, 181:9 **Bullet - 19:3 Bump -** 37:19 **Bunch -** 96:13, 107:22, 108:2 Bunker - 250:3 **Burn -** 85:17, 98:10, 98:12, 100:10, 102:13, 248:23, 249:3 **Burned -** 101:11 **Burning - 98:5**, 98:19, 99:9, 103:10 **Business -** 59:4, 85:16, 93:2, 99:20, 127:16 **Bust - 156:11** Buy - 132:15, 165:9, 166:10, 166:11, 166:20, 167:4, 245:4, 246:3, 246:20 Buying - 91:17, 93:9, 244:5, 244:6, 244:16, 244:20

CA - 93:19, 121:14,

126:11, 127:5, 135:6, 173:4 Cable - 140:2, 140:6 Calculated - 10:3, 11:18 Calculations - 22:1 9 Call - 31:17, 38:25,

82:17, 94:24, 99:4,

231:13

Catch - 55:8

Cause - 105:6,

106:13, 108:12,

184:16, 226:8

166:18, 183:4, 185:6, 215:7, 215:15, 227:25, 248:6 Called - 72:19, 74:21, 74:24, 75:5, 82:2, 183:23, 198:4, 199:19, 237:24 Canada - 79:11, 79:15, 220:12, 220:20 **Canal - 149:8** Can't - 10:10, 49:14, 55:23, 61:17, 70:24, 71:5, 121:2, 141:2, 146:10, 160:16, 160:24, 161:24, 174:20, 176:9, 216:16, 230:2, 230:3, 234:21, 246:19, 250:14 Capability - 3:10, 14:22, 18:23, 28:15, 28:25, 57:23, 197:17 Capacity - 12:22, 19:6, 25:5, 29:16, 30:3, 147:7, 233:7 Cape - 91:19, 98:5, 98:11 Capital - 6:18, 6:20, 7:11, 7:22, 7:24, 8:4, 9:10, 11:8, 12:4, 12:8, 12:10, 13:9, 23:21, 23:24, 26:3, 70:17, 71:7, 71:14, 71:23, 72:8, 164:25, 165:11, 165:21, 186:24, 194:4, 194:6, 226:19, 226:20, 226:21, 227:6, 242:21 Carbon - 134:6, 138:9 Card - 198:24 **Care -** 40:1, 248:13 **Career - 129:14** Case - 54:10, 85:17, 134:14, 136:21, 141:20, 141:24, 142:5, 149:16, 166:23, 184:9, 192:4,

Caused - 40:1. 40:18, 40:22, 41:2, 41:11, 41:17, 42:20, 43:17, 187:20 Causing - 42:15 Cautiously - 47:16, 48:14 **Caveat - 162:3 CEA -** 42:23, 42:25, 43:1 Cease - 56:8 Cent - 80:21, 87:23, 88:1, 88:2, 88:12, 108:25, 118:14, 137:22, 138:15, 162:1, 219:19, 221:12, 221:16, 246:20 **Centre -** 59:5, 124:24, 128:12, 164:3, 164:10, 179:10, 179:11, 179:23 **Centres - 162:12**, 162:13, 162:15, 163:9, 163:10, 163:12, 163:15, 166:1, 179:24 Cents - 5:15, 5:23, 6:10, 68:15, 68:16, 68:17, 76:13, 76:22, 76:24, 77:1, 77:15, 77:23, 85:12, 88:14, 109:3, 109:7, 111:3, 112:10, 112:22, 112:23, 112:24, 113:4, 113:9, 114:15, 135:11, 135:18, 136:21, 137:11, 137:17, 138:12, 162:24, 163:2, 163:3, 163:6, 167:12, 207:7, 207:16, 208:7, 208:9, 216:1, 220:5, 220:16, 221:9, 222:1, 222:7, 246:20 **CEO -** 66:10, 206:2 Certain - 7:4, 10:8, 11:3, 56:12, 78:24, 108:15, 118:17, 132:19, 155:18, 183:8, 184:14, 184:22, 196:6, 233:8, 233:10, 234:10, 245:21, 245:24, 251:11

25:15, 26:13, 29:14, 30:1, 36:9, 42:18, 44:2, 50:21, 51:9, 75:8, 81:8, 104:18, 108:12, 109:15, 110:4, 110:17, 117:18, 118:21, 120:20, 138:4, 138:14, 141:20, 142:8, 145:20, 150:1, 187:22, 189:9, 192:4, 195:1, 206:8, 211:3, 211:16, 214:11, 215:25, 217:23, 220:11, 220:23, 223:14, 248:19, 251:23 **Certainty - 146:17** Cetera - 72:12, 137:25, 170:20, 173:13 **CF -** 117:4, 152:5 Chain - 222:20, 223:2, 223:6, 223:21, 239:24 **CHAIR -** 1:2, 1:10, 1:15, 1:24, 2:9, 2:22, 58:7, 58:8, 75:24, 89:4, 89:20, 89:25, 91:23, 119:3, 130:17, 130:20, 130:21, 131:2, 131:5, 150:5, 150:18, 152:17, 154:5, 154:18, 155:6, 155:13, 155:25, 181:21, 181:25, 182:19, 192:8, 253:4, 254:4, 254:6 Chaired - 115:23 **Chairman -** 119:3 Challenge - 126:4. 128:19, 138:5, 164:7, 238:24, 239:3, 246:11 Challenged - 128:2 0, 152:18, 152:23, 154:1, 155:24, 198:23, 238:18 Challenges - 146:1 3, 147:13, 151:19 Challenging - 130: **Chance -** 231:18 **Change - 17:23**, 27:6, 50:25, 56:21, 71:18, 71:19, 71:23, 103:19,

103:24, 104:23, 105:23, 123:6, 179:20, 180:14, 206:7, 208:11, 211:21, 212:2, 212:3, 212:7, 212:16, 214:6, 250:23, 250:25 Changed - 54:22, 83:1, 189:18, 201:9 **Changes - 13:12**, 70:15, 208:3, 215:24, 249:18, 252:19 **Changing -** 54:16, 216:18, 231:19 **Chaos - 111:25 Chapter - 183:13** Characterize - 192: Charge - 226:1, 226:14 Charged - 225:25, 226:16 Charges - 226:7 Chart - 70:22, 72:17, 72:18, 74:9, 74:10, 74:14, 74:25, 75:5, 75:7, 75:10, 75:21, 76:25, 78:24, 111:16, 218:19 **Cheap -** 68:1. 138:6 **Cheaper - 29:14**, 49:13, 77:16, 99:9, 99:17, 111:20 **Cheapest - 29:12**, 29:14 Check - 4:14, 4:16, 5:18, 6:1, 6:2, 76:14, 76:17 Checked - 128:20 Choice - 112:1 Chosen - 220:6 **Chunks - 199:5** Churchill - 87:14, 136:18, 143:10, 143:12, 146:12, 146:22, 146:25, 148:5, 148:10, 149:2, 150:11, 170:18, 199:16, 200:1 Circulated - 2:5 Cited - 135:19 Clarified - 76:23 **Class -** 87:19 **Clean -** 54:4, 54:5 Clock - 127:2 Close - 37:10,

Certainly - 2:19,

92:1, 220:6 Closed - 112:8, 119:17 **Closer - 81:4** Co - 117:4, 152:5 Coal - 98:5, 98:10, 98:11, 98:19, 98:25 Coast - 126:5 Coish - 185:11, 186:6, 186:22, 187:14 Colleague - 167:17 Colleagues - 182:6 **Collect - 18:7**, 249:4 Collective - 38:17, 41:10, 43:4, 44:2 **Colour - 182:10 Columbia -** 77:18, 79:6, 79:21, 81:6 Combination - 137 :15 Come - 23:22, 35:16, 42:4, 43:3, 46:10, 51:21, 54:24, 60:10, 77:25, 85:1, 109:2, 113:19, 120:7, 121:8, 122:23, 124:11, 130:12, 165:4, 166:25, 168:21, 172:22, 202:24, 208:25, 226:22, 227:10, 243:25, 244:23, 254:7 Comes - 15:7, 25:10, 34:4, 83:25, 86:3, 98:19, 124:6, 150:24, 152:4, 165:17, 202:11, 227:7, 230:8, 233:23 **Comfort -** 87:17, 201:4, 240:11, 253:10 Comfortable - 17:1 2, 161:1, 239:4 **Coming -** 37:11, 43:25, 87:2, 91:8, 91:14, 91:19, 92:10, 92:11, 93:1, 104:1, 111:1, 160:6, 199:12, 206:5 **Comment -** 84:14, 86:24, 97:23. 97:25, 107:16, 189:22 Commenting - 193 :24 **Comments - 35:15,**

192:16 Commercial - 97:1 0, 180:7, 228:19 Commercially - 90: 11 Commission - 229: Commissioned - 1 14:23, 168:25, 169:22, 173:18, 202:14, 203:21, 219:23, 225:13, 225:16, 228:16, 230:1 Commissioner - 5 8:14, 150:13, 150:17 Commissioning -121:20, 168:3, 168:13, 169:5, 169:23, 170:1, 170:8, 170:10, 170:12, 171:8, 171:12, 171:24, 172:11, 172:13, 173:18, 173:22, 176:1, 225:4, 231:19 Committee - 112:1 5, 115:17, 115:23, 116:4, 116:6, 116:8, 116:10, 116:12, 116:21, 117:11, 117:14, 118:3, 118:4, 118:8, 118:24, 119:1, 120:4, 120:16, 121:11, 122:4, 122:14, 123:15, 123:18, 123:19 Committees - 119: **Common - 79:18**, 149:7 Communication -183:4, 184:13 Communications -187:10, 187:23 Companies - 111:2 0, 129:1, 140:16 Company - 40:22, 83:1, 122:22, 122:24, 123:8, 129:1, 142:17, 143:16, 143:17 Comparable - 195: 18, 199:5 Comparative - 79:1 Comparator - 79:1

Compare - 79:18, 189:24, 190:21, 191:12, 209:19, 219:4, 219:11 **Compared - 220:2** Comparison - 76:5 Comparisons - 76: Competent - 174:3 Competing - 79:13 . 95:7 Competitive - 220: 21 **Complete - 190:6,** 191:11, 191:16, 191:21, 193:9, 194:24, 196:18, 200:14 **Completed - 57:10,** 174:9, 191:3, 191:4, 193:6, 193:11, 193:18, 193:21, 194:6 Completely - 11:14 , 245:18 Completeness - 19 3:9 Completion - 171: 5, 190:3, 190:15, 191:6, 191:24, 194:21, 195:5, 198:9, 204:14 **Complex -** 231:18 Complexities - 247 Complications - 1 68:23 Component - 7:12, 147:24, 147:25, 181:6, 195:16, 195:17, 240:20 Components - 126 :25, 139:16, 166:16, 168:20, 172:24, 173:21, 191:22, 215:9, 238:1 Compress - 56:2 Comprises - 115:2 5, 116:1, 168:16, 238:16 Conceivable - 62:2 1, 147:20 Conceived - 61:3 Concept - 99:12. 99:14, 161:10 Concern - 48:25, 60:8, 62:10, 62:12, 69:24, 134:21,

Concerned - 110:1 6, 134:9, 134:11, 134:15, 134:16, 134:17, 165:13, 199:1 Concerning - 9:10 **Concerns - 28:1**, 133:21, 166:8 **Conclude -** 97:20 Concluded - 25:21 Conclusion - 16:21 254:8 Concoct - 119:20 Condenser - 55:5. 55:11, 57:3, 57:20, 57:24 Conditions - 229:2 3, 246:15 Conduit - 120:10 Confess - 210:24 Confidence - 88:21 . 88:25 Confident - 246:24 Confidential - 89:1 4, 91:24, 92:4, 97:7, 142:4, 245:7 Confidentiality - 9 1:25, 92:12, 92:23 **Configuration - 16** 0:25, 206:23 **Confirm - 77:4**, 154:15, 155:11, 155:24, 253:15 Confirmed - 154:1 Conflicting - 118:1 Confusion - 77:10 Congested - 54:3 Connected - 40:8, 214:15 Connection - 21:3, 73:6 Conscious - 111:1, 231:7 Consequence - 35: 17 Conservation - 13 1:10, 131:16, 132:17, 132:18, 133:5, 135:8 Conservative - 196 **Conserve -** 133:22 Consider - 40:9, 152:13. 152:14. 168:2, 168:12, 169:4 Considerably - 16

:16, 33:16, 122:24 Considerations - 2 5:14, 110:9, 232:24 Considered - 51:1, 120:3, 120:13, 121:13, 121:16, 121:25, 123:2, 131:9, 135:5, 200:13, 203:19, 212:16, 225:12, 227:25, 232:9, 244:15 Considering - 104: 11, 121:11 Consistent - 71:3 **Consists - 117:11** Consortium - 82:2 **Constant - 68:19** Constitutes - 238: Constraint - 232:1 Constraints - 230: 14, 230:20, 231:10, 233:8, 233:20 Constructed - 136: Construction - 87: 11, 87:13, 126:6, 165:3, 168:23, 190:3, 190:6, 191:15, 191:21, 223:1, 223:3 Consultant - 130:1 Consumer - 39:17, 40:21, 41:12, 46:19, 86:16, 106:18, 107:12, 107:13, 131:16, 137:1, 181:22, 218:18 Consumers - 76:11 , 101:13, 110:25, 111:16, 111:17, 112:1, 118:7, 121:12, 121:13, 124:3, 124:14, 131:11, 133:17, 134:4, 136:7, 136:10 Consumption - 13 5:16, 135:23 Contact - 183:24, 185:5, 186:3 Contacts - 244:7 Contemplated - 18 0:14 Contentious - 155: Context - 64:18,

165:22, 165:23

7:14

Consideration - 29

131:22, 223:13 Continent - 164:6, 219:15 Contingency - 21: 18, 28:18 **Continue - 34:1**, 51:1, 53:19, 54:6, 65:15, 238:23 Continued - 65:12 Continuing - 85:17 . 224:2 Continuous - 44:2 **Contract - 36:6**, 45:18, 82:5, 84:10, 93:24, 117:4, 144:3, 244:14, 244:22 Contracted - 47:19 Contractors - 54:2 1, 224:23, 240:7, 240:13 **Contracts** - 81:16, 81:18, 83:9, 83:12, 84:3, 84:6, 126:16, 143:21, 143:25, 161:21 Contribute - 43:7, 122:9, 123:22, 221:24 Contributed - 40:2 Contribution - 124: 13, 165:3 Contributor - 51:1 **Contrived - 113:20** Control - 41:2, 59:4, 59:5, 85:20, 107:3, 115:13, 124:24, 128:12, 135:2, 151:8, 179:10, 179:11, 179:23, 179:24, 216:6, 216:14, 216:19, 217:1, 217:13, 221:24, 239:8, 239:13 Controlling - 125:8 **Controls -** 87:14, 225:6, 225:8, 231:15, 231:16 Conversion - 57:3 **Convert - 134:5** Converter - 140:8, 171:4, 233:14 Converters - 230:2 Converting - 110:1 1, 112:5, 133:10 Converts - 55:5, 55:10 Coordinate - 185:2

186:11 Coordinates - 210: Coordination - 235 :4 Copies - 2:4. 182:2, 182:5, 182:14, 182:15 Copy - 188:9, 188:14, 188:19 Corner - 36:6, 164:12 Corporate - 45:14. 45:17 Corrected - 211:13 **Costing -** 136:9, 244:24 Couldn't - 147:17, 152:2, 213:16 Council - 121:1, 143:14, 169:20 Counsel - 153:21, 182:24 Counted - 66:18 Country - 42:23, 165:24, 219:14 Couple - 7:19, 54:4, 126:6, 161:3, 163:16, 167:21, 185:17, 187:13, 197:22 Course - 65:21, 97:18, 161:9, 189:11, 207:8, 221:3, 236:25, 237:3, 241:16, 242:9 Court - 146:4, 146:13, 147:13, 151:19, 152:6, 153:16 Courts - 153:7, 153:9, 153:18, 154:12, 154:24 Cover - 19:9, 21:13, 21:22, 28:17 **Covered -** 26:3, 143:13, 162:15, 162:16 **Covers - 238:7** Cowan - 116:14 **Craig -** 116:15 **Created - 70:7**, 94:21 **Creating -** 59:12, 179:21 **Crews - 178:11 Crisis - 127:17**

Criteria - 7:2,

Critical - 59:9,

33:17, 45:5

148:25, 152:7, 152:9 **CROSS - 3:3.** 58:11, 92:5, 182:4, 182:21, 188:7, 219:14, 219:15 Crossed - 232:13 Crunch - 83:25 **CT -** 5:16, 6:18, 6:20, 12:11, 23:16, 23:17, 26:9, 28:13, 30:3 Cumulative - 4:2 Current - 9:10. 9:14, 19:15, 53:23, 55:3, 57:2, 102:11, 104:8, 108:7, 146:14, 175:13, 197:1, 251:17, 252:7, 253:1, 253:22 **Currently -** 69:16, 94:12, 95:17, 96:21, 96:23, 162:1, 244:5, 244:11 **Curtail - 164:1** Curtailable - 36:3 Curtailing - 132:19 Customarily - 219: **Customer - 37:13**, 39:15, 39:24, 39:25, 40:20, 42:2, 44:16, 49:11, 50:3, 101:5, 103:17, 133:22, 133:24, 134:3, 135:8, 135:10, 135:13, 135:16, 135:23, 138:18, 148:7, 162:22, 165:17, 174:12, 183:1, 183:23, 184:15, 186:4, 186:5, 186:19, 186:20, 187:2, 187:6, 216:13, 249:5 Customers - 12:23 , 17:1, 17:25, 18:14, 36:1, 37:9, 40:6, 40:11, 41:7, 42:14, 43:6, 43:9, 70:14, 85:23, 100:24, 102:19, 108:17, 113:13, 117:24, 134:2, 135:21, 135:25, 162:5, 169:14, 181:23, 183:2,

184:5, 184:13, 184:16, 187:13, 209:5, 233:16, 250:21 Customer's - 186: 14 Cuts - 127:18 Cutting - 124:12, 125:24 D

DAFOR - 50:18, 50:22, 52:5, 53:3

Deal - 69:23, 139:7

Dealt - 89:6, 121:4

Deciding - 251:7

Decision - 17:13,

115:7, 120:23,

134:8, 152:17,

244:2, 244:10,

Decrease - 15:2,

105:23, 250:19

Deferral - 3:22.

