

Page 1

1 SEPTEMBER 23, 2015
 2 (9:05 a.m.)
 3 CHAIRMAN:
 4 Q. I understand there are no preliminary matters,
 5 so we can go right to Mr. O'Brien, sir.
 6 MR. O'BRIEN:
 7 Q. Thank you, Mr. Chair.
 8 MR. DARREN MOORE - CROSS-EXAMINATION BY MR. O'BRIEN
 9 MR. ROBERT HENDERSON - CROSS-EXAMINATION BY MR. O'BRIEN
 10 MR. TERRY GARDINER - CROSS-EXAMINATION BY MR. O'BRIEN
 11 MR. O'BRIEN:
 12 Q. Mr. Henderson, I wanted to pick up on a point
 13 we discussed yesterday about the vacancy
 14 adjustment, and I just wanted to see if I've
 15 gotten your position straight, is that when we
 16 talked about the vacancy adjustment of 40, I
 17 guess, that's in each of the test years, it
 18 was your position that we should keep that 40
 19 because there could be some puts and takes in
 20 terms of what the test year figures are, so
 21 there may be a 65 vacancy actuality in 2015,
 22 but there might be more overtime charged or
 23 something like that. Is that correct?
 24 MR. HENDERSON:
 25 A. That would be those things happening, yes.

Page 2

1 MR. O'BRIEN:
 2 Q. And would that be the same with - a
 3 possibility with a number of other of the
 4 expenses throughout the test year?
 5 MR. HENDERSON:
 6 A. There could be some other impacts, such as in
 7 system equipment and maintenance, there may be
 8 impacts related to hiring contract labour, for
 9 instance.
 10 MR. O'BRIEN:
 11 Q. Okay, and one of the things when I looked
 12 through some of the documents last night, we
 13 do have actuals there for 2014, and you can
 14 see obviously that the forecast doesn't
 15 correspond with the actuals, which is what you
 16 would expect, you're not necessarily going to
 17 be perfect with your forecast, but we also
 18 have a document there where we saw
 19 reconciliation for the two test years from
 20 2014 and 2015 showing the differences between
 21 the two, and there's notes at the bottom
 22 saying here's why 2015 is different in this
 23 area, here's why it's different in that area,
 24 that kind of thing. Is it possible to get a
 25 reconciliation of the actuals versus the test

Page 3

1 year for 2014? We can see those puts and
 2 takes and give us some reasoning behind each
 3 one of the differences, that kind of thing.
 4 MR. HENDERSON:
 5 A. I would think we should be able to do that.
 6 MR. O'BRIEN:
 7 Q. Okay, and how about the 2015 to where you are
 8 right now versus the test year, there's those
 9 types of puts and takes, is that possible to
 10 provide us that type of information as well?
 11 MR. HENDERSON:
 12 A. In terms of those types of things, I guess, we
 13 can show year to date how things have -
 14 MR. O'BRIEN:
 15 Q. Yeah, versus what was built into the test year
 16 with the reconciliations as to why it's
 17 different, that sort of thing?
 18 MR. HENDERSON:
 19 A. I think with respect to the FTEs, we can give
 20 that - I think Mr. McDonald gave a projection.
 21 MR. O'BRIEN:
 22 Q. Yeah.
 23 MR. HENDERSON:
 24 A. And we can indicate to you the puts and takes
 25 that impact on that vacancy.

Page 4

1 MR. O'BRIEN:
 2 Q. Yeah, so you could show us, say, the
 3 projection for 2015 until the end of the year
 4 and what you expected versus what the actual
 5 forecast was in the test year with some
 6 reconciliation like that?
 7 MR. HENDERSON:
 8 A. We could show those types of things. I'm not
 9 sure what detail we'd have at this point, but
 10 we can certainly provide something. I'm not
 11 sure in terms of how up to date we'd have that
 12 and that sort of thing.
 13 MR. CASS:
 14 Q. Mr. Chair, perhaps we could take this away and
 15 see what is the best that we can do to respond
 16 to the question. I'm not sure at this point
 17 just what can be done, but we could take it
 18 away and see what best that can be done.
 19 MR. O'BRIEN:
 20 Q. Because I am going to ask for an undertaking
 21 that that be done, but I have to have had a
 22 discussion with Mr. Young in terms of whether
 23 or not he can take that away, and if it can be
 24 done, then fine, to provide it if they're
 25 prepared to provide it, but if not, I guess,

Page 5

1 we may have to come back with that request for
 2 an undertaking for the record.
 3 MR. YOUNG:
 4 Q. That's true, Mr. Chair, Mr. O'Brien was kind
 5 enough to tip me off on this just a few
 6 minutes before the hearing this morning, so I
 7 did have a few brief minutes to discuss it and
 8 to get my head around it. I think we need to
 9 explore that further and see what useful
 10 information can be provided.
 11 MR. O'BRIEN:
 12 Q. Okay.
 13 MS. GLYNN:
 14 Q. So we'll come back to this as an undertaking.
 15 MR. O'BRIEN:
 16 Q. Yes, thank you.
 17 MS. GLYNN:
 18 Q. Thank you.
 19 MR. O'BRIEN:
 20 Q. I think where we left off yesterday, I believe
 21 I had a few questions, Mr. Henderson, with
 22 respect to what contact you might have had
 23 with Government over the years in terms of
 24 Hydro's operations. I'm going to ask you
 25 about the rate case itself, and this

Page 6

1 particular one, whether or not you had any
 2 discussions, say, in April of 2013 with
 3 Government on how to proceed with the rate
 4 case?
 5 MR. HENDERSON:
 6 A. No, I wasn't party to any discussion on rate
 7 case, how we were going to proceed with it or
 8 anything like that. We had our case ready to
 9 file and there was some directives there in
 10 terms of timing that came from the Government,
 11 but I was not party to any kind of discussion
 12 with Government on it.
 13 MR. O'BRIEN:
 14 Q. Okay, let me ask you sort of - I'll take you a
 15 year later then to the point where there was a
 16 decision made at Hydro, I guess, to amend the
 17 filing for 2013 to update it, I guess, in
 18 November of 2014. Can you give me your
 19 recollections as to the reasons why that was
 20 done and who was involved with making that
 21 decision?
 22 MR. HENDERSON:
 23 A. That was - the people who were involved in
 24 that would have been myself, and the CFO, Mr.
 25 Sturge, the General Manager of Finance, and

Page 7

1 the Rates and Regulatory Manager. It was
 2 presented to me, the financial outlook for the
 3 coming year, we had updated some financial
 4 plan information, and given the length of time
 5 that it had occurred with respect to the 2013,
 6 which was the test year, versus where we were
 7 seeing things were going, with that length of
 8 time that had transpired, we felt that in
 9 terms of Hydro's financial outlook, it looked
 10 to be - it was most appropriate to file with
 11 additional information to update and go
 12 forward with the 2014 and 2015 test year. If
 13 that wasn't the case, it was very likely that
 14 we would have to turn around and have another
 15 application right after the 2013 one, you
 16 know, with the 2013 test year, and that would
 17 have certainly been, I'll say, inefficient in
 18 the sense of us going through the regulatory
 19 process and we thought at that time the
 20 appropriate thing to do was to file for 2014
 21 and 2015 test year.
 22 MR. O'BRIEN:
 23 Q. So that updated forecast, that looked a fair
 24 bit different than what you had forecast back
 25 in 2013 for 2014, is that right?

Page 8

1 MR. HENDERSON:
 2 A. That's right. There was some significant
 3 changes. One obvious one was the purchase of
 4 the combustion turbine that was going to
 5 impact on costs.
 6 MR. O'BRIEN:
 7 Q. Any other significant changes at that time
 8 that you were looking at?
 9 MR. HENDERSON:
 10 A. Well, I'll say that was probably the biggest
 11 one that was targeted, but there was other
 12 operating expense items that we would have
 13 seen that there was upward pressure, which is
 14 obvious from our filing that those types of
 15 things were there that we had to address as
 16 well.
 17 MR. O'BRIEN:
 18 Q. Were they related to salaries, related to
 19 labour, capital labour?
 20 MR. HENDERSON:
 21 A. There would have been, I'll say, in terms of
 22 the general expenses across the board, there
 23 were things that were showing an increase that
 24 we felt that we were definitely going to be
 25 requiring a higher revenue requirement than

Page 9

1 the 2013 test year would provide.
 2 MR. O'BRIEN:
 3 Q. And you're satisfied that the forecast you
 4 have in this rate case is sufficient to go
 5 forward until, I believe, the plan for the
 6 next rate case is in 2017 for 2018?
 7 MR. HENDERSON:
 8 A. Basically, these rates are what we require on
 9 a go forward basis. Right now we're updating
 10 our 2016 forecast. We're in the middle of the
 11 budgeting process right now. From what we
 12 were looking at back then, indicated we would
 13 be.
 14 (9:15 a.m.)
 15 MR. O'BRIEN:
 16 Q. I want to ask you about the rural rate
 17 deficit. That's one of the big items for
 18 Newfoundland Power with respect to this
 19 particular rate case. I'm going to ask if we
 20 can pull up NP-NLH-034, Revision 2. It might
 21 be PUB 34, Jennifer. Actually, perhaps the
 22 best thing might be to use what Mr. Johnson
 23 filed yesterday. That might be the most up to
 24 date one.
 25 MS. GRAY:

Page 10

1 Q. The rural deficit -
 2 MR. O'BRIEN:
 3 Q. The rural deficit annual report might be the
 4 best thing to look at. That's from March of
 5 2015, and if we look at Page 2, Table 1.
 6 MS. GLYNN:
 7 Q. Mr. O'Brien, we're going to enter that as
 8 Information Item #8.
 9 MR. O'BRIEN:
 10 Q. Sure. I don't mean to steal your thunder, Mr.
 11 Johnson, and use your document, if that's all
 12 right?
 13 MR. JOHNSON:
 14 Q. Not a problem.
 15 MR. O'BRIEN:
 16 Q. I'm wondering in terms of the rural deficit
 17 here, we see the annual amounts climbing from
 18 2010 from 40 million up to 64 in 2014. Is
 19 this something that's on your radar in your
 20 position as to where the rural deficit is on
 21 an annual basis?
 22 MR. HENDERSON:
 23 A. It is on my radar.
 24 MR. O'BRIEN:
 25 Q. Yeah.

Page 11

1 MR. HENDERSON:
 2 A. This report that's done each year - because
 3 the rural deficit basically comes from, I'll
 4 call it, cost to service run. In order to
 5 determine the rural deficit, there is a fair
 6 bit of allocation of corporate costs into
 7 that, so once a year following the end of the
 8 year this report is done, and we can see where
 9 the rural deficit has landed for the year.
 10 MR. O'BRIEN:
 11 Q. Okay, and when this report is generated, is it
 12 something that comes to you and you have
 13 discussions with the leadership team about it,
 14 or is it just something that gets generated as
 15 a -
 16 MR. HENDERSON:
 17 A. It's more - I'll say it's a report that would
 18 be presented to me as a piece of information
 19 that's reported to the Public Utilities Board.
 20 It's not - this particular report does not get
 21 discussed at the leadership team or it hasn't
 22 been for the last period of time that I've
 23 been involved.
 24 MR. O'BRIEN:
 25 Q. Okay, and, well, not just the report, put

Page 12

1 aside the report itself, but the deficit
 2 itself, does that get discussed with the
 3 leadership team?
 4 MR. HENDERSON:
 5 A. What the leadership team would be discussing
 6 would be the items in which we control, I'll
 7 say, the impact on the operating expense, so
 8 the focus would be, in particular, on the
 9 operating expenses for the company, the O & M
 10 expenses, and whether we are managing that to
 11 our budget. So the focus is on those
 12 controllable items. There's a number of items
 13 here in the rural deficit that, I'll say, are
 14 fallouts of previous decisions, that type of
 15 thing. For instance, the depreciation, the
 16 return, but in the areas of the operating
 17 expenses, that would be an area that we would
 18 have discussion on with respect to budgets and
 19 the people who manage their budgets meeting
 20 those expenses - you know, keeping within
 21 budget.
 22 MR. O'BRIEN:
 23 Q. And is there ever any discussion about how
 24 Hydro may go about trying to, I guess, keep
 25 the rural deficit down, any initiatives in

Page 13

1 order to do that?