3:24, 3:25, 4:9,

15:6, 15:9, 27:23,

Deemed - 228:18

13:18, 13:19, 16:5,

85:15, 86:6, 86:9,

86:12, 86:20, 99:3,

99:4, 99:6, 99:22,

116:25, 122:11,

33:24, 44:2, 44:12,

Decisions - 112:5,

Dealing - 25:12,

86:19, 127:6,

Debt - 111:7 **Decide -** 104:13,

184:22

251:9

231:8

252:1

50:22, 52:5, 53:3 **Daily - 18:20**, 33:25, 64:16, 90:21, 149:19, 252:1, 252:3 **Dalley - 185:18**, 185:21, 188:2 **Dam -** 191:8 **Data -** 46:9, 46:10, 162:12, 162:15, 163:8, 163:10, 163:12, 163:15, 164:3, 164:10, 165:25 **Date -** 1:25, 57:6, 162:16, 178:16, 178:22, 194:23, 196:2, 196:3, 196:6, 196:13, 198:16, 200:10, 201:6, 204:3, 228:15 **Dates -** 197:20, 198:1, 198:2,

172:3, 174:13, 175:6, 175:9, 214:3, 221:5, 221:6, 222:4, 227:21, 248:25 Deferred - 16:8 **Deficit -** 102:8 **Definitely -** 75:14. 172:25 198:8, 201:18, **Definition - 105:4** 203:25, 204:1, **Degree - 51:18.** 205:6, 205:11, 102:20, 191:5, 207:24 215:23 Dave - 116:17 **Delay -** 31:20, Day - 49:11, 59:15, 65:23, 250:2 59:16, 82:8, 82:22, **Delayed -** 13:13 90:25, 119:20, **Delays - 85:3** 124:20, 143:13, Delineated - 192:2 159:10, 159:24, 159:25, 195:15, **Deliver - 124:17**, 199:2, 204:7, 129:21, 174:4, 213:20, 213:25, 198:1, 200:9, 216:13, 224:12, 229:25, 232:2 236:2, 237:8, **Deliverable - 44:17** 239:7, 240:4 , 145:7, 145:10, **Days -** 2:17, 107:5, 202:9, 203:25 150:16, 150:19 Delivered - 66:25, **DC** - 27:22, 34:3, 250:18 179:13, 224:18, Delivering - 170:24 224:20, 225:6, , 195:10, 198:2, 240:8, 240:18, 231:20, 250:2 240:19, 240:24 **Delivery - 136:19**, **De** - 21:24, 22:12, 137:24, 167:13, 23:12

183:5, 183:25,

176:10, 176:22, 201:6, 207:24, 208:1, 250:2 **Deloitte's - 129:1 Delve -** 27:10, 33:14 **Delved - 143:20 Demand - 132:17**, 132:18, 135:8, 135:13, 135:15, 136:7, 162:11, 250:20 **Demonstrable - 12** 9:17 **Denied -** 16:6, 16:8 **DENNIS - 58:11** Department - 59:1 9, 59:22, 60:22, 61:13, 62:7, 129:3, 136:13, 179:4, 179:22, 184:24, 210:12, 212:20, 223:9 **Depreciation** - 178 **Depth -** 7:3, 67:24 **Deputy - 116:13**, 116:14 **Derate - 54:8** Derating - 53:9 Described - 173:12 **Description - 99:5 Design - 45:5** Designated - 167:6 **Designed - 229:23** Desirable - 25:17, 221:17 **D'espoir - 15:5**, 20:2, 20:4, 20:5, 20:19, 21:8, 22:9, 22:14, 50:11, 149:6, 149:8, 149:17 **Detailed -** 61:19, 198:7, 251:13 **Determination - 10** 8:15 Determine - 28:14, 243:14, 243:20 **Determined - 221**: 19 **Determining - 243**: **Detriment - 182:12** Developed - 42:6, 43:12, 43:21, 43:22, 74:9, 74:14. 75:5, 75:7, 75:10, 75:21 **Development - 79**: 14

Develops - 141:24

Dialogue - 97:3, 178:19, 238:15 Dialoguing - 42:13 **Didn't -** 5:18, 40:9, 43:15, 55:8, 61:21, 65:6, 65:16, 65:17, 65:19, 68:2, 74:25, 100:10, 113:6, 119:22, 128:12, 181:16, 235:2 **Diesel - 132:21 Diesels - 49:14** Difference - 12:10, 103:13, 208:7, 210:16, 211:7, 212:23 Differences - 189:1 7, 206:20 Different - 6:14, 6:15, 12:18, 26:22, 31:24, 32:1, 35:16, 42:22, 54:5, 83:3, 86:10. 102:9. 102:10, 103:9, 126:25, 128:7, 149:15, 155:10, 166:22, 169:12, 180:17, 191:22, 191:23, 194:7, 197:4, 203:23, 206:23, 213:2, 222:12, 234:1, 242:1, 244:22, 245:19, 247:1, 251:2 Difficult - 54:4. 67:8, 134:12 **Dig -** 141:18, 238:7 **Dilemma -** 124:13 **Direction - 103:16**, 109:23, 123:4, 123:6, 186:17 **Directly - 82:16**, 93:21, 94:9, 154:12, 199:14 **Disburse - 99:24**, 103:16 Discharged - 148:6 Disclosed - 97:9 Discoveries - 1:18, 137:13 **Discreet - 168:20** Discussing - 139:5 , 166:3, 184:14 Discussions - 96:1 0, 97:2, 97:10, 108:24, 121:22, 184:20 **Dispatch - 16:13**,

252:13

Dispatching - 253:

23 Dispersion - 27:2 **Displace - 103:2.** 160:2, 161:4, 161:10, 161:19, 169:4 Displacement - 10 4:9, 234:19 Displacing - 101:1 Disposal - 31:1 **Disposition - 16:4 Dispute -** 80:21, 80:24 Distinction - 89:23, 107:14, 241:6 Distribution - 40:6, 48:4, 48:6, 164:19, 179:6 **Dive - 68:2 Division - 179:21** Document - 2:4, 2:5, 68:8, 70:8, 70:13, 173:6, 173:15, 188:11, 189:3, 189:8, 189:12, 189:19, 189:20, 190:5, 190:25, 192:10, 208:8, 210:22, 211:15, 211:23, 250:8 Documents - 8:3, 182:3, 189:16, 210:17 Doesn't - 5:1, 36:8, 38:3, 78:24, 101:4, 101:7, 137:24, 152:12, 152:13, 177:4, 187:9, 209:20, 228:22, 239:9 **Dollar - 127:21 Dollars -** 4:3, 4:18, 130:12, 177:25 **Domestic -** 68:13, 76:11, 80:2, 212:11, 213:9, 214:15, 215:6, 242:11 **Donovan -** 89:16 **Double -** 6:11, 111:10 **Doubt - 139:11 Downward - 76:21 Dr** - 67:16 Dramatic - 50:24 **Drifted - 168:22 Drive -** 7:24, 72:10, 165:6 **Driven -** 6:21, 7:14

52:8, 52:19, 71:13

Drivers - 107:25

Driving - 52:20, 196:6, 196:14

Due - 28:1, 251:10

Duplication - 95:6

Duties - 58:24, 61:21

Dynamic - 21:4, 21:11

Ε Each - 13:17, 167:6, 173:16 Earlier - 32:18, 35:4, 108:10, 170:7, 189:2, 219:20, 229:11 **Early -** 56:1, 56:2, 150:16, 150:19, 176:17, 237:15 **Earn - 122:20** Ease - 100:24 **Easier -** 128:18 **East -** 21:9, 126:5 **Eat -** 13:22 **ECC -** 31:18, 32:17, 37:5, 59:4 Economic - 162:3 Economies - 239:2 0.239:25 Economist - 113:7 Economists - 108: 14, 109:22, 109:23, 113:3, 120:6 Economizer - 53:6, 53:16. 54:3 Economizers - 53: 24 Edward - 79:17, 220:9 Effect - 40:23, 85:23, 86:16, 104:20, 121:8, 123:23, 166:19 Effective - 7:5, 93:21, 94:6, 94:9, 95:10 Efficiencies - 122: 23, 129:4 Efficient - 20:7, 20:21, 29:19, 30:1 **Effort -** 15:11, 95:6, 199:2, 199:3, 200:19 **Efforts - 144:5**, 149:23, 181:18 **Eighteen - 112:22**, 113:4, 113:9

Elasticity - 108:14,

113:3, 114:6,

114:13, 114:15, 114:18, 120:8, 219:22 **Electric - 108:17**, 110:15, 110:17, 133:8, 133:9, 133:11 Electrical - 151:8, 181:9 Electricity - 39:18, 76:5, 80:1, 88:12, 90:7, 99:7, 102:25, 109:25, 111:1, 111:2, 111:8, 111:9, 112:2, 120:11, 131:7, 131:12, 131:15, 133:19, 136:8, 137:10, 137:16, 166:11, 166:12, 218:23 **Electronically** - 18 2:2, 188:8 Elsewhere - 133:1 **Embarked - 132:16** , 133:5 Embarking - 131:1 Embedded - 45:18 Emera - 82:14, 92:14, 93:13, 140:18, 140:22, 142:14 Emissions - 26:24 Employees - 127:7 , 180:10, 180:12 Encouraged - 131: 11, 131:12 Encouragement -205:3 **Encouraging** - 133 :7, 204:9

Encouragingly - 1

Endeavour - 21:11,

Energize - 171:13

Energized - 168:1,

168:12, 171:14,

228:25, 229:11,

Engaged - 54:20,

Engineering - 59:1

9, 59:21, 60:22,

167:25, 168:11,

184:24, 195:3

60:23, 60:24,

61:13, 62:8,

Ends - 136:1,

90:4

43:24

139:22

232:10

130:2

Driver - 7:6, 51:3,

004-04
231:24
Eventual - 12:8,
85:21
Eventually - 7:24,
12:25, 13:2, 62:13,
86:14, 100:12,
164:22, 169:2,
228:3
Everybody - 1:3,
45:20
Everybody's - 42:2
4
Everyone - 110:2,
120:9, 151:11
Everything - 30:8,
205:4
Everywhere - 49:1
5
Evidence - 4:1,
18:18, 39:13, 50:6.
64:11 77:15 78:2
18:18, 39:13, 50:6, 64:11, 77:15, 78:2, 115:16, 119:22,
156:6, 157:13,
150.0, 157.15,
158:6, 162:9,
163:9, 172:11,
175:2, 177:1,
183:13, 222:15
Evolution - 179:23,
240:10
EXAMINATION - 3 :
3, 58:11, 92:6,
182:4, 182:21,
188:7
Examine - 128:7,
129:2
Example - 186:23,
193:6, 193:18,
196:5, 196:16,
207:17
Examples - 79:23
Except - 12:14
Exception - 97:8
Exception - 97:8 Excess - 13:19,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3,
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8 Excluding - 220:12
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8 Excluding - 220:12
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8 Excluding - 220:12 Executive - 126:16
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8 Excluding - 220:12 Executive - 126:16 Exempted - 142:24
Exception - 97:8 Excess - 13:19, 27:14, 31:13, 67:2, 82:5, 83:13, 83:15, 84:7, 94:21, 94:22, 136:22, 144:22, 220:7 Exchange - 112:4, 167:10 Exclude - 45:4, 68:22, 68:25, 145:2 Excluded - 45:3, 79:8 Excluding - 220:12 Executive - 126:16

Exemption - 141:1

Exemptions - 151: **Exercise - 195:16.** 249:14, 249:16 **Exhaust - 27:2** Exhausted - 30:9 Exhibit - 8:8 Exists - 253:20 **Expand -** 60:3 Expansion - 60:6, 158:18, 163:10 **Expect -** 51:1, 51:25, 52:3, 53:19, 70:24, 136:17, 143:20, 143:22, 181:16, 185:21, 187:8, 205:7, 236:2, 242:16 Expectation - 125: 5, 206:10 Expectations - 37: **Expected -** 13:10, 28:16, 34:14, 85:1, 102:13, 103:21, 124:18, 135:10, 137:11, 212:10, 248:9, 249:6, 250:1, 250:5, 250:20 **Expended - 194:5**, 194:6 **Expense - 178:1** Expenses - 96:4 **Expensive -** 66:15, 138:8, 244:11 Experience - 224:2 1, 240:14 **Expert - 219:23 Expertise - 94:13**, 224:20, 240:18 **Experts - 120:12** Explain - 150:19, 179:8 Explaining - 9:25 Exploring - 164:8 **Export -** 110:20, 137:3, 147:23 **Extended -** 49:16 **Extent - 98:15**, 192:22, 212:2, 216:24, 221:1, 225:22, 239:13, 239:20 **External -** 67:3. 83:17, 109:20, 130:12 **Extra -** 179:11 F

Faced - 124:14 Facetious - 195:15 Facilitate - 176:21, 178:10, 179:12, 179:15 Facilities - 110:11 **Facility -** 67:20, 149:12 Factored - 102:16, 111:8 Factors - 70:11, 70:14, 70:19, 71:18, 100:5, 138:8 Fagan - 73:3, 74:23, 75:4, 75:7, 78:1, 107:20, 137:5, 162:19, 208:18, 210:7, 211:4, 214:24 Fagan's - 136:12, 212:20 **Fair -** 13:21, 22:6, 27:13, 30:4, 33:9, 41:14, 51:21, 64:20, 84:2, 84:13, 86:24, 97:23, 97:25, 98:7, 107:16, 111:17, 131:25, 159:1, 161:3, 166:13, 197:7, 201:4, 215:3, 222:3 **Fairly -** 6:4, 142:8, 148:4, 158:23, 170:14, 170:15, 170:16, 202:16, 202:21, 248:12 **Fairness - 96:20 Fall -** 16:6, 164:19, 164:21, 164:23, 197:19, 231:17 Fallen - 85:4 **Falling - 31:19** Falls' - 81:19, 82:6, 83:13, 83:15, 84:7, 85:24, 86:17, 146:25, 147:1, 196:7 Familiarity - 92:21 **Far -** 29:7, 90:8, 143:23, 163:15, 200:22, 253:13 **Fashion - 67:20** Favourable - 131:1 Fear - 133:19 Fearmongering - 1 09:12 **February - 90:11**, 90:16, 188:11, 189:20, 190:5,

190:25, 191:2, 191:14, 197:9, 200:15, 201:20, 201:24, 211:23 **Feed -** 190:8 Feedback - 184:17 Feeds - 56:24 **Feel -** 34:12, 51:10, 105:7, 122:5, 123:22, 124:17, 173:25 Feeling - 113:22 **Fees -** 96:5 Felt - 16:10, 34:12, 42:1, 71:10, 113:11, 113:21 Fictitious - 102:14 Figure - 46:18, 46:24, 191:14, 197:8, 203:8, 203:18 Figures - 19:23, 46:1, 46:20, 46:22, 50:18, 51:21, 127:11, 158:20, 204:25, 237:4 File - 32:25 Filed - 2:4, 2:6, 92:13, 106:16, 182:1, 182:14, 183:11, 188:8, 207:2, 217:17, 236:14, 248:16, 248:19, 250:9 Filing - 2:15, 248:24 **Fill - 246:21 Final -** 136:3, 196:2 Finalized - 171:20, 226:20 Finance - 116:3, 116:15 Financial - 126:23, 176:5, 178:20, 238:5 Financing - 70:19 **Find -** 43:20, 43:24, 44:3, 67:7, 72:19, 74:15, 111:19, 134:11, 154:19, 173:5 **Fine -** 78:14, 78:18, 150:15, 156:4, 204:20 **Fingers -** 232:13 Fire - 232:12 Firm - 163:13 First - 1:4, 13:22, 14:13, 14:15, 29:2, 55:8, 57:8, 82:25, 87:19, 115:6,

Face - 253:8

140:21, 183:3, 196:5, 196:7, 197:18, 201:25, 202:7, 204:15, 211:18, 230:6, 230:13, 230:21, 244:17 Fitzgerald - 167:17 , 167:20, 168:7, 169:7, 169:15, 170:5, 171:10, 171:21, 172:8, 172:16, 173:2, 174:15, 174:23, 175:12, 175:21, 176:24, 177:10, 178:12, 178:23, 180:9, 180:13, 180:18, 181:11 Five - 44:21, 100:19, 137:22, 138:15, 167:12 **Fixed -** 136:24 **Fledged -** 225:7 Flexibility - 15:4 Flip - 21:9 Flows - 248:2, 248:8 Focus - 14:10, 18:5, 50:19, 64:9, 121:12, 200:9, 205:15, 223:13, 223:15, 230:5, 243:18, 252:18 Focused - 18:4, 39:15, 41:17, 198:2 Folks - 13:8, 17:12, 17:19, 31:10, 36:12, 39:7, 44:1, 57:7, 63:3, 116:12, 116:17, 129:14, 129:24, 130:8, 134:9, 134:11, 200:20, 205:15, 205:25, 223:6, 229:20, 234:8, 238:5, 238:15, 240:15, 240:23, 244:14, 246:4, 252:4 Follow - 45:12, 205:19, 226:11 **Following -** 28:19, 102:7, 121:19, 226:13 Foot - 173:6. 173:14 **Footnote -** 19:14 **Forces -** 239:15 Forecast - 31:19, 33:25, 56:25,

70:15, 72:11, 72:13, 108:22, 109:14, 135:20, 158:3, 207:1, 208:3, 208:5, 208:11, 209:3, 209:5, 209:25, 210:3, 210:4, 210:11, 211:7, 212:6, 214:25, 219:4, 222:6, 249:25, 250:5, 250:16, 250:23 Forecasting - 218: 23 Forecasts - 249:18 Forelle - 231:19 **Foresee - 37:9 Forgive - 179:1** Form - 85:13 Forms - 111:18 **Formula - 193:17** Forward - 23:21, 46:13, 104:24, 107:9, 115:13, 120:7, 123:15, 123:20, 124:6, 124:11, 124:16, 124:21, 125:6, 128:8, 129:25, 134:7, 156:5, 159:7, 160:19, 204:4, 206:5, 214:2, 214:8, 214:20, 221:23 **Fouling -** 53:6, 53:23 Found - 165:15, 201:23 Four - 87:9, 100:19, 137:22, 138:15, 163:6, 167:11, 202:24, 203:1 **Frame - 13:4 Frames - 7:5** Framework - 183:1 0, 183:18, 183:20 **Frank -** 141:10 **Frankly - 134:16** Frequency - 37:21, 40:13, 231:23, 232:4, 232:5, 233:14 Friday - 1:6, 182:1,

188:9

Friends - 117:13

Front - 29:1,

Ftes - 125:2

209:17, 210:19

Fuel - 4:18, 5:1,

5:7, 5:11, 12:3, 15:24, 38:7, 38:9, 54:17, 56:25, 101:11, 101:17, 102:25, 103:2, 103:7, 104:9, 107:4, 108:1, 160:2, 161:4, 161:10, 169:4, 234:18, 249:22 Fulfil - 62:5 Fulfilment - 2:7 Full - 85:20, 99:23, 169:2, 202:1, 203:5, 203:19, 203:21, 204:15, 225:7, 234:25 Fulltime - 124:8, 224:8 Fully - 225:13, 225:16, 226:5, 227:14 Funds - 104:14 Furnace - 53:5, 53:17 **Further -** 33:10, 98:2, 173:7, 183:11, 187:25, 189:22, 224:19 Future - 27:21, 65:7, 65:8, 121:18

G **Gains - 86:13 Gallons - 149:2 Game -** 194:23, 195:11 **Gardiner - 198:13**, 199:10 **Gas -** 9:13, 10:3, 14:7, 14:13, 14:14, 16:24, 17:13, 23:22, 24:2, 27:2, 29:14, 29:15, 30:7, 31:11, 32:2, 33:23, 37:14, 37:18, 37:24, 59:6, 67:18, 90:20, 235:25 General - 16:12, 63:14, 89:18, 99:5, 162:17, 162:22, 162:24 **Generalities - 90:4** Generally - 20:17, 87:1, 99:12, 110:25, 131:25, 169:16, 169:19, 177:14, 234:11 **Generate -** 7:3. 44:18, 44:19,

165:20, 209:5, 217:19 Generated - 209:2 5, 237:14 Generates - 210:3, 215:1 Generating - 94:23 , 125:19, 168:19, 200:20 Generation - 3:16, 18:9, 24:10, 28:14, 28:23, 32:8, 36:24, 50:9, 50:10, 52:25, 59:6, 63:4, 71:11, 81:15, 82:3, 84:20, 86:2, 86:4, 86:21, 98:5, 98:13, 98:19, 172:24, 210:10, 232:17, 233:21, 234:14, 235:25, 252:4, 252:5, 252:14 **Generations - 29:2** Generator - 37:21 Generators - 29:20 , 30:2, 253:23 **Genesis - 99:6** Gentleman - 46:7, 184:4 Gentlemen - 210:2 Gets - 215:1 **Gibbons - 1:20 Gigawatt -** 66:19, 66:22, 90:14, 147:3, 249:7 **Gist - 132:6 Give -** 6:2, 72:15, 151:24, 167:19, 183:15, 186:23, 210:17, 241:2 Given - 3:20, 34:6, 70:13, 89:8, 97:7, 122:24, 127:11, 191:21, 211:24, 221:15, 230:13, 233:20, 233:21, 234:12, 245:21, 245:24, 246:24 **Gives -** 225:19 **Glenda -** 1:19 **Glove -** 86:5 Glynn - 2:11, 2:12, 6:6, 8:7, 8:11, 8:17, 8:24, 9:3, 44:6,

73:11, 73:15, 73:20,

73:25, 75:19, 76:1,

80:17, 139:1,

141:25, 142:10,

145:21, 188:15,

218:10, 253:6,

253:16

Goal - 44:16, 53:22 Goals - 44:14 **Gold - 130:7** Gone - 45:25, 110:14, 119:7, 125:8, 125:23, 127:24, 129:8, 236:7 Good - 1:3, 3:4, 3:6, 52:5, 63:11, 75:6, 182:24, 184:19, 195:3, 229:10 Goose - 157:23 Got - 12:3, 24:19, 119:15, 119:16, 119:25, 132:6, 177:18, 179:11 Government - 110: 13, 115:24, 115:25, 116:2, 116:19, 116:21, 117:11, 118:2, 118:3, 118:12, 118:19, 119:2, 119:20, 119:25, 123:4, 123:6, 123:7, 123:11, 123:20, 132:14, 221:14, 221:21 Government's - 12 3:12 **GRA -** 183:8, 221:4, 222:6, 237:1, 237:4 **Granite - 149:8 Granted -** 70:7, 101:7 Graph - 30:20. 69:6, 211:24, 215:23, 218:1 Greater - 127:8, 237:25 Grief - 41:3, 184:16, 187:20 **Ground - 27:1 Group -** 8:23, 32:14, 46:7, 54:14, 82:24, 95:1, 125:16, 125:21, 129:18, 183:1, 183:23, 227:25, 232:15, 245:13 **Groups - 95:11**, 240:1 **Grow - 134:3 Growing - 162:11 Grown -** 42:21 GT - 4:19, 5:6, 14:4, 27:13, 28:1

128:3, 148:1,

Gts - 31:3

Guaranteed - 122: 19, 122:20 Guess - 1:11, 18:3, 25:11, 28:13, 53:2, 78:20, 95:4, 118:18, 151:24, 169:16, 171:11, 182:9, 192:16, 203:6, 216:23, 243:6, 243:15 Guestimate - 212:1 **Guide - 139:9** Guideline - 252:8 Guidelines - 252:1. 252:13, 252:25, 253:22

Н Hadn't - 124:11, 182:7 Half - 37:16 Hand - 86:4, 96:17, 216:1, 249:23 **Hands -** 54:22 Happening - 1:12, 125:18, 133:18 **Hard -** 65:10, 168:8, 182:2, 188:9, 228:15 **Hardwood -** 14:18 Hardwood's - 37:2 5, 38:24 Hasn't - 152:22, 152:23, 251:21 Hasten - 153:20 Haven't - 17:22, 34:15, 35:14, 47:17, 70:7, 80:25, 101:11, 110:14, 114:23, 127:14, 128:25, 129:5, 132:16, 133:4, 138:13, 165:13, 178:8, 213:18, 234:17 **Head -** 27:18, 39:5, 80:8, 156:13, 157:25, 158:4, 162:18, 206:13 Headed - 81:12, 179:6 **Heading -** 185:17 **Health - 13:7** Hear - 205:10 **Heard - 132:3**, 132:13, 138:13, 153:24 **Hearing - 1:25**, 2:17, 26:8, 139:6, 142:6, 174:24

Heat - 110:17,

112:4, 131:13, 132:15, 133:11 Heater - 53:25, 54:16 **Heating -** 108:17, 111:19, 134:13 He'd - 253:12 Height - 26:24 He'll - 184:19 Help - 24:17, 36:8, 36:10, 36:14, 36:17, 102:18, 117:7, 117:8, 118:13, 121:18, 129:25, 130:13, 132:15, 214:4, 214:8 Helpful - 75:4, 136:2 **Helps - 36:9** Hence - 152:6 **He's -** 75:5, 152:25, 185:13 High - 5:19, 32:12, 44:16, 111:24, 148:4, 157:16, 158:24, 202:16, 202:21, 203:2, 246:8 Higher - 5:8, 11:12, 22:13, 29:21, 29:23, 159:25, 163:18, 167:14, 193:22 Highlight - 189:17 Highlighting - 182: 6, 182:10, 182:16 Highly - 25:17 Hindsight - 66:8 Hire - 124:24 Hired - 224:15 Historical - 44:20 Hold - 128:23, 140:24 **Holyrood's -** 19:17 Home - 42:20 Honest - 155:1, 198:22 Hooking - 164:11 **Hope - 56:3 Hopefully -** 55:17, 214:13, 237:21 **Hoping - 1:11** Host - 128:21, 165:24, 194:3, 194:7 Hour - 5:15, 6:11, 12:11, 31:21, 37:16, 164:24, 207:17, 208:8, 208:9, 216:1

Hours - 7:1, 7:7,

7:13, 7:15, 12:12, 12:15, 12:17, 26:10, 26:22, 27:15, 27:18, 28:7, 29:24, 56:3, 56:24, 66:19, 66:22, 90:14, 147:3, 148:1, 148:2, 149:11, 167:4, 248:5, 249:6, 249:7 House - 111:6, 129:19, 130:9 Household - 111:5 **HST -** 68:20, 68:25, 69:9, 69:12, 111:3 **HST> -** 68:23 Huge - 65:22, 102:15, 110:15, 161:25, 164:5 Human - 178:9, 194:5 **Hundreds - 130:11** Hutchens - 125:21. 178:19, 238:11, 238:13, 241:20, 244:1 Hydraulic - 50:9, 52:5 Hydro/ **Nalcor - 192:21 Hydroelectric** - 19 1:8 **Hydroelectricity** -Hydrology - 98:4, 248:1 **Hydro's -** 3:15, 8:4, 9:10, 16:12, 37:3, 44:14, 55:3, 93:12, 97:20, 101:8, 124:12, 126:13, 126:14, 149:16, 175:13, 183:3, 200:12, 216:18 Hydrothermal - 24 8:6, 248:21, 250:16 **Hypothetical - 135**: 13. 136:4 **Hypothetically - 92** :25, 93:8, 147:16

IBEW - 38:18
IC - 68:9, 70:12,
76:4, 81:13, 139:8,
189:5, 189:25,
190:10, 191:9,
201:23, 206:17,
207:2, 209:10,
210:22, 211:10,
218:17, 242:8

216:12

9

Impression - 177:1

l'd - 1:3, 76:21, 99:3, 139:4, 192:6, 209:13, 211:9, 225:8 Ideal - 13:14, 106:1 **Ideally - 234:17 Identical - 189:9,** 190:2, 211:13 Identified - 160:21 Identifies - 245:14 Identifying - 92:2 I'II - 23:11, 32:5, 90:15, 120:20, 138:21, 151:16, 167:19, 179:7, 183:14, 189:21, 192:8, 192:16, 195:14, 198:22, 210:17, 210:24, 213:19, 215:15, 220:5, 224:19, 247:16, 247:18, 253:15 Imaginary - 249:9 **Imagine -** 71:6, 143:21, 242:24 Immaterial - 212:1 Immediate - 120:2 Impact - 39:17, 40:10, 41:7, 50:21, 50:24, 103:23, 135:9, 148:12, 186:19, 212:10, 213:21, 216:16 Impacted - 50:17 Impacting - 65:24, 70:11, 70:14 **Impacts - 134:6**, 145:4, 214:7 Impediment - 174: Implement - 183:9 Implemented - 221 :3, 221:7 Implication - 176:5 **Implications - 105**: 7, 108:13, 108:22, 150:2, 150:6, 150:11, 234:11 Implied - 132:2, 132:4 Important - 17:7, 18:6, 18:12, 145:6, 152:14 **Imports -** 251:18 Imposed - 127:22,

Improve - 52:1 Improved - 135:7 Improvement - 44: 25, 47:7 **Improvements - 18** :18 Improving - 47:1 Inaccurate - 155:2 Incent - 127:1 Incentive - 14:3, 126:22 Incentives - 126:15 **Inclusive - 135:21** Income - 111:5, 134:19 Inconceivable - 98 :17 Incorporate - 44:2 **Incorporated -** 45: 7, 45:10 **Incorporates - 17**: 9, 46:11 **Increase -** 28:24, 29:6, 36:7, 49:11, 53:3, 65:17, 70:2, 105:12, 106:7, 110:5, 110:10, 110:15, 121:7, 128:11, 133:14, 158:23, 161:25, 207:8, 231:6 Increased - 28:2. 178:8 Increases - 62:20. 65:14, 69:21, 121:19, 216:8 Incremental - 136: 24, 178:3 Incur - 120:25, 176:13 **Incurred - 237:10 Indeed -** 166:5 **Independently - 18** 6:10 Index - 44:11, 46:1 Indicated - 35:6. 177:17 Indicating - 53:8 Indication - 50:17 Indices - 40:4, 42:21 Indifferent - 63:12 Indirectly - 154:12 Industrial - 35:25. 70:13, 79:14, 117:23, 181:22, 182:25, 183:2, 183:5, 183:25, 184:5, 186:4,

25:21, 35:12, 37:11,

51:4, 51:10, 52:22,

186:5, 186:14, 186:19, 186:20, 187:2, 187:5, 187:13, 209:4, 250:21 **Industry - 164:3** Inevitable - 181:20 Infeed - 81:15, 84:19, 86:1, 87:13 Inflicted - 42:1 **Influence - 216:25** Informal - 205:18, 205:23 Information's - 20 8:25 Inherent - 67:9 Inherently - 118:16 Initial - 84:23, 236:18 Initially - 26:9 Initiate - 31:10, 32:1 Initiatives - 124:21 Input - 209:3, 209:11, 209:21, 209:22, 210:13, 217:14, 221:19, 238:14 Inquiry - 64:3, 64:8, 141:16 Inside - 25:19, 94:16 Insight - 241:21 Inspections - 178: **Installed -** 170:19 Instruction - 18:22, 18:23 Instructions - 3:11, 252:20, 253:25, 254:2 Intangibles - 87:16 Integral - 248:19 Integrated - 180:25 . 234:13 Intended - 149:13, 168:21, 236:6 **Intends -** 144:23 Intense - 15:15, 131:10 Intent - 26:13, 148:22, 223:5 **Intention -** 10:17, 23:20, 57:22, 160:18, 220:18, 224:3, 226:6 Inter - 40:8, 214:14 Interaction - 212:1 Intercompany - 22 2:17, 226:1, 226:7

Interconnected - 6 8:12, 76:12, 132:22, 135:17, 157:18, 157:20, 162:4, 166:5, 166:7, 209:24, 211:20, 212:11, 213:8, 215:6 Interest - 104:22, 117:18, 118:22, 140:23, 141:15, 178:1 Interesting - 75:10, 166:10 Interests - 118:20, 120:2 Interface - 199:19 Interfacing - 199:1 Interjecting - 74:19 Internal - 95:18, 95:25, 96:3, 185:2, 186:11 Internally - 129:23, 186:18, 204:13 Interpretation - 17 3:25, 174:21 Interrupterable - 3 6:1 **Intervene - 216:24** Intervener - 3:17 Interveners - 3:19, 17:3 Intervention - 52:1 Interventions - 184 :10 Intimately - 214:24 Invest - 72:8 **Invested - 143:22** Investment - 71:1, 116:16, 165:1, 165:8, 212:21 Invited - 117:14, 117:23, 117:24 Involvement - 24:8 , 59:11, 60:2, 60:7, 64:10, 244:8, 252:4 **IOC -** 157:12, 158:19 IOC's - 166:4 **Isle -** 224:10 Isn't - 86:23, 137:17, 172:10, 227:6, 241:9 **Isolate -** 99:19. 101:25