2 MR. HENDERSON:

3 A. Well, the initiatives that we do - our primary

4 focus would be on the isolated systems in the

5 rural areas where we look at energy

6 efficiency, which would be in terms of

7 reducing fuel consumption for the plants, to

8 reduce the capital requirements, so for

9 capital growth, we would look at what we may

10 be able to do in terms of doing activities

11 that would - again it's primarily load

12 related, that the energy conservation group

13 would do, so we've put into effect those types

14 of things to influence the growth and the

15 demand in the area, which could drive capital

16 investment. Our system planning group would

17 be also looking at the consumption that's

18 occurring, the load growth in those areas to

19 look at alternatives to the generation to see

20 if there are opportunities for more cost

21 effective sources. Those types of things get

22 discussed during the regular operating budget

23 time and they would also get discussed in the

24 capital budget time as to those types of

25 initiatives that could be undertaken. The

Page 14

1 other things would be, and Mr. Moore could

2 probably elaborate on this, but there would be

3 looking at how we do our work in the isolated

4 diesel areas because it's very - these are

5 remote locations that require - in order for

6 us to address problems in those areas, I'll

7 say, dealing with distribution problems or

8 generator problems, we have to dispatch people

9 from places like Happy Valley Goose Bay to go

10 to the coast of Labrador, so we would be

11 looking at how we might be able to do that

12 more effectively and efficiently so that we

13 would be challenging the way we do it, looking

14 at how we dispatch people, how we can be doing

15 that more effectively. One area that's been a

16 focus area for a period of time, and we're

17 doing additional work on in the last couple of

18 years, is the people who run the diesel plants

19 in the isolated communities, who are diesel

20 system representatives, these folks are there

21 in the community, live in the community, so

22 they can do certain activities there to help

23 with responding to troubles in the community,

24 responding to customer issues to enable them

25 to do, I'll say, more tasks than just running

Page 15

1 the diesel plant to help get power back rather

2 than waiting for crews to fly in from Happy

3 Valley or from St. Anthony, depending on the

4 areas, or from our central office. So those

5 types of things we've been doing to try to

6 minimize the operating expenses for those

7 areas. So that's the kind of thing that we

8 have been focused on.

9 MR. O'BRIEN:

10 Q. And in terms of tracking sort of how

11 successful you are with those initiatives, do

12 you track it just based on the figure, the

13 annual rural deficit figure, as to whether

14 it's gone up or down, or do you track it

15 internally in any way to see here's how our

16 initiatives are working out, that kind of

17 thing?

18 MR. HENDERSON:

19 A. What we would do, we reflect it in our

20 operating budgets, and if there's particular

21 items that we have put in place, then we

22 reflect that in our operating budgets to

23 reduce those costs, but for a lot of the -

24 like, the diesel system representatives, or

25 DSRs, training to enable them to do switching

Page 16

1 which would reduce our travel. So you may see

2 some adjustment in the travel. Now travel,

3 there's a lot of things that affect travel, so

4 to see a specific drop because you've got

5 increasing costs for travel, that sort of

6 thing, I'll say, it wouldn't be easy to track

7 it specifically, but that's where we would see

8 the impact of these things would be in reduced

9 travel time in terms of the expensive travel

10 for people coming out of the central areas.

11 MR. O'BRIEN:

12 Q. So put aside, I guess, the cost of travel

13 which may not be as controllable as may be how

14 you do it and the dispatch, do you track sort

15 of - do you put that aside and say, yes, we've

16 been able to dispatch much more efficiently

17 this year and here's how we can show that? is

18 there any way for you to put that together?

19 MR. HENDERSON:

20 A. We have not looked at that. There's been

21 nothing brought forward to me. I don't know

22 if Darren can talk about what they may be

23 doing and it's sort of at the regional level,

24 but just to say I have not seen anything that

25 shows that specific, and I'll say it would be

Page 17

1 challenging from the standpoint is that
 2 there's high variability and the frequency of
 3 issues from year to year to be able to
 4 pinpoint and say - I think you'd need a number
 5 of years to see a trend, and the diesel system
 6 representative, DSR, training is an ongoing
 7 program which we basically in the last two
 8 years have picked that up again, and the big
 9 area is training the diesel plant operators to
 10 be able to do limited line switching so that
 11 they can replace fuses on the lines and that
 12 type of thing, which would normally be done by
 13 a line worker. So there's those types of
 14 things that could save on - well, shorten
 15 outages and also save on the travel time.
 16 MR. O'BRIEN:
 17 Q. And that's training that's in place right now?
 18 MR. HENDERSON:
 19 A. It's ongoing.
 20 MR. O'BRIEN:
 21 Q. And do you expect that that will help reduce
 22 or at least maintain the deficit as to where
 23 it is, or it will be one of the factors?
 24 MR. HENDERSON:
 25 A. It's a factor that will help in a particular

Page 18

1 area, which is the travel cost to go out and
 2 service these remote communities, but it's not
 3 going to have a big impact from the - you
 4 know, I wouldn't want to leave the impression
 5 that this is going to make some dramatic
 6 change and flatten the amount of the operating
 7 expenses because the other things continue to
 8 have to be required. People have to maintain
 9 the diesel plants and we have people centrally
 10 located that travel out to each one of these
 11 diesel communities to maintain, to do
 12 overhauls on the diesels. There's a lot of
 13 work that has to be done there. So those
 14 types of things are subject to the general
 15 cost increases that we have experienced in the
 16 company.
 17 MR. O'BRIEN:
 18 Q. I want to ask you about the allocation of the
 19 deficit in Hydro's original application back
 20 in July of 2013. That included the proposal
 21 to continue with the Board approved
 22 methodology now for allocation. I'm wondering
 23 on what basis did Hydro decide to change that
 24 proposal with its amended filing?
 25 MR. HENDERSON:

Page 19

1 A. The allocation of the rural deficit is most
 2 appropriate to put to our Rates and Cost to
 3 Service Panel, or person.
 4 MR. O'BRIEN:
 5 Q. All right.
 6 MR. HENDERSON:
 7 A. To address that, because it is a rates, I'm
 8 going to say, issue in the sense of fairness
 9 and there's a number of issues there, and I
 10 was aware that the change was happening, it
 11 was explained to me, and it seemed to me to be
 12 a reasonable change in terms of allocation,
 13 given the arguments that were put forward for
 14 sharing that, that it would worthy a good
 15 hearing and discussion at this proceeding.
 16 MR. O'BRIEN:
 17 Q. Okay, so put aside, I guess, getting into the
 18 details from a policy level or a higher level,
 19 it was discussed with you prior to the amended
 20 filing?
 21 MR. HENDERSON:
 22 A. It was, yes.
 23 MR. O'BRIEN:
 24 Q. And what's your recollection of the discussion
 25 for the reasons for changing it?

Page 20

1 MR. HENDERSON:
 2 A. The reasons for changing it was our rates team
 3 had done an assessment and looked at
 4 considering fairness in allocation to
 5 different areas, and in particular, I guess,
 6 we're talking about the Newfoundland Power
 7 customers versus the Labrador Interconnected
 8 customers, and the view was, looking at that,
 9 that this seemed to have merit of a fair
 10 allocation, and so again in looking at that,
 11 yes, this is something that we should put
 12 forward to garner that discussion because it
 13 looked to be a significant amount of the rural
 14 deficit that was being borne by Labrador
 15 customers relative to, you know, the cost that
 16 they were paying.
 17 MR. O'BRIEN:
 18 Q. And in that discussion, did you have any
 19 discussion about whether or not there was
 20 merit for keeping it where it is?
 21 (9:30 a.m.)
 22 MR. HENDERSON:
 23 A. Obviously, it was one of the options, and as I
 24 said, the discussion went that this looks like
 25 an area that should warrant further hearing in

Page 21

1 the GRA, that seemed to be related to fairness
 2 to the different customer groups, so again
 3 this would be the proceeding to have that kind
 4 of discussion.
 5 MR. O'BRIEN:
 6 Q. I don't dispute that. I guess, my concern is
 7 more at this point in time, I'm just wondering
 8 what your take on it was. I presume at the
 9 time when the application was filed, you were
 10 satisfied, based on your discussion with your
 11 rates and regulation team, that this was the
 12 appropriate thing to do, is that right?
 13 MR. HENDERSON:
 14 A. That's correct.
 15 MR. O'BRIEN:
 16 Q. And in coming to that decision, did you
 17 consider whether or not it was appropriate to
 18 consider that Newfoundland Power's customers
 19 might pay more generally than the Labrador
 20 Interconnected customers for electricity?
 21 MR. HENDERSON:
 22 A. Obviously, part of the discussion was that
 23 this would shift the cost to - the
 24 Newfoundland Power customers will pick up
 25 additional costs with respect to the rural

Page 22

1 subsidy versus the Labrador Interconnected
 2 from where it previously led.
 3 MR. O'BRIEN:
 4 Q. But the point of my question is put aside the
 5 rural deficit, did you consider the fact that
 6 Newfoundland Power customers on the Island
 7 Interconnect would actually, putting aside the
 8 rural deficit, pay more for their electricity
 9 than Labrador Interconnected customers do for
 10 their electricity?
 11 MR. HENDERSON:
 12 A. Obviously, there is a difference there between
 13 the two because of the source of electricity
 14 in Labrador is primarily the Upper Churchill.
 15 MR. O'BRIEN:
 16 Q. Upper Churchill.
 17 MR. HENDERSON:
 18 A. But putting aside the source of electricity,
 19 you know, how you allocate that rural deficit
 20 to different customers, we looked at it from
 21 the perspective of what's a fair allocation on
 22 a customer basis, and that was why we made the
 23 change that we did.
 24 MR. O'BRIEN:
 25 Q. I understand that, I guess, in terms of that's

Page 23

1 one option to take in terms of per customer,
 2 but I'm wondering why it was or if it was that
 3 there was no consideration to the fact that
 4 Newfoundland Power customers would pay higher
 5 amount for electricity, putting aside the
 6 rural deficit, and if you're talking about
 7 fairness, why not consider that in the context
 8 of your decision making?
 9 MR. HENDERSON:
 10 A. That is a factor, but when we balanced out all
 11 the factors, we felt that the proposal we were
 12 putting forward would be the most fair one in
 13 the circumstance.
 14 MR. O'BRIEN:
 15 Q. Okay, so any further detail, I guess, on that
 16 is best to take up with the rates and
 17 regulations?
 18 MR. HENDERSON:
 19 A. Yes.
 20 MR. O'BRIEN:
 21 Q. I wanted to turn, Mr. Henderson, there's a
 22 fair bit of discussion about the infamous PUB-
 23 228, the charging in of the Nalcor leadership
 24 team, and I don't want to go through the
 25 details on the amounts there other than to say

Page 24

1 one of the questions that I put to Mr. Martin
 2 is whether or not the hours that we see on
 3 that document is reflective of the leadership
 4 provided by Nalcor to Hydro, and the fact that
 5 the hours were lower before the test year
 6 suggests there's not - that I can assume that
 7 there's not a lot of leadership there, and I
 8 asked him if I could do that, and he said, no,
 9 you can't assume that because it's not
 10 necessarily reflective of the hours. Ms.
 11 Greene put to Mr. McDonald a question more
 12 recently concerning the same sort of document
 13 to say what is it that we can point to that
 14 shows that there's sufficient leadership here
 15 in terms of hours from Nalcor into Hydro. Is
 16 there something you can point us to in that
 17 regard?
 18 MR. HENDERSON:
 19 A. I don't think there is anything else I can
 20 point to other than I can say my interactions
 21 with both Mr. Martin and Mr. McDonald, and
 22 other people on the Nalcor leadership team, is
 23 that there is considerable discussion on a
 24 number of areas related to Hydro with them in
 25 terms of there's the asset management approach