Isolated - 33:21,

Isolating - 175:23

40:7, 132:21

Issue - 23:11,

53:12, 54:2, 87:10, 103:3, 146:6, 146:18, 153:5, 154:10, 164:4, 166:8, 171:11, 178:25, 185:7, 186:4, 186:17, 206:4 **Issues -** 27:20, 41:16, 42:15, 50:12, 53:1, 53:6, 53:23, 139:6, 146:1, 148:7, 166:3, 167:22, 187:14, 202:15, 202:25, 231:12 Item - 8:12, 188:9, 227:20 Items - 24:20 **I've -** 66:16, 67:11, 114:20, 182:14, 184:3, 184:4, 188:25, 197:21, 198:23, 211:11, 222:18, 236:11 J

Jaggedness - 30:1

JAMES - 3:3, 58:11, 182:21 **January - 23:23**, 90:16, 183:11, 250:9 **Job -** 63:21, 184:19 **John -** 116:14 John's - 25:19 Joined - 153:11 **Jones - 116:17** Jotted - 222:18 Judgment - 31:17 July - 76:19, 102:4, 171:14, 228:14, 228:22, 229:1, 230:5, 232:8, 251:5 **Jump -** 87:5 **Jumping - 247:15** June - 58:17, 78:16, 189:7, 190:7, 201:19, 201:22, 207:16, 207:19, 208:8, 210:22, 211:22, 214:16, 218:20 Jurisdiction - 43:5, 97:21, 104:8,

151:6, 151:10, 153:10 Jurisdictions - 42: 7, 42:9, 77:17, 93:23, 94:3, 94:11, 94:15, 219:5, 219:6 Justification - 224: 7, 227:16 Justified - 16:24

K Keenly - 52:21 **Kevin -** 208:15, 208:18 **Key -** 183:23, 185:5, 187:3, 187:4, 197:20, 248:21 Kicked - 119:9 **Kilowatt -** 5:15, 6:10, 29:24, 68:15, 68:17, 68:18, 111:3, 135:11, 135:19, 137:12, 137:17, 148:1, 149:10, 207:7, 207:17, 208:8, 208:9, 216:1, 248:5 Knowledge - 39:2, 66:5, 152:23, 153:11, 251:23 **Known -** 72:11

L

Labour - 240:17. 241:4, 241:5, 241:11 Lack - 32:24, 39:22 **Laid -** 195:12 **Land -** 35:20 **Large -** 21:13, 21:14, 104:1, 104:22, 170:15, 224:4, 250:23 Largely - 33:21, 79:9 **Larger - 19:21**, 46:21, 165:2, 165:8 Largest - 19:6, 20:2, 21:23, 22:11, 28:18 Late - 58:17 Later - 12:16, 25:15, 139:6, 166:4, 175:11, 229:9, 232:20, 234:23, 244:7 **Lead -** 97:19

Leadership - 126:1

7, 192:21

Lean - 129:19 Leave - 58:19, 108:16, 111:17, 112:10, 112:23, 112:25, 211:3, 215:4, 218:15 **Leblanc - 48:8**, 49:23, 179:7 Leblanc's - 210:1, 210:11 **Led -** 97:18 **Left -** 3:8, 24:3, 32:18, 58:24, 59:1, 59:8, 61:4, 151:5, 193:16, 196:18, 216:1 **Legal -** 89:6, 89:9, 147:11, 174:2, 174:17, 174:21, 177:6 Legislation - 155:1 0. 164:9 Legitimately - 176: 13 Lesser - 106:8 Let's - 21:25. 22:12, 139:15, 154:19, 196:13, 230:16, 243:18 **Letting -** 105:22 Level - 27:2, 32:12, 34:23, 36:23, 44:16, 115:11, 126:9, 145:5, 205:18 Levels - 15:12, 234:24 **LIA - 232:9 Liberty -** 17:19, 35:5, 35:15, 192:13, 193:13, 196:17 Likelihood - 137:1 **LIL -** 87:15, 139:17, 139:21, 168:1, 168:12, 169:11, 170:3, 171:23, 172:11, 172:21, 173:17, 174:3, 175:2, 175:18, 190:16, 191:2, 201:7, 222:14, 222:23, 223:8, 223:17, 225:6, 225:12, 225:24, 228:2, 228:13, 229:14, 229:18, 230:9, 230:16, 233:2, 243:7,

Leak - 50:12

114:10, 142:22,

150:22, 150:25,

143:6, 144:6,

251:12, 251:19 **Limit -** 223:14 Limitations - 15:20 **Limited -** 119:21, 228:12 Line - 15:23, 21:8, 27:22, 34:4, 39:14, 40:5, 41:4, 45:5, 47:6, 47:15, 48:1, 85:7, 90:10, 97:6, 99:21, 156:15, 160:12, 160:22, 167:23, 169:6, 169:8, 170:21, 170:23, 171:3, 171:6, 171:13, 179:13, 188:1, 197:17, 214:23, 227:20, 228:17, 228:25, 229:23, 230:8, 230:20, 231:12, 232:9, 232:12, 241:8, 241:11 **Lines -** 50:8, 53:20, 62:2, 82:24, 87:7, 143:10, 149:14, 170:20, 181:3, 206:22, 224:20 Lining - 220:11 Link - 33:22, 55:18, 55:25, 82:1, 84:25, 85:5, 86:22, 88:8, 90:8, 90:18, 91:8, 98:18, 99:8, 99:16, 101:16, 103:1, 131:9, 131:17, 139:17, 139:23, 139:25, 140:12, 140:13, 140:24, 142:16, 142:20, 143:11, 143:17, 144:4, 144:5, 144:12, 144:15, 150:24, 168:18, 168:25, 171:3, 180:5, 197:15, 233:14, 243:5, 243:12, 244:5, 251:18 **List -** 2:14, 125:19 Listening - 133:17 **Listing - 127:7** Litigation - 152:19, 152:20, 152:24, 153:12, 154:11, 154:21, 154:24, 155:19 **LNG -** 67:18 Loading - 14:16, 31:12

Loads - 10:8, 28:16, 110:5, 124:9, 232:5 **Location -** 24:15, 25:23, 26:2 Logic - 175:23, 226:13 **Logically - 226:12** Long - 7:21, 12:3, 28:6, 34:5, 49:4, 52:14, 62:13, 63:20, 73:7, 81:16, 81:18, 83:9, 83:12, 83:21, 84:3, 84:6, 84:10, 90:24, 129:22, 133:11, 142:3, 160:14, 185:13, 202:13 Longer - 31:5, 32:9, 82:7, 83:23, 96:9, 96:12, 106:21, 146:6, 174:10, 212:24, 214:18, 239:7, 244:14 Looked - 13:6, 15:10, 17:14, 21:5, 35:22, 36:3, 36:19, 40:3, 40:6, 60:24, 63:2, 63:4, 63:15, 63:23, 63:24, 63:25, 66:16, 66:17, 68:4, 79:10, 80:25, 90:22, 108:21, 110:12, 122:14, 122:15, 124:6, 125:24, 127:10, 127:11, 146:3, 182:8, 211:11, 219:10, 220:19, 234:13, 235:3, 235:7 **Loop -** 25:19 **Lose -** 22:5, 231:3 Losing - 234:10 Loss - 21:13, 21:22, 40:18, 109:5, 109:8, 109:10, 113:12, 144:25, 145:2, 145:10 **Losses -** 145:6, 156:14, 157:1, 167:5, 167:9 **Lost -** 37:20, 41:4, 132:4, 145:25 Lot - 13:11, 15:2, 15:3, 20:6, 23:3, 32:12, 33:12, 45:8, 45:9, 47:22, 48:16,

60:5, 61:15, 78:6,

87:7, 98:4, 109:11, 118:21, 125:9, 125:10, 126:4, 126:5, 128:16, 132:20, 134:19, 137:16, 138:11, 159:12, 159:14, 163:21, 165:25, 183:24, 186:9, 200:19, 200:21, 201:11, 205:15, 213:23, 221:19, 231:3, 238:14, 239:7, 245:2, 246:3, 246:8, 246:10, 248:10, 248:12 Lots - 63:23, 107:25, 114:4, 125:14, 125:17, 125:25 **Low -** 138:13, 163:17, 234:21, 246:2 Lower - 14:19, 22:14, 30:3, 55:17, 87:14, 121:9, 122:25, 133:3, 136:18, 199:16, 199:25, 220:13, 231:22, 240:3, 247:2 **Lowest -** 243:15, 243:21, 243:24 **LTA -** 170:3, 172:21, 173:16, 174:3, 190:15, 191:3, 222:14, 222:23, 223:8, 223:18, 225:12, 225:24, 226:16, 228:2, 229:14, 230:9, 230:16, 232:9, 233:2, 251:12

M

Lump - 237:9

Machine - 10:18, 11:23, 12:2, 20:7, 21:14, 21:23, 21:24, 52:16, 56:1 Machines - 14:17, 14:18, 52:5, 56:2, 91:2, 202:24, 230:1 Madam - 1:24, 58:6, 89:4, 91:23, 152:17, 181:25, 192:8, 253:3, 254:4 Magazine - 219:14 Magnitude - 214:1 Maintained - 19:25 , 177:18 Maintaining - 36:2 0, 176:7, 178:4 Maintenance - 19: 3, 20:18, 21:2, 27:25, 70:18, 175:18, 222:13, 222:24, 223:5, 228:2, 233:22 Major - 45:2, 54:21, 87:13, 109:8, 113:12, 133:5, 168:16, 171:2, 179:20, 206:4 **Majority - 142:19** Make - 17:13, 89:23, 108:14, 112:6, 121:3, 122:12, 148:25, 187:3, 197:25, 212:22, 231:7, 234:25, 240:15, 252:19 Maker - 218:1 Making - 44:12, 103:19, 125:11, 201:12 Manage - 149:10, 159:16, 163:25, 181:3 Management - 145 :25, 146:2, 146:6, 146:11, 146:20, 148:16, 148:18, 148:19, 148:25, 149:13, 150:1, 150:14, 151:7, 151:12, 152:1, 153:13, 153:19, 153:24, 154:10, 154:20, 155:23, 183:10, 183:18, 183:20, 192:21 Management's - 1 92:14 Manager - 183:24, 187:3, 187:4 Manitoba - 77:17, 79:5, 79:20, 81:6 Manufactured - 25 3:20 Manufacturers - 2 8:5 Many - 11:2, 54:22, 67:12, 213:1, 251:7 Map - 114:8, 139:9, 139:15, 166:9,

Maine - 167:1

57:12

Maintain - 15:12,

166:10 March - 58:21 **Maritime - 33:22.** 86:22, 88:8, 90:7, 90:18, 91:8, 98:18, 99:8, 101:16, 103:1, 131:9, 131:17, 233:14, 243:5, 244:5, 251:18 Mark - 8:8, 8:10, 9:2 Market - 67:3, 81:16, 82:8, 83:18, 94:24, 96:12, 97:13, 109:20, 123:11, 132:11, 132:25, 133:2, 136:23, 137:4, 137:22, 138:16, 244:6, 244:16 **Marketing -** 91:13, 93:24, 94:2, 94:3, 94:17, 94:20, 95:11, 96:2, 97:4, 97:14, 247:7 Marketing's - 95:1 8, 95:25 Marketplace - 166: Markets - 83:17, 109:20, 131:8 **Marking - 243:4 Martin - 116:15** Massachusetts - 8 2:2, 82:17 Materially - 214:6 Materials - 188:8 Math - 156:17, 157:3, 157:10, 233:19 Matters - 1:21, 127:9, 167:18 **Maximize - 28:22**, 148:24 **Maximum - 28:25**, 230:7 Meaningful - 171:6 Means - 99:23, 110:18, 172:12, 205:11, 234:9 Meant - 211:1 **Meantime -** 187:11 Measure - 10:17, 40:12, 41:9, 41:15, 41:25, 42:4, 193:9, 194:4, 195:9, 221:8 Measurements - 1 98:13

Measures - 11:22,

32:7, 81:14,

124:12, 221:2, 221:7 Measuring - 194:1 2, 194:13, 194:22, 195:5, 195:11, 195:23 Mechanic - 137:6 Mechanics - 107:1 9, 174:10, 198:25, 213:25, 221:18 Mechanism - 86:10 112:4 Mechanisms - 108: **Media -** 155:18, 155:21 Meet - 27:2, 30:8, 160:14 **Meeting - 14:9**, 148:7, 184:2, 186:12 **Meetings -** 18:21, 40:14, 119:4, 184:3, 184:4, 187:12, 187:18, 187:21, 197:23, 206:2 Megawatt - 147:24, 148:2, 156:24, 163:17, 164:14, 164:24, 167:3, 202:12, 203:8, 203:18, 231:1 Megawatts - 14:16, 19:8, 19:16, 19:25, 30:9, 30:11, 30:13, 31:12, 31:13, 55:20, 66:20, 66:24, 91:3, 144:18, 147:10, 148:1, 156:25, 157:24, 158:2, 158:14, 158:16, 158:18, 159:8, 159:13, 160:13, 163:20, 164:21, 202:19, 202:21, 229:4, 229:22, 229:24, 230:9, 230:18, 230:24, 231:21, 232:2, 232:11, 232:12, 233:1, 234:2, 252:22 Mentions - 9:13 Merit - 130:11. 246:9 Message - 120:4 **Met -** 200:7 Meter - 39:22 Method - 100:23 Methodologies - 1

98:7, 199:20 Methodology - 192 :17, 196:14, 197:10 Metric - 40:10, 42:25, 43:12, 46:24 Metrics - 194:3, 194:4, 194:7, 194:9 **MF -** 215:14 Mic - 167:19 Microphone - 119: **Midway -** 193:2 Mightn't - 136:2 Miles - 194:6 Milestones - 194:1 Million - 4:3, 4:17, 127:21, 175:15, 175:16, 175:22, 177:25 Mimic - 122:21 Mine - 129:24, 158:12 **Mini -** 132:15 Minimum - 14:15, 31:11, 91:1, 216:7, 233:10 Minister - 116:13, 116:14 Minor - 10:24 **Minority -** 142:18 Minus - 21:17, 231:2 Missed - 90:15 **Mistake -** 66:11 Mitigate - 54:1. 104:5, 109:8, 113:10, 113:11, 115:10, 118:13, 128:22, 134:25, 221:25 Mitigated - 207:13, 207:15, 214:13 Mitigating - 117:8, 216:7 Mitigation - 81:14, 85:14, 115:23, 116:22, 117:1, 121:5, 121:7, 122:3, 122:4, 122:10, 122:13, 123:24, 174:14, 219:19, 221:1, 221:2, 221:7, 232:4 **Mode -** 21:3, 21:10 Model - 39:16. 71:4, 73:3, 73:7, 212:24, 214:21 Modelling - 26:24,

212:23

Models - 240:24

Modest - 158:23 Modifications - 54: 17 Modified - 56:22, 248:23, 252:24 Modifying - 33:17 Molloy - 89:16 **Moments - 70:10** Money - 87:4, 101:4, 101:7, 101:8, 107:14, 110:21, 117:8, 121:8, 123:10, 125:4, 130:14, 143:22, 174:12, 178:22, 249:4, 249:9 Monies - 85:22, 103:14 Monitor - 193:15 Mono - 15:8, 169:1 **Month -** 106:8, 229:2 Monthly - 206:3, 250:17, 250:22 Months - 23:25, 195:18, 204:25, 229:4, 229:5, 230:6, 230:14, 230:21 Morning - 1:3, 3:4, 3:6, 182:2, 254:7 **Motion -** 89:4, 89:12, 91:24, 91:25 Move - 13:13, 23:14, 30:17, 39:9, 45:8, 99:3, 112:2, 139:4, 188:6, 211:9, 222:11, 223:4, 241:25 Moved - 39:15 Moving - 110:17, 138:6, 138:11, 177:11, 178:24, 180:17, 225:6 Much - 29:16, 36:4, 39:3, 99:11, 99:17, 102:20, 105:19, 110:20, 110:22, 121:12, 128:10, 135:2, 137:11, 157:21, 159:4, 160:21, 181:18, 193:20, 224:17,

> N olate - 20

Nameplate - 203:7, 203:16

230:15, 245:4,

249:22, 250:18

247:2. 249:3.