Page 25	Page 27
<p>1 and philosophy that has a large impact on 2 Hydro. The safety issues are also regularly 3 talked about, we have regular meetings on 4 safety, on asset management, where I would be 5 interacting with Mr. MacIsaac, and others in 6 my group would be interacting with Mr. 7 MacIsaac, but all of those areas are common in 8 the sense that they are also have impact on 9 CF(L)Co, for instance, and probably CF(L)Co 10 being the biggest part of those types of 11 things, but then also the Lower Churchill has 12 aspects of that as well. So all of those 13 areas are common and Nalcor, my understanding, 14 is that those are allocated to Nalcor, they're 15 not charged specifically to Hydro, but I'm 16 involved with those discussions. My time gets 17 charged to Hydro when those discussions occur, 18 but they would be charging it more generally 19 because they have that common interest in both 20 CF(L)Co and Hydro.</p> <p>21 MR. O'BRIEN: 22 Q. When Ms. Greene asked Mr. McDonald that 23 question, he gave a little bit of a different 24 answer. I think what he said is that you can 25 look to how Hydro has fulfilled its mandate,</p>	<p>1 how the organization is operating, the 2 initiatives that the organization is putting 3 forward to improve on its performance, there's 4 those items too. All of those initiatives 5 that occur, so to isolate to say that it's 6 just tied to, you know, reliability or just 7 tied to the cost in a particular year, I think 8 you'd have to more look at over a period of 9 time and how that is evolving and improving.</p> <p>10 MR. O'BRIEN: 11 Q. I understand, and part of your mandate is to 12 set these initiatives and that kind of thing 13 as well within the obligation to provide safe, 14 reliable, least cost service, so that's all 15 part of your mandate.</p> <p>16 MR. HENDERSON: 17 A. Exactly.</p> <p>18 MR. O'BRIEN: 19 Q. I understand what you're saying. Well, let's 20 talk about reliability for a little bit. We 21 talked to Mr. Martin about key performance 22 indicators, and he indicated in his evidence 23 that when he testified back in 2007 at the 24 last GRA, that was around the time that Hydro 25 was putting in place some key performance</p>
<p>1 that's sort of how you would tell whether or 2 not there's appropriately leadership provided. 3 Would you agree with that?</p> <p>4 MR. HENDERSON: 5 A. That's another approach to it.</p> <p>6 MR. O'BRIEN: 7 Q. And would you agree with that approach?</p> <p>8 MR. HENDERSON: 9 A. I would agree that how Hydro has performed and 10 the things that it has implemented in terms of 11 changes to improve its business performance 12 are all reflective of those discussions.</p> <p>13 MR. O'BRIEN: 14 Q. And would - I guess, in terms of things like 15 being able to provide least cost, reliable, 16 and safe energy, I mean, that's your mandate?</p> <p>17 MR. HENDERSON: 18 A. Yes.</p> <p>19 MR. O'BRIEN: 20 Q. And that would reflect the level of 21 leadership, would you agree?</p> <p>22 MR. HENDERSON: 23 A. There is a relationship there, but there's so 24 many more things, I'll say, in the context of 25 the items that are occurring with respect to</p>	<p>1 indicators to look at reliability and 2 financial performance and that sort of thing, 3 and that this has been done. I'm going to ask 4 that we look at Information 5, if we could. 5 That's reproduced from one of Grant Thornton's 6 reports. We see key performance indicators 7 for 2009, 2010, 2011, 2012, and we see 2013 8 and 2014 as well. In terms of - I want to 9 look at Page 2, if we could, actually. So if 10 we look at reliability here, we've got eight 11 different KPIs, and we see targets for 2013 12 and results, and we see targets for 2014 and 13 results. Have you seen this document before?</p> <p>14 MR. HENDERSON: 15 A. Yes, I have.</p> <p>16 MR. O'BRIEN: 17 Q. First of all, I just want to ask you sort of 18 these targets, how are they achieved - sorry, 19 how are they set?</p> <p>20 MR. HENDERSON: 21 A. The targets that are there for 2013 and 2014 22 were established based on a review of historic 23 performance.</p> <p>24 MR. O'BRIEN: 25 Q. Okay.</p>
	Page 28

Page 29

1 MR. HENDERSON:
 2 A. So they would take into account our historic
 3 performance and project that forward and
 4 trying to establish improvements on historic
 5 performance. So it's initiatives to improve on
 6 how we've been doing in the past, so we have a
 7 group internally who do some analysis on past
 8 performance, look at that, and then they put
 9 forward the targets for these KPIs based on
 10 that. So they'll take into account what may
 11 be exceptional that may not be indicative of
 12 future performance, such as a very severe
 13 weather event that you may look at the history
 14 and say, okay, that was an unusual event, so
 15 we would not consider that as part of our
 16 historical performance in predicting where
 17 we're going to go. So it's a matter of
 18 looking at that historic performance
 19 projecting it forward, and that's pretty much
 20 how all of those are done. Now the weighted
 21 capability factor and the DAFOR, weighted
 22 DAFOR, do take into consideration the annual
 23 work plan and the outages that we plan on our
 24 generating equipment. So when they establish
 25 those targets, they would look at, well, do we

Page 30

1 have a long outage plan for a generator in Bay
 2 D'Espoir that may influence that, and they
 3 would take that into account to reflect it,
 4 and then they would also consider the number
 5 of forced outages that we've had previously
 6 and project an improvement.
 7 MR. O'BRIEN:
 8 Q. So there's a bit of normalization, I guess, in
 9 terms of going forward when you look at
 10 setting that target - for each of those
 11 targets, I guess?
 12 MR. HENDERSON:
 13 A. That would be correct.
 14 MR. O'BRIEN:
 15 Q. Okay, and you're looking for the most part,
 16 except for the first two, I guess, which also
 17 look at the plan for each year, you're looking
 18 historically where the company has been and
 19 the idea is to improve in these areas as well?
 20 MR. HENDERSON:
 21 A. That was behind those. So if you look back,
 22 you'll find that those targets do reflect an
 23 improvement over historic performance.
 24 MR. O'BRIEN:
 25 Q. What do you take from the fact that the 2013

Page 31

1 result shows that none of your reliability
 2 targets were achieved?
 3 MR. HENDERSON:
 4 A. I'll say in 2013, as everybody is aware, there
 5 was a significant event where we had a very
 6 severe winter storm in January of 2013 that
 7 caused problems at the Holyrood terminal
 8 station that resulted in the generating
 9 station coming off. So that had a significant
 10 impact and, of course, we had the damage to
 11 the turbine bearings on Unit 1 at Holyrood, so
 12 that greatly impacted in 2013 the DAFOR, the
 13 second line item, and it also impacted on the
 14 weighted capability factor for that year, and
 15 they are very unusual from our historic
 16 performance, and so they were the main factors
 17 that influenced it, so it was related to that
 18 severe storm, the impact of that storm, and
 19 then the resultant damage that occurred on
 20 Unit 1. On the other matrix, I'll comment
 21 that there's an element here where they did
 22 not reflect our outage requirements, and I
 23 think the targets were set low, they did not
 24 reflect some of the capital investments that
 25 we were making in our distribution system and

Page 32

1 in our transmission system that were going to
 2 require additional outages. So there's an
 3 element of, in particular, the distribution
 4 SAIDI and SAIFI numbers which it was
 5 unrealistic given the program that we had
 6 coming forward, in particular, there was a
 7 significant amount of feeder outages in our
 8 distribution system, the Labrador City
 9 upgrades that we were doing were causing a
 10 significant amount of customer outages, which
 11 actually continued through both 2013 and 2014.
 12 So those targets for the distribution system
 13 were influenced by that, and they're also
 14 influenced by other events that occurred in
 15 the distribution forced outage events. I
 16 wouldn't want to leave the impression that it
 17 was only the planned outage, but certainly the
 18 targets were set unrealistically low for the
 19 distribution system.
 20 (9:45 a.m.)
 21 MR. O'BRIEN:
 22 Q. And would those planned outages you're talking
 23 about that would have affected setting those
 24 targets, would they have been - your committee
 25 or the group that gets together that sets

Page 33

1 these targets, would they have been aware at
 2 the time when they set the targets?
 3 MR. HENDERSON:
 4 A. What was happening was the targets were being
 5 established - you'll notice that the
 6 distribution targets are the same for 2013 and
 7 2014, and that's because they had been
 8 established prior to 2013 as a target. When
 9 they hadn't been met, they were carried
 10 forward and since we did not make the target,
 11 we're going to carry that forward as the
 12 target for future years, and would carry it
 13 forward until we met it. So that happened for
 14 the 2013 and 2014 year. For 2015, I got more
 15 involved with the target setting and went and
 16 insisted, I guess, that the consideration of
 17 the planned outages, so there was more rigor
 18 put into the target setting to reflect the
 19 planned work that we were doing in the
 20 distribution system. So the targets, when you
 21 see the targets for 2015, you'll notice that
 22 they are higher, and that's to reflect the
 23 experience that we're having with respect to
 24 outages required for system upgrades. So
 25 that's there. On the transmission SAIDI and

Page 34

1 SAIFI figures, these are measures that they do
 2 move around and there has been some effort to
 3 reflect planned outages, but again it did not
 4 have the rigor that I would expect in setting
 5 the targets, and so there's some changes
 6 happening there as well to bring those
 7 through. The other thing with respect to the
 8 transmission SAIDI and SAIFI, they are
 9 influenced quite a bit by our transmission
 10 performance on the Great Northern Peninsula,
 11 which we have a number of delivery points off
 12 the transmission system that can be influenced
 13 by one event. You can have a number of
 14 delivery points knocked out for event on the
 15 transmission system. So you can see that
 16 number move around quite a bit depending on
 17 our experience on severe weather events on the
 18 Northern Peninsula, such as up there we can
 19 experience some high wind or salt spray type
 20 of events, so that has an influence on that.
 21 So those numbers in the transmission SAIDI and
 22 SAIFI are reflective of those types of things,
 23 it's the nature of our system. There is a
 24 high variability that occurs in those. You'll
 25 see that year over year.

Page 35

1 MR. O'BRIEN:
 2 Q. So Mr. Henderson, I guess, part of what I'm
 3 hearing and I want you to correct me if I'm
 4 wrong, part of what I'm hearing is that we've
 5 got 2013 targets that are not achieved, and
 6 2014 targets that are not achieved, and that
 7 part of the response to that is to look at
 8 whether or not the targets are realistic and
 9 adjust them upwards?
 10 MR. HENDERSON:
 11 A. That would be - it's basically making sure
 12 that the targets are realistic.
 13 MR. O'BRIEN:
 14 Q. So were you concerned when you looked at the
 15 2013 and 2014 targets that there are
 16 reliability issues here that we need to handle
 17 and deal with, or were you more concerned with
 18 adjusting the target to make sure that we meet
 19 target going forward?
 20 MR. HENDERSON:
 21 A. Well, I was responding to your question about
 22 how the targets were set. In terms of the
 23 performance to move to that, there is
 24 definitely areas here that we see that there
 25 area areas to be addressed, areas that we've

Page 36

1 done some analysis on to determine what the
 2 issues are behind the changes in the
 3 performance and what we can do to address it.
 4 Those are exactly the things that we would do.
 5 For each event that we have, we do a review of
 6 those to identify what the problems may be and
 7 set forth a plan to address them, to put - to
 8 get the performance back to where it should
 9 be, and our customers should be - the type and
 10 level of performance that our customers have
 11 experienced in the past and should experience
 12 in the future. So we do that, and any large
 13 event gets a particularly hard look at in
 14 terms of analysis because of the significant
 15 impact it has, and those provide a significant
 16 opportunity to identify areas for improvement,
 17 you know, as we strive to continually improve
 18 on our reliability.
 19 MR. O'BRIEN:
 20 Q. Okay, and yesterday you actually mentioned, I
 21 believe at one point, that there was a review
 22 in 2013 into 2014 where you had noted some
 23 areas that could require some additional work.
 24 I'm wondering if you can take us through, say,
 25 from the 2013 targets achieved there, what

Page 37

1 types of areas you would have been concerned
 2 about and addressed in 2013 when you looked at
 3 these reliability performance indicators?
 4 MR. HENDERSON:
 5 A. For 2013, with respect to the events that
 6 happened in January, 2013, we did a thorough
 7 review of that.
 8 MR. O'BRIEN:
 9 Q. Uh-hm.
 10 MR. HENDERSON:
 11 A. And identified a number of items. I don't
 12 recall the number, but I'll say there's 50 or
 13 more action items that were identified that
 14 people were assigned to do, to follow up on to
 15 improve, to address the issues of the items
 16 that we had identified in our review. They
 17 were initiated and being taken care of in
 18 2013, and they continued on in 2014. When we
 19 had the problems in January, 2014, we did a
 20 similar analysis and this one was more in
 21 depth because there was a number of different
 22 aspects to it, perhaps broader than what we
 23 experienced in January, 2013, and again there
 24 was a large number of action items that came
 25 out of that that we have been implementing and

Page 38

1 following up, and there was also some of the
 2 items from 2013 that had been identified, they
 3 continued into 2014 to be actioned to improve
 4 on reliability.
 5 MR. O'BRIEN:
 6 Q. Okay, and in terms of the results here, and
 7 we've talked a fair bit just in terms of how
 8 the targets get achieved, in your position,
 9 when you see these KPIs and the results
 10 whether or not targets are achieved, what
 11 emphasis do you put on that type of analysis?
 12 Mr. Martin sort of suggested, well, look,
 13 those are just data points, I've got to go
 14 behind it. Is that the same thing for you?
 15 MR. HENDERSON:
 16 A. Well, for me and the operations team, in
 17 particular, all of these - I shouldn't say all
 18 of them. Different aspects of these KPIs are
 19 discussed with the management group to look at
 20 each issue and address. So this is a regular
 21 conversation that would happen between myself
 22 and the management team on outages that we've
 23 had and what we are doing to address the
 24 issues, to make sure that we're doing a sound
 25 assessment of what happened in each event, and

Page 39

1 are addressing those in response to what we
 2 have found, so they are regularly monitored.
 3 In terms of each one of these, they are
 4 measures of what has happened, but as the
 5 events occur, that's when we have the
 6 discussion and that obviously influences
 7 future performance for those matrix. The
 8 weighted capability factor is one that would
 9 be - aspects of that would be sort of in a
 10 performance measure for the managers in their
 11 performance contracts to make sure that have
 12 proper attention on those. Each one of these
 13 reliability measures do fall down to each one
 14 of the managers who have an aspect of their
 15 role to address them. For instance, in
 16 Darren's shop, the regional managers would
 17 have either the SAIDI or SAIFI, depending on
 18 where we had focused that year, in their
 19 performance contracts that they're expected to
 20 manage and to get the performance to a level
 21 that we've established or are expecting to get
 22 to. It is an ongoing aspect of the management
 23 of the company is these KPIs for discussions
 24 with the managers who are responsible for the
 25 operation.