Natural - 116:2, 116:13 **Naturally - 172:22** Navigate - 168:8 Near - 168:2, 168:13, 169:5, 169:22, 169:25, 170:10, 171:8, 171:12, 234:24 **Nearing - 170:8**, 171:4, 171:23, 172:12, 173:18, 173:22, 175:25 **Necessary - 16:18**, 31:4, 31:5, 31:9, 32:9, 32:10, 94:12, 160:5 Needed - 25:5, 30:9, 31:7, 62:1, 62:2, 66:16, 67:1, 71:11, 124:24 **Negotiations - 97: NEM -** 95:9 **Net -** 40:22, 66:20, 86:13, 133:23, 172:3, 175:7 New - 1:17, 2:16, 18:21, 27:5, 36:5, 79:17, 100:2, 133:1, 137:21, 138:15, 166:12, 166:14, 166:20, 166:25, 167:1, 167:12, 177:20, 179:21, 182:15, 220:12, 240:11 Newfoundland - 3: 17, 14:24, 17:4, 28:20, 28:22, 39:24, 39:25, 40:11, 40:15, 40:24, 41:1, 41:3, 41:16, 42:13, 45:3, 69:19, 69:21, 70:1, 76:8, 76:13, 84:16, 117:13, 122:21, 173:11, 179:4, 184:1, 209:4, 215:17, 216:23, 250:21 **News -** 81:25 **Nice - 199:4** Night - 159:11, 163:22 Nimble - 246:13, 246:25 NL - 211:19, 236:7 **NLH -** 8:6, 8:22, 9:4, 9:5, 28:10,

68:9, 70:12, 76:4,

81:13, 93:19,

121:14, 126:11, 127:5, 135:7, 139:8, 173:4, 189:5, 189:25, 190:10, 191:9, 201:23, 206:17, 207:2, 209:10, 210:22, 211:10, 215:5, 215:8, 215:16, 216:5, 217:6, 217:8, 218:17, 242:8, 242:10, 242:11 **NLSO -** 124:25, 178:25, 179:4, 179:6, 179:10 Non - 35:23, 36:20 Nonetheless - 155: Nor - 42:14 Normal - 28:12, 40:19, 170:16, 217:15 **Normally -** 71:16 **North - 179:24 Northern - 181:4** Note - 1:17, 44:7, 73:16, 73:21, 76:16, 76:21, 95:19, 139:2, 182:5, 206:19, 206:24, 251:3 **Noted -** 6:7, 80:18, 145:22, 218:11, 253:17 **Notes -** 135:17, 222:19, 247:19 Notwithstanding -173:10 Nova - 79:16, 91:6, 91:10, 91:14, 92:10, 92:11, 92:13, 92:14, 92:17, 92:20, 93:1, 93:2, 97:8, 97:11, 97:22, 98:3, 98:4, 133:1, 166:15, 167:1, 220:8 **NP -** 8:6, 8:21, 8:22, 9:4, 9:5, 28:10 **Nuances - 31:24 Numbers - 11:17**, 15:9, 45:12, 72:12, 74:16, 78:1, 105:10. 107:19. 111:11, 111:13, 114:5, 137:6, 138:7, 141:3, 158:22, 162:20, 163:18,

200:20, 205:21,

212:20, 216:2, 237:8, 237:14, 237:15, 238:25, 239:3, 239:4 **Nutshell - 136:14**

0 **O&M** - 136:16, 175:24, 176:20, 177:20, 178:2, 223:17, 223:21, 223:23, 224:13, 225:23, 226:16, 226:17, 227:18, 240:19 Objectives - 44:14 Obligation - 84:16, 239:3 **Obligations -** 62:6 **Oblige - 111:21 Obtained -** 25:1, 27:6 **Obtuse - 153:1 OC -** 169:18, 173:3 Occasionally - 197 :23, 200:8, 249:17 Occurrence - 149: 19 **Odd -** 62:16 **OEM -** 10:22, 11:24, 54:21 **Oems -** 54:20 **Offer -** 237:4 Offset - 161:20 **Offshore -** 67:18, 221:4, 222:4 Often - 63:18, 250:14 Oftentimes - 219:1 Oil - 29:24, 85:17, 98:25, 99:9, 100:6, 100:10, 102:1, 102:13, 103:10, 111:20, 111:23, 112:5, 161:5, 175:8, 248:22, 249:3 **Old -** 2:18, 62:16, 164:16 **Omitted - 79:5** Ones - 42:23, 134:14, 162:16, 163:19, 216:5 Ongoing - 96:10, 97:11, 155:3, 164:2, 250:13 Online - 19:7, 19:17, 20:1, 85:2, 194:24, 195:10 **Onshore -** 67:19

Ontario - 79:20,

81:6 Open - 35:18, 104:19, 119:18, 120:5, 179:16, 179:25, 181:6, 223:22, 240:4 Operable - 90:11 **Operate -** 20:20, 20:21, 26:10, 49:15, 57:23, 62:17, 125:5 **Operated - 27:19.** 33:2 Operates - 20:6, 222:5 Operating - 3:10, 7:1, 7:15, 14:7, 18:22, 25:10, 27:14, 27:17, 28:7, 28:13, 32:2, 33:1, 33:21, 34:17, 35:3, 54:9, 56:24, 70:18, 124:8, 124:16, 145:5, 160:17, 174:7, 176:7, 203:1, 217:10, 217:12, 225:18, 226:22, 241:3, 242:6, 242:12, 251:25, 252:7, 253:25, 254:2 Operation - 23:16, 24:25, 26:7, 27:7, 28:2, 55:4, 55:6, 55:11, 56:9, 65:13, 169:1, 169:3, 179:2, 228:1, 228:12 Operational - 17:8, 18:8, 18:18, 37:4, 87:16, 175:17, 202:14, 223:4 Operationally - 24 9:12 Operations - 11:15 , 39:13, 52:17, 59:2, 59:16, 59:24, 61:8, 64:15, 64:16, 64:17, 129:5, 180:24, 205:25, 222:12, 222:23, 249:21 Operative - 95:19 **Operators - 31:18,** 166:22, 251:6,

252:21

196:21

Opinion - 105:20,

Opportunities - 87:

171:9, 172:25,

3, 93:22, 94:4,

94:7, 94:10, 240:2, 246:14, 247:10 **Opposed -** 81:5, 82:7, 103:18, 105:21, 109:19, 190:6, 209:21, 250:8 **Optimize - 146:21**, 147:1, 148:8, 148:9, 148:20, 148:23, 149:5, 149:7, 149:18, 149:19 **Option -** 14:11, 62:4 **Options -** 35:22, 36:19, 61:13, 63:23, 63:24, 114:11, 121:14, 164:8 Order - 118:18, 141:17, 143:14, 144:20, 152:3, 152:4, 152:21, 155:9, 157:23, 158:2, 162:7, 163:6, 169:20, 176:14, 183:7 **Ordered - 183:8 Orders -** 120:25 Organization - 43: 12, 167:7, 186:7, 223:25 Organized - 247:18 **Original - 28:4**, 191:17 **OT -** 39:3 **Otherwise -** 19:18, 121:9, 201:12, 205:10, 253:15 **Ours - 43:3 Ourselves - 119:15** , 127:22 Outage - 21:8, 37:13, 40:2, 44:18, 49:16, 184:25, 233:22 Outages - 41:22, 42:19, 44:22, 44:23, 45:6, 45:9, 46:11, 49:12, 52:18, 184:15 Outcome - 25:12, 97:2 **Outlines - 251:13** Output - 29:20 Outrageous - 65:2 Outset - 142:19 Outstanding - 193:

10:5, 11:3, 11:25, 28:6 **Overly - 136:2 Overruns -** 65:23 Oversight - 201:2 **Overtime -** 38:19, 38:21, 124:9, 125:9, 126:1, 126:2, 127:6, 127:8, 127:10, 127:14, 127:15, 128:16 **Overture -** 82:10 Own - 41:17, 61:4, 61:7, 76:22, 115:12, 119:22, 120:12, 131:14, 149:16, 179:2, 216:11, 224:5, 224:15, 239:14 Ownership - 141:1 Owns - 46:9, 140:12, 142:15, 143:16 Ρ Paid - 32:13, 88:16, 96:17, 126:17, 173:11, 228:5 **Panel - 2:6 Papers - 114:20** Parameter - 41:8 Parameters - 25:11 , 32:1, 245:21, 245:24 Parent - 121:16 Park - 176:18, 207:25, 234:22 Participants - 97:1 3, 138:22 Participate - 247:1 Particularly - 34:4, 47:20, 122:11, 126:7 **Parties -** 1:22, 2:6, 2:18, 34:15, 120:1 Partner - 93:3. 93:9, 93:12 **Parts - 86:22** Party - 63:8, 63:10 Pass - 146:25 **Past -** 45:24, 52:6, 53:10 **PAUL - 182:21**, 182:25 **Pay -** 34:25, 72:5,

Overalls - 7:4. 110:23, 118:18, 121:13, 124:3, 134:17, 166:14, 167:2, 171:9, 174:7, 176:20 **Paying - 80:1**, 93:25, 95:17, 95:20, 95:24, 96:21, 96:23, 107:12, 162:5, 162:13, 222:13, 227:19, 227:22, 227:24, 228:19 **Payment - 127:8 Payments - 126:13** , 126:15 Payroll - 222:20 **Pays - 137:2** Peak - 31:16, 159:9, 159:10, 159:13, 159:24, 163:20, 163:21, 164:1 **Peculiar - 32:16** Penalties - 10:16 **Penalty - 11:16** Peninsula - 181:4 **Penstock - 50:14.** 50:16, 51:4, 51:17, 52:7, 52:21 **People - 15:11**, 37:23, 59:22, 61:17, 84:11, 104:22, 105:17, 108:16, 108:25, 109:10, 109:13, 110:16, 111:6, 112:6, 112:10, 112:23, 112:24, 114:20, 116:2, 116:15, 120:7, 124:23, 127:1, 128:17, 129:19, 130:2, 132:15, 134:20, 177:3, 179:8, 179:18, 180:2, 186:21, 192:18, 192:19, 192:23, 199:11, 200:25, 210:1, 221:15, 224:15, 224:16, 246:17, 249:13, 249:21 People's - 111:7, 114:10 Perceive - 37:8 Percentage - 105:5 , 190:3, 193:19, 193:21, 193:22, 195:5, 197:5 84:16, 86:10, 96:5, Percentages - 190: 96:16, 105:15,

20

8, 190:13, 191:18, 191:23, 192:1, 192:8, 199:12, 199:21, 204:13 **Perfect - 2:10**, 11:14 **Perfectly - 40:19**, 100:23 **Perform - 28:18** Performance - 19: 9, 27:25, 39:14, 40:16, 40:17, 41:10, 41:11, 43:2, 43:9, 44:16, 44:20, 45:18, 46:20, 50:10, 53:1, 126:16, 198:15 Performed - 218:2 Performing - 180:2 **Perhaps -** 183:15, 188:14, 189:16, 189:21, 190:9, 190:25, 191:1, 191:17, 203:9, 207:10, 211:2, 211:3, 220:6, 226:12, 229:10, 230:5, 230:6, 241:20, 243:16, 247:16, 251:2, 251:5 Perilously - 92:1 Period - 11:25, 50:22, 59:9, 90:6, 106:8, 122:25, 132:20, 163:21, 164:1, 218:24, 222:15, 225:2, 225:14, 225:25, 231:6, 231:14, 237:11, 245:3 **Periods -** 4:3, 47:7, 160:23, 204:1 Permit - 26:14, 27:5 Permitted - 177:5 Permitting - 25:21 Person - 72:16, 72:19, 75:14, 75:15, 75:16, 75:21, 107:12, 180:6, 208:14, 210:8, 224:8 Personal - 1:4. 64:24, 65:3, 196:21 Personalities - 127 :13 Personally - 65:8, 65:9, 130:14,

174:1, 196:21 Personnel - 223:18 , 225:23 **Person's - 105:15** Perspective - 27:2 2, 31:14, 42:17, 47:24, 59:14, 59:15, 60:11, 64:1, 95:12, 106:4, 109:19, 110:5, 116:4, 118:20, 122:7, 134:8, 161:11, 164:7, 168:1, 168:11, 169:13, 171:7, 172:7, 174:5, 176:19, 196:23, 207:22, 213:1, 219:12, 224:11, 232:21, 238:8, 241:2, 244:9, 244:18, 244:25, 246:11, 250:13, 251:19 **Pf** - 127:8 Philosophy - 3:16, 17:8, 18:8, 37:4 Photocopied - 182 Photocopies - 182: Photocopying - 18 2:10 **Physical -** 231:12 Picked - 201:13 **Pickle - 124:10 Picture - 235:3 Piece -** 155:10, 191:4, 240:8 Pieces - 130:7, 172:19, 199:4 Place - 15:23, 32:8, 59:17, 81:18, 89:15, 94:12, 94:16, 112:16, 167:8, 186:2, 224:23, 233:15, 240:11, 251:4, 251:5 Places - 96:6, 155:18 Plan - 13:9, 24:24, 26:7, 27:6, 55:3, 55:12, 55:14, 56:11, 56:20, 56:23, 57:16. 61:22. 100:3, 100:7, 100:11, 101:9, 101:15, 102:3, 102:16, 103:4,

103:6, 104:2,

104:3, 104:11, 104:15, 107:3, 107:23, 131:10, 159:19, 194:12, 194:15, 195:12, 198:15, 205:1, 224:1, 247:22, 248:18, 249:12, 250:7, 251:4 Planned - 26:9, 41:22, 44:22, 45:6, 45:8, 46:11, 194:16, 195:13, 231:24 **Planning - 15:14**, 36:24, 47:23, 52:14, 59:18, 60:13, 60:17, 60:19, 61:22, 62:3, 62:7, 63:3, 63:4, 63:17, 66:18, 184:23, 229:20, 234:7, 234:8, 234:14, 234:15. 240:23 **Plans -** 45:11, 56:15, 67:2, 95:24, 221:2, 233:22 Plant - 38:23. 56:16, 57:10, 57:12, 65:12, 85:1, 85:4, 91:15, 144:18, 146:22, 146:23, 147:1, 147:4, 169:10, 170:4, 171:19, 172:15, 172:24, 191:8, 197:18, 202:23, 203:1, 203:21, 208:1 **Plants - 92:3**, 149:5, 149:7 Plate - 23:12 **Play - 146:7**, 233:23 **Plot -** 30:19 Plotted - 206:22 Pockets - 126:3, 224:6 **Pointing - 253:2 Polar - 225:17** Pole - 15:8, 169:1, 169:2, 225:7, 225:18, 230:25 **Pond - 15:7**, 139:22, 140:9, 143:6, 143:12, 144:15, 145:7, 145:11, 170:25, 229:15 Portion - 170:25, 175:25, 191:10,

193:5 **Posed -** 93:20, 121:15, 135:7, 136:4 **Poses - 135:12 Position - 17:17.** 28:16, 64:22, 64:24, 65:3, 142:18, 147:8, 163:8, 164:10, 171:22, 183:22, 185:14, 185:16, 185:23 **Positions - 124:9**, 128:11, 128:14 **Positive - 184:18**, 237:19 Possibilities - 124: 5, 125:20 Possibility - 123:1 Post - 47:6, 83:16, 83:24, 85:24, 86:17, 99:25, 102:21, 103:18, 103:24, 104:4, 104:20, 105:13, 105:18, 117:9, 244:20 Potential - 60:15, 68:1, 100:12, 151:19, 243:6, 244:7 Potentially - 37:23 Power/ **Emera -** 93:1, 93:2 **Power's -** 69:19, 122:21 **PR -** 42:16 **Practice - 170:16**, 195:4 **Praxair - 36:10 Pre -** 47:6 **Precision - 215:23 Predates - 191:2 Predict - 13:14** Predicted - 201:8 Predicting - 111:25 **Prefer -** 178:18 Preliminary - 1:24, 181:25 **Premise - 136:12**, 151:15, 161:18, 184:7 Preparation - 23:2 **Prepared - 191:1**, 247:22, 247:25 Prerogative - 123: 12 Present - 153:21

Presentation - 78: 9, 188:23, 197:8, 201:20, 208:25 Presentations - 19 9:15 **Presented - 111:15** 140:21, 201:6 President - 59:1, 60:23, 64:15, 183:19, 204:11 Pressure - 15:2, 53:5, 53:17, 62:17 Presumably - 99:8, 136:7, 163:13, 201:23, 216:2 Presuppose - 96:1 Prevailing - 110:7, 137:2, 162:21 Preventing - 104:7 **Previous - 97:18**, 192:11, 222:15 Previously - 111:1 6, 131:6, 207:9 **Price -** 34:24, 114:5, 136:23, 161:5, 161:25, 167:13 Prices - 92:3, 132:11, 133:2, 137:10 Prince - 79:16, 220:9 Principle - 231:5 Principles - 198:21 Prior - 46:23. 47:11, 87:9 Private - 122:22, 122:23 **Privy - 122:6**, 122:16, 153:22 Proactive - 37:24 Problem - 1:9, 119:15, 120:22, 213:22, 214:1, 214:12 Procedure - 89:15 Procedures - 32:7 **Proceed -** 58:10, 181:23, 182:20 Proceedings - 3:24 189:2, 216:25 **Proceeds -** 85:18, 217:11 Processes - 47:13 Procured - 23:17 **Produce - 217:22 Produced -** 7:14, 252:10 **Product - 129:22**

Production - 12:17

15:10, 15:14, 56:15, 57:16, 66:18, 148:21, 148:24, 149:20, 235:12, 244:23, 247:22, 248:9, 248:18, 249:6, 250:5, 251:3 Productive - 110:2, 235:20, 235:21 **Productivity - 124**: 20, 125:15, 127:21 Proficient - 95:2 **Profile - 219:15**, 235:12 **Profit -** 179:19 Prognosticators -137:9, 152:8 **Program -** 71:14, 126:22, 132:14, 132:18, 133:5 **Progress - 125:12.** 193:3, 193:8, 193:15, 201:11, 206:11, 237:22 Progressing - 61:3 **Prohibits - 169:20** Projected - 71:14, 201:18, 211:22, 215:9, 220:7 Projection - 68:15, 68:18, 69:23, 72:16 Projections - 68:13 , 68:14, 68:19, 69:18, 70:20, 70:21, 71:4, 77:23, 77:24, 81:11, 101:12, 103:11, 108:10, 137:21, 138:14, 212:11, 212:22, 213:9, 214:15, 215:6, 248:22 **Projects - 168:16**, 170:2, 198:12, 198:14, 198:21 **Proper -** 120:10 **Properly - 33:2**, 49:4, 118:24 **Proponent -** 64:21, 66:6 Proponents - 163: **Proposal - 23:21**, 67:17, 82:1, 82:3, 84:23, 85:14, 86:1, 95:9, 99:18, 102:12, 108:7, 116:24, 160:19, 214:20 Proposals - 214:7