Page 40

1 MR. O'BRIEN:
 2 Q. Okay, and I take from it that you do consider
 3 these KPIs to be important data points, I
 4 guess, in terms of how you manage the
 5 organization. You talk about the managers
 6 having them built into their performance
 7 contracts. The performance contracts
 8 themselves, when you talk about that being
 9 built in, is that in the incentive portion of
 10 is that as part of your everyday salary,
 11 that's your target?
 12 MR. HENDERSON:
 13 A. It's part of all aspects of their role. It's
 14 a critical piece of their jobs is addressing
 15 reliability, so it's in their incentive pay,
 16 it's also part of their basic key
 17 responsibility areas, reliability is
 18 forefront.
 19 MR. O'BRIEN:
 20 Q. And what level of oversight does Mr. Martin
 21 provide to you, I guess, in terms of these
 22 types of results? Do you have regular
 23 discussions with him on an annual basis, I
 24 guess, here's where we are with respect to
 25 these results?

Page 41

1 MR. HENDERSON:
 2 A. I would speak to Mr. Martin on general
 3 reliability issues, areas that we have
 4 concerns about. It would be more on a very
 5 high level in terms of impact on customers and
 6 areas of concern that we should be addressing.
 7 These particular measures are put in Hydro's
 8 annual plan and they are rolled down to the
 9 organization so that each manager has sight of
 10 what's happening, and Mr. Martin and I go
 11 through the Hydro plan. Our discussions tend
 12 to be much more on the very high level matrix
 13 that we've put forward, which - what we have
 14 is on each - for each year for Hydro, there is
 15 a number of key areas that we are focusing on
 16 in terms of both reliability and other areas,
 17 so it's one of those areas that I would
 18 discuss with Mr. Martin would be the
 19 reliability performance.
 20 MR. O'BRIEN:
 21 Q. And would you - I guess, my question is more
 22 would you have gone to him, say, in 2013,
 23 early 2014, to say, look, here's what our
 24 results are from 2013, we had these eight
 25 reliability targets and none of them are met?

Page 42

1 MR. HENDERSON:
 2 A. No, I would not have spoken specifically to
 3 that. We would have been more focused on
 4 addressing the major issues that we had and
 5 making sure that we were taking action to
 6 address those, which had a broader impact
 7 across each of them, not talking about them
 8 specifically so much as we would be talking
 9 about the broader aspect of reliability, the
 10 significant impact of the January 2013
 11 troubles and 2014, that's were our focus would
 12 be on those and getting the identified actions
 13 that were having a broad impact addressed and
 14 completed.
 15 MR. O'BRIEN:
 16 Q. How about 2014 then, you've got your results
 17 and no targets achieved. Is that something
 18 you would have brought to Mr. Martin then
 19 after? You're past now the early January
 20 2014, but still by the end of it is that a
 21 type of discussion you would have had with him
 22 that we've got these eight reliability KPIs
 23 and again we haven't met the targets?
 24 MR. HENDERSON:
 25 A. What I'd be talking to Mr. Martin about, as I

Page 43

1 said, would be the bigger issue type of items
 2 and what we're doing to address those, which
 3 would be the actions being taken in response
 4 to the broader outages. We may talk about
 5 some general areas of reliability improvement,
 6 but we did not sit down and walk through each
 7 one of these per se, other than when - he
 8 would be generally aware that the performance
 9 was behind.
 10 (10:00 a.m.)
 11 MR. O'BRIEN:
 12 Q. Now Mr. Henderson, I want to talk a little bit
 13 about preventative maintenance and deferrals,
 14 and I note part of this discussion will run
 15 into prudence, and I'm going to try to keep it
 16 away from that for this purposes, I want to
 17 stick sort of reliability and what we're
 18 looking forward to in the future, that sort of
 19 thing. Now it's clear from the report and
 20 evidence filed by Liberty Consulting that
 21 there were concerns raised by Liberty
 22 concerning Hydro's philosophy with respect to
 23 the deferral of preventative maintenance in
 24 certain areas, is that right?
 25 MR. HENDERSON:

Page 44

1 A. That's right.
 2 MR. O'BRIEN:
 3 Q. And I believe the Board even raised similar
 4 concern in May of 2014 with their interim
 5 report, is that correct?
 6 MR. HENDERSON:
 7 A. That's correct.
 8 MR. O'BRIEN:
 9 Q. Can you take us through the process in terms
 10 of when preventative maintenance is deferred,
 11 is that something that is done at a budgeting
 12 process or a budgeting time, how does that
 13 happen?
 14 MR. HENDERSON:
 15 A. The deferral of any maintenance basically
 16 occurs during the year. The budget is supposed
 17 to be set with the intent to complete all
 18 preventative maintenance that's required, and
 19 it also has an allowance in that for
 20 additional corrective maintenance which would
 21 be things that would occur during the year. So
 22 there is - through the budgeting process, the
 23 managers put forward their budget to be able
 24 to complete their annual work plan, and they
 25 would also - which would include an allowance

Page 45

1 for things for corrective maintenance, things
 2 that may happen during the year, and that
 3 would be based on historic experience and so
 4 on with respect to that aspect of it.
 5 MR. O'BRIEN:
 6 Q. Okay. So that's built in, the corrective
 7 portion is part of the budget as well?
 8 MR. HENDERSON:
 9 A. Yes.
 10 MR. O'BRIEN:
 11 Q. But throughout the year, so you've set each
 12 year and this, I guess, is based on your asset
 13 management plan and your capital plan going
 14 forward, here's the type of maintenance,
 15 preventative maintenance we're going to do on
 16 an annual basis. So take me through, say you
 17 get to a point where there's a question of
 18 whether we defer preventative maintenance, how
 19 does that happen? Who's involved in those
 20 types of discussions?
 21 MR. HENDERSON:
 22 A. Those types of discussions would occur by the
 23 -- within our -- well, in each area that we
 24 have, we have long term asset planners who are
 25 the managers who are responsible for condition