Propose - 122:7, 174:13, 175:6 **Proposed -** 101:20, 101:25, 172:2, 186:25, 221:4 Proposing - 103:8, 103:9, 214:5 Prospective - 81:2 **Protect - 16:25** Protection - 184:2 **Protocol -** 251:4, 251:13, 252:25 **Proven -** 16:17 **Provide -** 2:2, 14:3, 15:11, 16:18, 17:1, 18:13, 29:12, 52:15, 74:8, 75:20, 80:10, 85:22, 86:15, 97:12, 123:1, 138:21, 141:6, 141:13, 141:20, 142:8, 162:20, 163:4, 185:22, 222:22, 240:2, 241:21, 245:10, 249:18, 253:14 **Provided -** 2:1, 8:3, 17:2, 61:14, 73:22, 91:12, 91:13, 144:8, 182:5, 188:14, 189:12, 212:15, 212:21, 217:18, 218:1, 218:7, 218:22 Provider - 1:18 **Provides - 210:12**, 226:15 **Providing -** 95:18, 154:3, 169:14, 201:1, 223:17, 225:22, 239:14, 240:17 **Province -** 76:7, 76:13, 78:25, 82:6, 84:11, 84:12, 85:10, 109:18, 111:6, 132:10, 150:25 Provinces - 76:6, 78:24 Provincial - 110:13 , 115:24, 115:25, 116:1, 119:2, 221:13, 221:21 **Prudent - 233:1**, 251:14 PUB - 123:21,

236:7

Public - 80:13,

85:20, 92:9, 92:12, 92:15, 92:17, 97:22, 99:22, 122:8, 123:21, 133:16, 140:22, 141:19, 142:7, 142:21, 143:7, 165:4, 165:11 **Publicly - 142:14** Published - 114:21 **Pull -** 18:17, 28:10, 39:12, 46:15, 216:3 **Pulp - 36:6 Pumps - 131:13**, 132:15 **Pun - 246:21 Purchase - 97:20**, 121:17, 121:24, 161:20, 215:14, 216:17, 221:5, 221:6, 222:4, 227:21, 243:7, 243:10, 247:6 Purchased - 88:8, 243:4 **Purchases - 93:22**, 94:7, 94:10, 223:10, 243:25, 252:2 Purchasing - 91:10 223:7 **Purposed - 95:14 Purview - 104:18 Push -** 32:2, 237:20 Pushback - 34:16 **Pushed -** 35:17 **Puts -** 210:3, 220:22 **Putting - 24:22**, 30:3, 66:5 Q

Q4 - 202:9 **Qualify - 197:5** Quantities - 90:17 **Quantum - 138:7**, 213:20 **Quarter - 196:9**, 202:1, 202:2, 203:5, 237:13 **Quebec -** 78:25, 79:4, 79:9, 80:2, 80:25, 81:4, 82:23, 83:2, 146:4, 146:5, 148:3, 153:6, 153:9, 153:15, 153:18, 154:12, 154:24, 156:15, 160:5, 160:11, 243:8, 243:11

Questioned - 227: 12, 237:7 Questioning - 214: 23 Queue - 165:18 Quick - 46:17 Quickly - 6:5, 142:8, 178:24, 183:16, 234:4 Quote - 10:10 Quoting - 131:24

R

Rain - 248:11, 248:12 Raise - 166:7, 187:5 Raised - 155:17 Range - 4:4, 4:17, 5:15, 80:21, 108:25, 118:14, 137:23, 138:15, 221:12, 221:16 Rated - 21:24, 22:1, 22:12, 23:12 Ratepayer - 172:6 Ratepayers - 72:4, 80:1, 80:2, 84:12, 89:1, 121:19 **Rather -** 37:12, 93:23, 249:4 **Rating -** 23:12, 251:9 Rational - 174:6 Rationale - 17:4, 17:8 Rationalization - 2 39:10 Rationalize - 137:4 Rationalizing - 33: **Re** - 45:9, 94:24, 250:16 **React - 246:25 Reacting - 246:15 Reactive - 28:21**, 28:24 **Ready -** 37:19, 52:16, 58:10, 86:23, 181:23 **Realized - 77:25**, 182:7, 182:15 **Realm - 142:6** Reapplied - 16:22 Reason - 53:3, 74:18, 74:19, 79:4, 81:3, 86:19, 161:23, 214:14, 217:7, 236:23 Reasonable - 16:1 8, 16:19, 43:16,

65:21, 95:14, 104:25, 106:3, 109:8, 115:10, 130:5, 171:8, 174:6, 177:2, 177:3, 191:25, 208:23, 239:5, 251:15 Reasonably - 97:2 **Reasons - 102:10**, 141:23 **Rebate - 101:14 Recalled - 251:11 Recaps -** 156:24 Recapture - 96:7, 102:1, 103:12, 117:5, 160:20, 160:23, 165:14, 176:11, 176:22, 208:2, 214:4, 247:9, 249:3 Recaptured - 122: 12 **Receive -** 200:6, 233:7 Recent - 27:14 Recently - 111:4 Recipient - 202:6 Recognize - 15:19, 89:17, 181:15 Recommendation **-** 10:5, 10:22, 11:24 Recommendations - 28:5, 55:1, 120:8 Recorder - 1:20 **Recover - 109:5**, 110:20, 110:21, 136:25, 171:25, 175:3, 176:2 Recovered - 173:2 0, 175:11, 176:16, 226:5 Recovering - 41:9 Recovery - 3:21, 33:11, 169:20, 174:10, 178:20, 239:17, 242:21 **Reduce - 125:2**, 128:23, 135:24, 136:7, 136:19, 237:18 **Reduced - 135:8,** 135:16 **Reducing -** 105:22 Reduction - 15:24,

100:13, 135:13,

135:15, 135:23

20

Redundancy - 225:

Referenced - 209:1 **Referred - 207:9**, 218:19, 222:19 **Refers -** 135:15 **Refining - 237:16 Reflect - 2:15**, 156:11, 157:1, 215:24, 215:25 Reflected - 250:22 **Reflects -** 193:19 Reformulated - 45: **Region - 21:6 Regional -** 15:14, 133:8 Regrettably - 34:2 **Regular -** 7:13, 40:14, 149:6, 219:9, 224:13, 250:15 Regulated - 59:2, 59:24, 64:15, 70:16, 132:23 Regulating - 120:1 Regulations - 26:2 Regulator - 104:8, 149:24 Regulatory - 184:1 Reheater - 53:11 Reinstating - 47:14 Relation - 222:23, 240:18 Relevance - 150:2 Reliability - 14:11, 17:15, 17:16, 18:5, 34:24, 35:20, 39:11, 39:16, 40:4, 46:7, 49:12, 50:3, 55:23, 67:9, 126:24, 160:15, 179:12, 180:7, 187:19, 225:20, 229:7 **Reliable -** 39:13, 87:20, 125:6, 228:17 **Reliably - 55:21**, 234:16 Relooked - 102:4 Reluctantly - 157:1 **Rely -** 205:20 **Relying -** 35:23, 200:24, 200:25, 201:21

Remain - 193:7

Remaining - 13:23, 193:12 **Remind - 209:18 Remiss - 139:7 Reopen - 158:12** Repeating - 221:22 **Replace -** 60:10, 62:20, 66:24, 67:17, 67:19, 144:23, 147:9 Replacement - 23: 22, 62:14, 178:5 **Report - 183:10**, 191:15, 192:13, 192:20 **Reported -** 59:19, 60:22, 62:8, 211:23 REPORTER - 119: 5, 119:10 Reporting - 125:9, 128:16 **Reports -** 17:18, 51:11, 155:21, 197:22, 219:22, 219:23 Representation - 4 3:17, 118:8 Representations -118:1 Reproduced - 182: Request - 9:9, 28:22, 88:19, 89:13, 163:16, 186:11, 245:9 Requested - 118:7. 127:9 **Requests - 163:18,** 165:25, 184:11 Require - 91:2, 123:5, 124:17, 124:18, 158:20, 176:8 Required - 10:25, 14:25, 26:4, 31:11, 55:17, 56:22, 110:23, 125:4, 159:2, 164:14, 164:21, 165:1, 176:21, 186:13, 221:20, 224:3 Requirement - 7:4, 14:21, 26:23, 48:15, 136:15, 136:17 Requirements - 7: 13, 22:20, 27:3, 148:7, 165:18,

235:25, 236:1,

Requires - 37:13,

248:4

165:20 **Reserve -** 3:10, 14:9, 15:1, 15:12, 19:8, 21:4, 21:13, 21:22, 22:19, 33:17, 34:8, 34:24, 36:21, 37:11, 187:25, 230:23, 230:24, 231:1, 231:5 **Reserves -** 18:23, 19:4, 19:5, 19:24, 35:23 Reservoir - 145:5, 146:25, 147:17, 149:2, 234:22, 234:23 Reservoirs - 148:1 1, 149:20, 248:8 Residential - 135:2 0, 164:15 Resolved - 92:7 Resources - 28:21, 116:2, 116:14, 159:16, 178:10, 194:5, 223:19, 224:5, 224:9, 232:3, 248:7 Respect - 7:7, 14:22, 28:1, 61:7, 87:10, 96:10, 110:10, 151:4, 151:9, 151:12, 153:10, 153:12, 153:22, 153:23, 155:22, 173:16, 179:25, 180:4, 180:7, 185:5, 191:6, 199:20, 205:24, 208:15, 223:17, 223:24, 240:14, 250:17, 252:2, 252:8 **Respects - 201:21 Respond -** 186:14 Responded - 17:17 Response - 8:5, 9:15, 37:7, 37:16, 243:1, 243:19 Responsibility - 42 :18, 235:9 Responsible - 59:3 , 59:15, 61:9, 243:21, 251:6 Restrict - 121:1 Restrictions - 229: 17 **Result -** 12:15, 27:6, 100:12,

Retain - 133:21, 134:1 Retained - 58:3, 204:5 **Retired -** 23:20, 24:9, 42:11 Retirement - 181:1 Retrospect - 31:5, 31:6 Retrospective - 33 :4 **Return -** 69:19, 69:20, 122:18, 122:19, 122:21, 122:22, 122:25, 123:1, 123:9, 143:18, 143:23, 242:22 **Returned - 24:16**, 249:10 **Revenue -** 86:13, 136:15, 136:17 **Reversed - 203:10**, 203:12 **Reviewed -** 164:9, 213:18, 250:12 Reviewing - 92:18, 128:15 **Revised -** 249:16, 251:17 **Revising - 121:23 Reviving -** 223:25 **RFI - 8:6** Rfis - 236:18 RFP - 82:2, 82:17 **Rightly -** 177:19 **Rights -** 95:3, 95:4 **Rising - 133:19 Risk -** 17:24, 48:19 River - 146:22, 148:23, 149:7, 149:10 **Road -** 100:20 Robert - 185:11 **Role -** 64:14 **Roll -** 174:9 Round - 163:13, 236:18 **Route -** 67:9, 83:3 **Routine - 170:15** Routinely - 63:18 **RSP -** 5:1, 248:13, 250:11 **Run -** 5:1, 5:16, 12:3, 14:4, 14:13, 14:18, 14:25, 17:13, 31:3, 31:4,

94:5, 110:1, 114:6

RESUME - 131:1

Retail - 135:24

31:5, 55:16, 62:22, 91:1, 202:23, 212:25, 231:8, 233:10 **Running -** 5:6, 6:12, 6:18, 6:20, 7:7, 7:21, 12:15, 12:17, 18:8, 26:22, 30:2, 32:9, 34:7, 55:17, 56:3 **Runs -** 12:11

S

Safe - 251:14 Safely - 234:15 **Safety -** 48:24, 198:16 Sake - 22:13, 147:16, 232:9 **Salaries - 96:4**, 241:4, 241:5, 241:11 Sales - 81:17, 81:24, 82:5, 147:23, 209:24, 211:20, 211:22, 217:12 **Salmon - 149:9 Sanction -** 109:16 Sanctioned - 244:4 Satisfactory - 156: Satisfied - 46:22 Satisfies - 74:22 **Satisfy -** 153:3 Save - 77:17, 124:21, 174:12 Saving - 87:4, 99:10 Savings - 49:7, 85:19, 99:19, 101:25, 103:20, 128:4, 129:16, 157:1, 172:4, 175:7 **Savvy -** 110:25 Saw - 70:21, 72:18, 108:10, 111:4, 163:11 **Scan -** 183:16 **Scanning - 211:15** Scenario - 103:21, 135:12 Scenarios - 160:17 , 234:1 **Schedule -** 56:14, 65:6, 168:22, 194:22, 197:1, 197:2, 197:13,

Results - 44:11,

131:14

197:14, 197:19,

198:16, 201:13,

204:7, 205:16,

April 23, 2018
206:8 Scheduled - 204:3, 204:12, 204:17 Schedules - 65:23 Scheduling - 47:23 Science - 114:1, 114:3 Scope - 92:5, 180:4 Scotia - 79:16, 91:6, 91:10, 91:14, 92:10, 92:11, 92:13, 92:14, 92:17, 92:20, 93:1, 93:2, 97:9, 97:11, 97:22, 98:3, 98:4, 133:1,
166:15, 167:1, 220:8 Screen - 23:15, 189:14 Screens - 189:15
Scroll - 52:24, 173:5, 173:14 Scrutinized - 127:2 3, 237:6, 238:22, 238:23 Scrutiny - 125:10,
200:21 Season - 54:9 Second - 2:1, 81:17, 192:15, 192:25 Sections - 173:10,
173:12 Security - 17:1, 17:21, 18:14, 34:3, 71:12 See - 15:23, 32:15,
50:24, 51:20, 68:6, 68:13, 70:8, 72:22, 78:8, 85:13, 89:14, 99:24, 100:20, 129:3, 130:1, 154:9, 172:6, 179:19, 183:14, 190:12, 190:14, 190:24, 219:13,
219:17, 230:2 Seek - 69:21 Seeking - 124:7 Seen - 111:11, 188:25, 236:11 Selects - 78:24 Self - 224:1, 224:22 Sell - 67:2, 94:21
Sell - 67:2, 94:21, 96:7, 109:16, 109:25, 131:8, 131:15, 132:9, 132:23, 136:8, 136:22, 137:1, 147:23

Selling - 81:19,
82:8, 83:13, 83:16,
84:7, 94:24,
109:19, 111:2,
133:1, 137:16,
246:4
Sends - 226:4
Senior - 126:17
Sensitive - 89:8
Separate - 21:6,
Separate - 21.0,
102:2, 172:25
Sequence - 21:2,
28:13
Serve - 62:6,
147:9, 160:14,
236:1
Service - 15:13,
16:19, 28:21, 40:7,
55:19, 85:8, 90:10,
95:19, 123:2,
104.10 105.6
124:18, 125:6, 162:17, 162:22, 162:25, 163:4, 163:16, 169:13, 170:22, 170:24,
162:17, 162:22,
162:25, 163:4,
163:16, 169:13,
170.22 170.24
474.4 402.02
171:1, 183:23,
196:2, 197:15,
201:18, 205:8,
208:20, 212:25,
214:21, 228:19,
239:6, 240:2
Services - 1:18,
222:22, 223:17,
223:21, 226:15
Session - 204:17
Sessions - 205:24
Set - 45:12, 94:25,
3et - 45.12, 94.25,
119:2, 140:16,
193:7
Setting - 46:12
Settlement - 125:1
Seven - 163:3
Several - 184:3,
189:4, 211:12
Shall - 173:12
Share - 66:11, 140:18, 141:3 Shared - 246:10
140·18 141·3
Shared 246:10
Charabaldings 1
Shareholdings - 1
41:14
Sharing - 244:13
Sharply - 31:19
Shedding - 37:22,
40:13
Sheet - 162:21,
250:23
She's - 32:24,
She's - 32:24, 32:25, 52:20
Shock - 102:21,
105:3, 105:5, 105:6, 105:7
100.3, 100.3,

105:6, 105:7,

```
105:11, 105:14,
106:13, 108:9,
108:12
Shop - 39:7, 52:20,
89:16, 210:1
Shops - 130:9
Shortfall - 25:5,
37:22
Show - 18:7, 80:20,
124:11
Showed - 191:10,
191:18, 242:6
Showing - 108:18
Shown - 191:2,
210:23
Shut - 31:15,
32:18, 55:23, 56:1,
58:4, 234:4
Shutting - 56:11
Side - 39:11, 57:16,
59:3, 164:15,
173:1, 178:20
Siemens - 10:4
Sight - 145:25
Sigma - 129:20
Sign - 152:5
Signatures - 152:2,
152:5
Significant - 34:16,
34:20, 34:22, 51:3,
62:19, 90:17, 99:1,
105:12, 148:12,
177:21, 183:1,
206:7, 250:25
Significantly - 5:7
Similar - 22:9,
126:19, 131:13,
189:11
Simple - 231:14
Single - 28:18,
52:8, 185:4, 223:9
Sit - 116:8, 219:11,
219:17
Site - 37:18
Sits - 232:16
Situation - 13:12,
114:24, 121:4,
136:4, 137:12,
147:12, 149:25,
152:10, 207:19,
231:3, 232:18,
232:20
Six - 80:21, 129:20,
180:2, 230:6,
230:13, 230:21
Size - 24:15.
164:13, 165:22
Skillset - 95:3
Slash - 92:14
Slated - 231:16
Slide - 73:8
```

Slight - 212:22 **Slightly -** 206:23, 213:2 **Slippage -** 205:12, 206:8 **Slower -** 49:10 **Slowly -** 48:12, 48:14 **Small - 95:1**, 212:16, 215:23 **Smaller - 104:24** Smooth - 99:25, 102:18, 103:17 **Smoother -** 85:23. 86:16, 104:20 Smoothing - 100:2 2, 102:3, 117:2, 123:25, 174:14 Social - 148:21 Socket - 39:22 **Sold -** 232:19 **Soldiers -** 15:7, 139:22, 140:9, 143:6, 143:12, 144:15, 145:7, 145:11, 170:25, 229:15 **Solely - 216:21** Solicit - 93:22, 94:4, 94:7, 94:10 Solicitors - 166:6 **Solid - 95:9 Solo -** 82:14 **Somewhat - 222:1** 1. 246:13 Sophisticated - 23 1:16 **Sound -** 4:4, 8:16, 95:9 **Sounded - 90:1 Sounds -** 5:19, 101:22, 117:12 **Source -** 60:15, 62:5, 78:7, 142:5 **Sources - 111:20 South - 147:6**, 232:19 **Space -** 108:17, 111:19 Specific - 90:2, 92:3, 105:10, 141:3, 145:15, 163:5, 170:2, 172:19, 186:23, 206:10, 212:24, 220:2, 227:21 **Specifics - 225:10** Speculate - 212:1, 220:5 Speculation - 151: 18

Speed - 224:17, 224:24, 225:1 **Spend -** 165:13, 213:23 **Spending -** 130:11 Spent - 177:24, 178:22 **Spill - 235:2 Spilling - 235:1**, 246:18 **Spinning - 19:4**, 19:5, 19:24, 21:4, 22:19, 33:17, 34:7, 35:23, 36:20, 37:10 **Split -** 189:14, 248:6, 248:21, 250:16 **Splits -** 132:15 **Spoken -** 192:18 **Spot -** 30:16, 30:23, 31:2 **Spring -** 102:5 **Squarely -** 155:2 **St** - 25:19 Stabilization - 100: 3, 100:7, 100:11, 101:9, 101:14, 102:3, 102:16, 103:3, 103:4, 103:6, 104:11, 104:15, 107:3, 107:23 Stack - 26:25, 246:7 Staff - 37:14 **Staffing -** 37:4, 38:3, 38:13, 38:16 Stakeholders - 17: 20, 35:7, 35:11, 35:14 **Stand -** 63:21, 147:14, 211:12, 214:14, 217:6, 252:24 **Standby -** 3:16, 18:9, 29:1, 32:8 **Standing -** 28:14, 146:14 **Stands -** 224:18 **Start -** 9:11, 9:13, 9:16, 9:22, 10:1, 10:2, 12:2, 12:23, 14:14, 29:1, 37:18, 123:23, 154:19, 171:5, 182:18, 183:3. 228:19. 228:22 Started - 1:16, 12:5, 12:21, 18:19, 124:20

Starting - 37:14,

231:25, 232:24,

240:25, 243:20

161:23

Technically - 95:2.

Technicians - 224:

Technology - 138:

Teething - 202:15

TEMPLETON - 1:2

Ten - 12:11, 105:16

Term - 24:17, 28:5,

28:6, 34:5, 39:22,

63:20, 73:7, 81:16,

81:18, 82:7, 83:9,

83:23, 84:3, 84:6,

84:10, 90:24, 96:9,

52:14, 62:13,

83:12, 83:21,

96:12, 100:13,

109:10, 126:15,

126:21, 129:22,

144:2, 161:2,

174:10, 178:4,

179:9, 212:24,

238:24, 239:7,

244:14, 244:18

Termed - 103:21

Terminal - 41:4,

170:17, 170:18

23:15, 24:22,

50:12, 52:10,

81:19, 104:13,

122:18, 133:17,

133:18, 137:14,

139:15, 142:13,

108:5, 108:9,

Terminology - 203:

Terms - 7:22, 9:15,

24:25, 26:7, 28:12,

29:19, 39:11, 45:14,

52:25, 55:12, 81:11,

228:13, 229:19,

Terawatt - 249:6

4, 138:5, 240:11

Telling - 150:9

Tells - 157:3

3, 2:10

54:7, 90:20, 190:10, 190:23, 228:9 **Starts -** 6:22, 7:6, 7:16, 7:20, 10:7, 10:24, 11:4, 11:9, 11:10, 11:12, 11:13, 13:9, 13:10, 13:11, 15:9, 15:24, 28:7, 33:23, 139:21, 242:10 Statement - 76:22 **Static - 28:20 Stating -** 127:13 **Station -** 37:24, 41:4, 50:11, 94:23, 168:19, 170:17, 170:25 **Stations -** 140:8, 170:19, 171:4 Statistic - 111:4 Statistics - 43:2 **Status -** 18:21, 146:13, 155:14 **Stay -** 91:3 **Steal -** 166:4 Steeper - 103:25 Step - 103:19, 103:24, 104:22, 105:23 **Stephen -** 67:16, 167:17 Stephenville - 14:1 8, 38:1, 38:24 **Steps - 47:10**, 52:11, 54:1, 105:25, 183:8 Stewarding - 24:1 **Sticking -** 201:13 **Stop -** 86:6 **Store -** 164:12 **Stored - 146:24** Storm - 37:11, 45:2, 46:21 **Straight - 134:7** Strait - 224:9 **Strategy** - 183:4 **Stream -** 86:3 **Street -** 164:15, 187:22 **Stress -** 10:17, 11:23 **Strictly - 234:18 Strive -** 244:12 Structured - 128:6. 179:15 Structures - 162:1 1, 165:7 **Studies - 33:5**, 60:14, 63:17, 108:14, 108:18,

108:21, 114:4, 114:13, 114:18, 164:13, 229:19, 240:25 **Study -** 114:7, 114:15, 115:21, 220:2 **Styled -** 189:6 Subparagraph - 17 3:9 Subsequent - 198: 5, 248:24 Subsidiaries - 222: 18 Subsidiary - 93:13 Substantial - 214:1 **Success - 221:8** Successful - 83:5, 83:7, 83:10 Sudden - 231:2 Sufficient - 101:11, 224:22 **Sum -** 193:10, 237:9 **Summary - 192:16**, 193:1 **Summer - 9:25** Summertime - 234 :20 Supervisors - 193: 3, 193:14 Supplier - 10:4 Suppliers - 92:2 **Supplies - 90:24**, 222:20, 222:21 **Supply -** 3:22, 3:25, 4:10, 13:19, 16:5, 40:19, 164:23, 171:6, 210:4, 222:20, 223:2, 223:6, 223:21, 224:5, 227:25, 228:17, 239:24, 240:1, 244:2 **Support - 223:3** Supporting - 224:1 **Suppose - 24:1**, 42:22, 176:13 **Surplus - 102:15**, 159:22 Surrounding - 146: Surveillance - 178: **Survey -** 35:11, 35:14, 78:4 **Survive -** 231:22 Suspect - 43:24,

60:21, 61:16, 78:8,

88:21

Sustainability - 22 9:7 Sustainable - 65:8. 128:3, 129:22 Synchronous - 55: 5, 55:11, 57:3, 57:20, 57:24 **System -** 17:16, 18:21, 19:16, 28:17, 33:22, 66:21, 76:12, 108:16, 111:18, 112:11, 112:23, 112:25, 125:5, 132:22, 134:13, 149:8, 157:19, 157:20, 160:18, 160:25, 164:19, 164:22, 164:23, 165:9, 166:22, 179:18, 180:5, 180:25, 181:2, 181:9, 225:7, 229:23, 231:20, 233:20, 234:16, 246:15, 248:3, 249:18, 252:19, 252:20, 253:2 **Systems - 39:13**, 86:5, 166:7, 233:6 **System's -** 233:7 T

Table - 46:18, 117:6, 120:2, 211:24, 218:7, 219:6, 236:9, 238:1, 241:3, 242:2 Tacked - 181:6 Taking - 39:16, 47:10, 52:12, 54:1, 98:2, 175:24, 231:17, 246:14 **Tall -** 248:12 **Tap -** 206:4 **Target - 44:19**, 44:24, 45:11, 45:17, 45:20, 207:10, 219:19, 221:11 **Targeted - 207:6**, 210:20 **Targets - 45:15**, 46:11, 46:12, 126:24, 160:15 **Tariff -** 167:2,

144:11, 145:24, 150:22, 156:5, 158:11, 159:3, 166:8, 192:7, 193:16, 202:8, 203:24, 215:8, 216:6, 232:25, 234:1, 246:14, 247:19 **Tax -** 118:19, **Territory -** 40:7

Test - 248:20 Tested - 233:25 Team - 23:9, 128:5 Testimony - 167:2 **Technical - 39:22**,

2, 177:13, 192:12, 207:10, 229:12 **Thanks -** 1:4, 44:5 That'll - 15:6, 56:21, 202:24 There'd - 110:18, 178:5 **Therefore -** 99:10, 142:17 Thereof - 173:21 Thermal - 6:12, 29:20, 52:25, 54:8, 56:9, 57:15, 59:5, 65:7, 65:12, 98:12, 208:1, 252:5 These - 3:23, 10:5, 11:25, 18:7, 40:23, 41:25, 45:6, 47:7, 54:24, 59:9, 68:13, 68:19, 68:20, 69:10, 69:18, 70:19, 71:18, 71:23, 74:15, 77:17, 77:24, 107:5, 124:4, 129:1, 129:2, 191:22, 192:7, 205:6, 205:21, 215:4, 216:4,

77:25, 81:11, 83:23, 150:16, 167:18, 189:16, 190:1, 199:12, 199:21, 204:13, 204:14, 210:17, 211:11, 218:23, 238:22, 238:25 They'll - 202:12 They're - 12:18, 29:21, 36:11, 37:18, 38:23, 79:23, 87:19, 96:12, 107:15, 114:7, 114:9, 117:21, 117:23, 120:11, 120:20, 125:12, 128:19, 130:4, 132:25, 134:14, 149:15, 150:9, 158:24, 162:1, 164:4, 190:2, 193:23, 194:10, 194:14, 194:22, 195:13, 195:18, 197:21, 198:1, 199:4, 204:4, 211:13, 219:9, 224:16, 224:23,

181:8

138:9

134:6, 135:21,

225:4, 225:5,

234:12, 240:7,

240:15, 245:21,

246:7, 252:3, 252:9 They've - 40:2, 54:22, 70:3, 83:16, 83:19, 122:14, 122:15, 143:22, 170:19, 181:6, 192:18, 192:24, 201:10, 247:11 Third - 19:3, 202:1, 203:5 Thoroughly - 46:1 Thousands - 130:1 Three - 4:2, 10:16, 20:11, 20:15, 23:25, 44:21, 54:19, 87:9, 103:15, 111:24, 129:13, 168:16, 168:20, 170:1, 172:19, 172:20, 183:1, 191:22, 192:1, 195:17, 199:3, 204:24, 216:4, 229:1, 229:5 Threshold - 12:22, 13:20, 14:3, 28:16 Throughput - 203: **Thunder - 166:5** Thursday - 1:6 **Thus -** 90:8, 193:6 Tied - 146:3, 153:6, 154:11 **Timeframe - 127:3**, 128:1, 223:1 **Timelines - 198:9**, 204:14 **Timely -** 52:15 Times - 10:2, 11:3, 31:3, 32:9, 54:22, 67:12, 101:15, 105:4, 129:13, 149:3, 160:16, 189:4, 211:12 **Timing - 13:14**, 57:2 **Tipping - 220:3 Title -** 78:9 **TL -** 15:1, 24:2, 27:23 TL267 - 177:17, 178:21 **TO267 -** 169:12 Today - 1:12, 2:4, 66:1, 76:10, 76:25, 77:16, 80:2, 81:19, 84:2, 140:25, 182:4, 188:9, 203:24, 214:18, 247:21

Today's - 77:4, 77:6, 142:6 **Tomorrow - 247:17 Toned -** 249:8 **Tongue - 125:19 Took -** 4:11, 90:12 Tools - 94:12, 105:1 **Top -** 27:18, 39:5, 80:8, 125:18, 157:25, 158:4, 162:18, 206:13, 215:17 **Topic -** 222:12 **Total -** 4:6, 4:9, 7:7, 12:14, 19:24, 27:18, 55:24, 56:24, 90:12, 126:12, 126:14, 148:9, 148:23, 164:20, 194:13, 194:17, 194:20, 197:3, 212:13, 248:3, 250:20 **Touched - 19:4** Tough - 65:16, 67:4 Towards - 39:15, 47:11, 57:8, 104:2, 185:17, 196:6, 204:5, 205:7 Townships - 157:1 Track - 132:4, 198:15, 205:5, 227:5 **Tracking -** 227:9, 227:11 **Tracks - 198:14** Trade - 67:25. 219:13 Traded - 128:13 **Traditionally - 40:3** , 79:10, 158:13 **Trained - 129:19 Training - 48:15**, 127:23, 128:15, 224:16 Trajectory - 47:8 Transactions - 92: 19 Transcript - 177:13 Transcription - 1:1 Transcripts - 2:16, 2:19, 120:21 Transferred - 128: 19, 130:3 Transformer - 41:5 **Transformers** - 16

5:9

Transition - 85:23, 86:17, 100:21, 100:24, 103:18, 104:20, 117:3, 205:25, 231:14 **Transmissions - 4 Transparent - 119**: 18, 120:5 Transpiring - 150:3 **Transport - 229:13** Travel - 125:25. 127:23, 128:15 **Trend - 47:5** Trigger - 22:18, 165:10 **Triggered - 121:20,** 126:23 Trimmed - 125:24, 125:25 **Trip -** 11:15 **Triple -** 111:12 **Tripped - 10:9 Trips -** 10:8, 231:13 **Tube -** 53:11 **Tuesday -** 1:25 **Tunnel - 140:1 Turbine - 9:14**, 10:3, 14:8, 14:15, 16:25, 17:13, 20:22, 23:22, 24:3, 30:7, 31:11, 32:2, 33:23, 59:6, 90:20, 235:25, 246:19 **Turbines - 14:13**, 29:15, 37:14, 37:18, 37:25 **Turn -** 30:7, 30:10, 183:12, 189:23, 190:11, 190:23, 191:9, 192:7, 192:12, 201:16, 206:16, 236:4, 242:2, 242:7 Tweaked - 250:25 Twinco - 156:7, 159:3 **Two -** 2:17, 7:17, 8:21, 10:15, 12:18, 23:25, 31:21, 54:18, 56:1, 81:16, 90:19, 91:2, 95:11, 102:9, 102:10, 103:15, 111:6, 124:4, 129:13, 137:11. 137:15. 137:17, 138:12, 149:15, 162:24, 163:2, 187:9, 189:16, 206:21,

211:12, 215:4, 229:1, 229:4, 240:1, 246:20 Types - 235:15 Typical - 79:16 Typically - 20:19, 20:20, 29:23, 45:4, 45:6, 52:3, 109:1, 148:4, 235:13 U Unable - 97:12 Uncertainties - 19:

Uncommon - 240: 12 **Underground - 14** 0:1, 140:2 Underlying - 212:1 4, 213:6 Undermine - 87:21 Undersea - 140:6 **Understands - 151** Understood - 26:8. 74:5, 186:3 Undertake - 72:15, 72:22, 76:24, 77:1, 78:2, 80:10, 138:21, 141:6, 145:14, 145:18, 149:23, 151:24 Undertaken - 49:1 9, 96:8, 108:13, 108:18 Undertaking - 2:1, 2:2, 2:3, 2:7, 2:8, 2:15, 6:2, 6:8, 44:7, 44:8, 63:19, 72:20, 73:17, 73:22, 74:4, 74:8, 74:23, 75:11, 75:20, 77:2, 77:4, 80:11, 138:23, 141:7, 142:1, 142:3, 150:4, 151:15, 151:21, 151:22, 153:2, 153:3, 154:3, 154:13, 158:19, 217:17, 218:11, 218:12, 252:10, 252:11, 253:17 Undertakings - 2:1 **Unfolds -** 56:21 **Unfortunately - 8:1** 2, 189:13 Unintelligible - 231 :23

Unique - 43:4,

51:10

19:7, 19:17, 19:25, 20:2, 20:10, 20:13, 22:1, 24:24, 24:25, 53:2, 57:19, 58:3, 202:17, 203:1, 203:2, 234:4, 251:10 Units - 14:24, 19:19, 19:21, 31:15, 52:16, 54:8, 55:1, 251:7, 251:15 University - 67:17 **Unknown -** 71:7 Unless - 11:14, 205:10, 245:18 Unlike - 208:24 Unlimited - 1:18 Unplanned - 41:23, 44:23, 52:18 Unreasonable - 17 6:20 **Unsure - 8:13** Unsurprisingly - 1 Unsustainable - 12 8:2 **Unusual - 41:8** Upcoming - 24:10 **Update - 78:12**, 78:16, 78:20, 151:25, 152:11, 154:9, 189:6, 189:7, 189:10, 204:12, 204:18, 204:19, 204:25, 206:10, 208:5, 218:21 **Updated - 2:13.** 2:14, 70:17, 70:18, 149:25, 189:11, 214:17, 236:19, 236:24, 238:3 **Updates - 199:15**, 205:23, 219:1 **Updating -** 197:23, 207:18 **Upgrade -** 164:18 **Upper - 149:9 Upping -** 158:24 **Upward -** 68:18. 108:11, 142:15 **Upwards -** 50:25 Urge - 214:22 **Usage -** 131:14 Used - 6:14, 42:25. 48:24, 90:18, 103:1, 109:6, 110:19, 157:16, 158:13, 159:3, 161:15, 161:24,

Unit - 6:14, 7:22,

210:17, 210:23,

169:3, 170:22, 172:5, 174:4, 175:2, 196:17, 197:10, 238:24, 249:12 User - 39:17, 44:15 **Using -** 17:5, 42:9, 99:11, 122:10, 157:13, 240:7 **Utilities -** 48:16, 85:20, 92:15, 92:18, 99:22, 122:8, 123:21, 142:21, 143:7, 165:5, 165:12, 165:24, 246:18 **Utility -** 97:11, 97:22, 170:16 Utilization - 16:24, 103:7, 110:16, 250:1 **Utilize -** 44:11, 117:6, 214:3 **Utilized -** 198:8, 223:2 Utilizing - 100:4

V

Vacant - 128:14 Vague - 170:1 Vaguely - 117:12 **Vale -** 36:10 **Valid -** 109:13, 120:1, 197:1, 238:16 Validate - 227:14 Validation - 239:10 Value - 11:18, 130:1, 148:10, 169:14, 247:12, 247:13 **Variable - 114:9**, 244:17 Variables - 7:20, 71:24, 72:1, 138:11, 245:3 Variation - 248:14 **Vary -** 167:7 **Varying -** 114:6 **Vehicles - 133:9 Vendors - 85:3** Vengeance - 197:2 Versa - 149:4, 226:5 Versus - 12:11, 23:12, 35:23, 81:16, 87:24, 99:20, 102:1, 137:3, 192:23,

208:9

Via - 91:14, 131:9 Vice - 59:1, 60:23, 64:14, 149:4, 226:5 Views - 83:23, 193:5 Visible - 45:19, 227:15 Voiding - 246:6 Volunteered - 125: 2

Vetting - 63:11

W Wabush - 158:13

Waiting - 38:24 **Walk -** 39:18, 105:25, 169:2, 189:15 **Wants - 141:18** Warehouse - 164:1 6 **Warmer - 100:5** Warranted - 213:2 Warren - 116:17 Wasn't - 24:3, 32:17, 63:10, 68:3, 83:5, 99:21, 218:16, 236:6 Waste - 130:13 Water - 63:25, 145:25, 146:2, 146:6, 146:10, 146:20, 146:24, 147:17, 147:21, 148:5, 148:15, 148:18, 148:19, 148:23, 148:24, 149:2, 149:12, 149:25, 150:14, 151:7, 151:12, 151:25, 153:12, 153:19, 153:24, 154:10, 154:20, 155:23, 173:1, 202:13, 202:23, 202:25, 232:17, 234:22, 246:18 Watershed - 149:1 Wave - 104:1 Ways - 174:22 We'd - 62:2, 134:2, 173:5, 174:24, 235:1, 246:21 Weeds - 143:24 Week - 1:5, 2:17, 3:8, 18:20, 199:3, 236:2 Weeks - 90:19,

229:1, 229:2

Weened - 87:12 **Weighed - 199:3** Weighting - 193:4 **Welcome - 1:19**, 110:4 We'll - 8:8, 9:2, 21:9, 44:7, 55:19, 77:14, 78:20, 90:4, 129:21, 130:16, 159:23, 178:10, 197:14, 197:16, 217:23, 227:15, 241:25, 254:7 Weren't - 63:8, 83:7, 201:12, 219:25 West - 15:5, 147:6. 157:24, 243:10, 243:11 We've - 16:23, 17:2, 27:20, 36:3, 40:5, 40:8, 41:11, 42:19, 52:4, 53:9, 57:11, 79:10, 90:24, 106:24, 108:20, 119:25, 123:20, 124:25, 125:24, 125:25, 127:20, 127:22, 127:23, 129:19, 145:24, 147:10, 153:11, 156:13, 160:18, 160:21, 162:16, 163:15, 164:8, 178:22, 184:16, 200:6, 236:7, 245:7 What's - 55:3, 55:11, 57:20, 85:2, 94:2, 95:14, 100:2, 103:20, 105:4, 106:18, 112:16, 137:3, 144:15, 145:6, 145:7, 185:9, 189:6, 194:11, 211:22, 214:25, 227:5, 252:24 Wheeling - 166:14, 166:18 Whereas - 86:23, 142:18, 207:1, 210:21 Whereby - 82:1, 109:4, 131:11, 223:25 Where's - 232:17 Whole - 4:23, 33:9, 42:22, 43:4, 43:18, 61:17, 84:24,

235:3, 235:4, 252:18 Who'll - 198:4 Wilcox - 54:23 Williams - 22:22, 23:1, 23:13, 27:10, 31:24, 32:13, 32:23, 33:13, 36:25, 39:6, 51:12, 235:11, 244:2, 244:24, 245:13 Williams' - 52:20, 232:15 Willing - 111:21 Wind - 98:13, 137:14 Winter - 52:17, 53:10, 54:9, 100:5, 144:13, 144:16, 144:19, 145:5, 159:1, 159:5, 159:7, 159:20, 159:24, 163:12, 203:9 Wintertime - 148:3 Wire - 59:3 Wires - 87:8 Witness - 72:20, 75:6, 182:3, 198:5, 237:24 Witnesses - 199:1 Won't - 7:12, 46:9, 114:8, 169:16, 170:14, 171:19, 185:4, 214:6, 222:7, 224:17, 225:12, 225:18, 226:19, 229:24, 239:9, 250:24 Wood - 112:4 Word - 31:9, 32:25, 36:2, 105:3 **Words -** 95:19, 174:2 Work - 27:7, 45:10, 45:11, 47:13, 47:15, 47:23, 48:1, 55:22, 61:2, 61:4, 61:7, 61:15, 61:22, 127:1, 172:20, 180:4. 193:20. 237:22, 245:21 Worked - 60:21, 96:14, 127:14 Working - 45:1, 52:6, 57:6, 57:8,

143:5, 148:20,

165:23, 168:15,

177:24, 179:21,

161:9, 164:3,

86:4, 111:6, 119:11, 204:4, 205:6 Works - 84:21, 180:23 World - 39:23, 54:23 Worse - 113:16 Wouldn't - 1:11, 31:9, 36:14, 80:24, 86:12, 96:14, 101:10, 108:20, 123:8, 148:6, 176:1, 209:11, 213:16, 219:8, 232:11, 234:25 Written - 137:10, 251:13 **Wrongly -** 177:20 Wrote - 96:20, 128:14, 253:11

Υ

Year - 4:3, 4:18, 13:10, 26:11, 36:7, 54:7, 54:11, 56:14, 56:20, 56:21, 58:15, 66:19, 78:22, 102:7, 104:3, 111:24, 137:21, 163:13, 169:1, 175:22, 177:23, 201:7, 201:8, 204:4, 204:8, 207:15, 248:20 **Years -** 13:17, 27:14, 44:21, 45:24, 59:10, 62:16, 62:22, 87:9, 100:19, 103:15, 126:7, 129:8, 129:11, 129:13, 161:3, 185:18, 213:1, 220:18, 244:19 Yesterday - 18:20, 115:16 You'd - 167:5, 234:19 You'll - 57:18, 183:14, 190:14, 190:21, 190:24, 203:1, 205:10, 219:13 **YOUNG -** 74:2, 74:11, 74:17, 75:12, 77:3, 77:7, 77:11, 89:3, 91:22, 141:11, 142:2, 151:3, 152:16, 153:8, 153:17, 154:6,

107:22, 119:15,

128:21, 136:19,

154:14, 154:23, 155:8, 155:15, 156:1, 253:7, 253:9, 253:24 Young's - 90:2 You've - 12:2, 35:3, 88:7, 127:11, 135:5, 144:8, 177:5, 204:23, 207:9, 233:8, 238:22, 238:23, 240:6

#**2 -** 2:7, 2:15, 4:25

#4 - 8:19, 9:2, 9:5, 9:8 **#5** - 9:6 **#6** - 213:8, 218:15, 218:16 **#7** - 20:17, 20:18,

\$

22:9

\$40,000 - 127:8 **\$500,000.00** - 13:2 0, 13:22, 14:2 **\$640,000** - 126:18 **\$79,000** - 111:7

'Currently' - 95:20

0

0019 - 8:22 **004** - 8:6, 8:22, 9:2, 9:4 **007** - 121:14 **019** - 9:5 **031** - 135:7 **038** - 28:10

096 - 18:22

1
1.6 - 249:6
1/2 - 106:16
1:15 - 238:20
1:27 - 253:5
1:29 - 254:8
10 - 136:20, 167:8, 192:12, 192:14, 193:1
10.4 - 87:24
10.6 - 113:17
10.64 - 76:12, 76:22, 77:1, 77:14
10:00 - 66:2
10:15 - 81:9

10:30 - 98:8

10:45 - 115:4

177:13

18 - 70:12, 106:7,

108:25, 109:3,

112:10, 112:23,

112:24, 114:15,

109:7, 111:2,

100 - 167:3, 229:4, 252:22 **11 -** 113:17 **11.7** - 76:16, 76:19, 76:24 **11:00 -** 130:25 **11:31 -** 131:1 **11:39 -** 138:19 **11:41 -** 141:4 **11:45 -** 145:16 **11:50 -** 149:21 **110 -** 159:8, 159:19, 159:22, 163:11, 163:19, 163:20, 163:22 **12 -** 136:20 **12:00 -** 161:7 **12:15 -** 176:23 **12:30 -** 192:2 **12:45 -** 206:14 **12:55 -** 218:13 **122 -** 68:10, 70:12, 76:4, 81:13, 139:8, 189:5, 189:25, 190:10, 191:9, 201:23, 206:17, 207:2, 209:10, 210:22, 211:11, 218:17, 242:8, 242:10 **134 -** 127:5 **136 -** 126:11 **138kV -** 181:3 13th - 183:11 **14 -** 136:20, 167:23 **14.6 -** 77:23 **15 -** 19:14, 50:8, 69:10, 69:14, 97:6, 125:2, 135:21, 136:20, 167:8, 188:11 **15.4 -** 207:16, 208:7 **150 -** 22:1, 22:6, 163:23, 231:20 **154 -** 19:18 15th - 189:20 **16 -** 50:9, 190:23 **160 -** 22:13, 54:8 **1600 -** 249:7 **17 -** 109:7, 118:13 **17/18 -** 221:16 **170 -** 19:16, 22:15, 231:8 **17th -** 2:1, 167:23,

118:13, 207:7, 208:9, 219:19, 220:5, 220:16, 221:9, 221:12, 221:25, 222:7, 236:7

180 - 163:23

19 - 190:23, 191:3, 206:18, 209:9

196 - 177:12

1's - 22:1

1st - 228:14, 229:1, 232:8

2 **2.2 -** 210:21 **2.29 -** 51:21 **2.5 -** 183:13 20 - 4:17, 5:23, 39:14, 62:22, 68:10, 90:13, 136:20, 136:21, 193:10, 193:11, 193:18, 193:22, 196:17, 211:11, 242:8 **20/20 -** 66:8 20/25 - 6:10 **200 -** 202:11, 202:19, 202:21, 229:22, 232:1 **2011 -** 59:8 **2012 -** 59:8 **2012-2013 -** 52:11 **2013 -** 47:11, 58:21, 59:8, 59:9 2013/2014 - 25:13 2013-2014 - 46:20 **2013-334 -** 173:3 2013-343 - 169:18 **2014 -** 23:23, 50:18 **2015 -** 3:22, 16:4 **2016 -** 3:22, 16:4, 39:14, 50:25, 51:17, 53:2, 53:11, 58:17, 126:13, 126:17, 127:7, 128:1, 183:7, 207:2 **2017 -** 2:2, 3:23, 44:15, 46:17, 51:18, 51:21, 53:16, 76:20, 78:16, 126:18, 183:11, 189:8, 190:15, 190:16, 191:12, 201:19, 201:23, 207:1, 207:16, 207:20, 208:8, 210:22,

106:17, 107:10, 126:19, 175:17, 188:11, 189:20, 190:25, 191:2, 191:15, 197:9, 197:16, 201:7, 201:20, 201:25, 211:23, 222:14, 223:13, 223:16, 225:2, 225:13, 225:24, 227:19, 228:23, 230:5, 230:6, 230:14, 232:8, 248:16, 251:5 2018/19 - 245:3 2018/2019 - 242:7, 243:17 2019 - 57:9, 106:18, 107:10, 196:9, 197:19, 201:8, 202:1, 202:9, 222:15, 223:14, 223:16, 225:2, 225:13, 225:24, 227:19, 242:10 2019/2020 - 220:8 **2020 -** 77:22, 202:2, 203:6, 207:7, 207:15 **2021 -** 56:8, 57:4, 57:6, 57:11, 57:14, 68:14, 135:9, 135:10, 135:18, 171:16, 171:19, 242:10 **2030 -** 68:16 **2040 -** 68:17 **21 -** 213:22 22 - 76:4, 218:17 **22.89 -** 68:15, 71:2, 113:16, 212:19, 213:21 **220 -** 230:9 **224 -** 20:1 **225 -** 156:7, 156:17, 156:20, 156:22, 160:13, 229:21, 229:22, 230:9, 230:18, 230:24, 232:1, 232:10, 232:12, 233:1, 234:19 **23 -** 78:16. 81:13.

106:9, 106:15,

106:21, 106:24,

107:15, 107:21,

230kV - 156:11,

213:22, 242:4

2018 - 8:5, 76:7,

181:2, 181:10 23rd - 189:7 **24/7 -** 30:16 **240 -** 19:25, 30:16, 231:1 **25 -** 5:23, 62:22, 68:16, 90:13, 206:16, 209:9 **250/260,000 -** 43:6 **26 -** 68:10, 70:12, 76:4, 81:13, 139:8, 189:25, 190:11, 190:13, 206:18, 209:10, 211:11 **26.32 -** 135:11, 135:18 **260 -** 157:13, 157:18 **267 -** 15:1, 15:13, 24:2, 27:23 **27 -** 175:16 **27.3 -** 237:5 **28 -** 211:10, 213:7, 250:2 **29 -** 140:23

3

3.000 - 66:19 3.11 - 50:7 **3.2 -** 46:18 **3.4 -** 50:7 **3.6 -** 18:17 **3.8 -** 39:12 **30 -** 5:15 **300 -** 156:7, 156:24, 177:25 **307 -** 156:20, 156:22 **311 -** 50:7 315kV - 143:10 **317 -** 242:2 **32 -** 68:17 **33,000 -** 9:15 **332 -** 156:12, 156:17 **35 -** 173:4 **365 -** 30:16

4

40 - 14:16, 30:4, 30:10, 30:13, 31:12, 62:15 **400** - 10:23 **45** - 158:13, 158:16, 158:18 **465** - 66:20, 147:10 **49** - 183:7 **4900** - 66:22, 147:2

211:22, 214:16,

218:20

NL Hydro 2017 GRA April 23, 2018 5 **50 -** 158:16, 158:18, 234:2 **500 -** 26:10, 27:15 **52 -** 175:15, 175:22 **52.9 -** 237:5 **525 -** 156:8 **532 -** 157:6, 157:8, 157:12 **54 -** 93:19 **542 -** 157:6 **557 -** 156:18 **59 -** 4:3 6 **60 -** 142:15 **65 -** 4:6 **66 -** 191:11 7 **70 -** 19:8, 91:3, 158:2 **700 -** 66:25, 144:20, 145:1, 203:9, 203:18 **735kV -** 156:14 **75 -** 10:9, 158:2, 190:6 77 - 157:24 **78 -** 191:15 **79 -** 28:11 8 **80 -** 157:24, 193:6, 193:12, 194:15, 194:16, 194:19, 196:18 **800 -** 66:24, 203:8 **81 -** 190:16 **824 -** 144:18 **89 -** 190:5, 190:9, 191:20, 191:25, 196:25, 197:2, 197:7, 200:14 9 **9.4 -** 106:17, 107:10 9:03 - 1:1 9:15 - 14:5 9:30 - 30:21 **9:45 -** 50:4 **90 -** 156:25, 193:8, 193:11, 194:17 900 - 229:24 **95 -** 190:16 **99 -** 191:3, 191:4