Page 46

1 monitoring and establishing the preventative
 2 maintenance program. They would get involved
 3 with the discussion along with what we call a
 4 work execution manager, who would be involved
 5 with what work is being done and scheduled
 6 each week and during the course of the year.
 7 So they would come together to talk about I'll
 8 say challenges in accomplishing all of the
 9 work that has to be done and they would bring
 10 in their -- the regional manager for that
 11 area, I would expect would be also part of
 12 that discussion, and they would do an
 13 assessment based on priorities of the work to
 14 determine what adjustments can be made to be
 15 able to, you know, basically get the greatest
 16 reliability result for customers and manage
 17 the cost. It's a balance of both. And so
 18 they would make that decision during the
 19 course of the year and so there may be certain
 20 items that get -- because of I'll say a number
 21 of different items on the go, they may make
 22 adjustments during the year that would make a
 23 decision to say for a particular preventative
 24 maintenance activity, we will defer that to
 25 another year, which would be expected to be

Page 47

1 based on the condition of the equipment, what
 2 they know about the equipment, because the
 3 long term asset planners know the condition of
 4 equipment and the work execution people would
 5 also know that. So, there would be a
 6 discussion amongst that group and they would
 7 make that decision to prioritize where they
 8 should be putting their efforts, with a focus
 9 on reliability for customers.
 10 MR. O'BRIEN:
 11 Q. And is there any -- I presume for the most
 12 part you wouldn't be involved in those types
 13 of discussions yourself?
 14 MR. HENDERSON:
 15 A. No, I'm not.
 16 MR. O'BRIEN:
 17 Q. Okay. Are there any guidelines to follow when
 18 planning -- when looking at deferring
 19 maintenance?
 20 MR. HENDERSON:
 21 A. There are no specific written guidelines.
 22 Each of these people are experienced
 23 engineers, managers, so they are required to
 24 exercise their judgment in the circumstance.
 25 MR. O'BRIEN:

Page 48

1 Q. And you'd agree with me, I take it, that a
 2 good or an appropriate preventative
 3 maintenance plan can help avoid corrective
 4 costs down the future or down the road, sorry?
 5 MR. HENDERSON:
 6 A. That's correct.
 7 MR. O'BRIEN:
 8 Q. Okay.
 9 MR. HENDERSON:
 10 A. It's the preventative maintenance plan, the
 11 maintenance tactics that you establish based
 12 on a review, condition assessments. There's a
 13 number of elements and also the capital
 14 program and your replacement of facilities
 15 before they reach the point that they may fail
 16 because of the age of the facilities.
 17 MR. O'BRIEN:
 18 Q. I want to ask you just about some of the
 19 comments of Liberty Consulting in its recent
 20 reply evidence on the Prudence Review. I
 21 wonder if we can bring that up, please. It's
 22 the September 17th, 2015 document. Okay. And
 23 I believe it's page one, lines 18 to 22, and
 24 again, I'm focused more here on reliability as
 25 opposed to prudence, okay, so I want to ask

Page 49

1 you some questions on some of the comments
 2 here. Liberty has made some comments here
 3 about preventative maintenance deferrals and
 4 good asset management practice and one of the
 5 questions they have here is "please summarize
 6 the relationship that Hydro's reply evidence
 7 draws between deferral of preventative
 8 maintenance and good asset management
 9 practice." And Hydro -- or sorry, if we go to
 10 page two then, lines 15 to 17, yeah, that's
 11 right. I'm sorry, I had the wrong question
 12 there. "What's Liberty's view of how
 13 preventative maintenance deferrals confirm the
 14 good utility practice?" and Liberty indicates
 15 that it disagrees with Hydro's view and makes
 16 a comment here, "the widespread deferral of
 17 preventative maintenance work by Hydro was not
 18 well planned, carefully executed or consistent
 19 with good utility practice." So that appears
 20 to be a fairly strong statement. I wonder can
 21 you provide us your comments on whether or not
 22 there is a widespread deferral of -- or has
 23 been a widespread deferral of preventative
 24 maintenance work by Hydro.
 25 MR. HENDERSON:

Page 50

1 A. The evidence in this is that the -- in terms
 2 of the 230 -- air blast circuit breakers, I
 3 should say, and the 230 kV large transformers.
 4 There was deferrals made in order to execute
 5 other priority items. There was system
 6 issues, I'll say, that related to the troubles
 7 that we had in January 2013. There was also a
 8 growing capital program. All of those
 9 elements were occurring during those years
 10 that was causing the -- our folks to assess
 11 each of the items of work that they had to do
 12 and to prioritize where was the -- where the
 13 emphasis should occur. So that all occurred
 14 and it was an evolving situation during those
 15 particular years that impacted on the decision
 16 to defer.
 17 MR. O'BRIEN:
 18 Q. Okay. And is there any concern about that
 19 deferral of preventative maintenance being
 20 widespread in other areas, as opposed to just
 21 the circuit breaker you're talking about?
 22 MR. HENDERSON:
 23 A. In all of our areas, the compliance with the
 24 preventative maintenance program was, I'll
 25 say, in most other areas, it was very good.

Page 51

1 MR. O'BRIEN:
 2 Q. You're satisfied with the rest of the areas?
 3 MR. HENDERSON:
 4 A. Well, I'm going to say in terms of being
 5 satisfied, the challenge is always to continue
 6 to improve. So I'll say that we should be
 7 always striving to improve on that and each of
 8 the managers who are responsible for that type
 9 of work are challenged to improve on the
 10 compliance of preventative maintenance to get
 11 to 100 percent completion and that's where our
 12 focus is, is to get to that 100 percent
 13 completion.
 14 MR. O'BRIEN:
 15 Q. Okay. And when you say there's a challenge,
 16 has that been a focused challenge now since
 17 January 2014?
 18 MR. HENDERSON:
 19 A. I'll say that this has been an area of focus
 20 for many years, in terms of getting the
 21 preventative maintenance completed. At least
 22 in my time in this position, it's been one of
 23 the areas of discussion with the managers on
 24 getting to high compliance on the preventative
 25 maintenance program. There's elements in

Page 52

1 there, performance contracts again, related to
 2 this to get to high compliance.
 3 MR. O'BRIEN:
 4 Q. Okay.
 5 MR. HENDERSON:
 6 A. And so it is an ongoing focus. We've had
 7 metrics in place for maintenance completion
 8 that have been in place for a number of years
 9 and prior to me coming into this role, they
 10 were established. The success there was we
 11 were targeting 90 percent and this is based on
 12 how we've been performing to get to 90 percent
 13 compliance and we've upped that to 100 percent
 14 now. But that -- when I -- I'll say the first
 15 time I got involved with it, 90 percent was
 16 the target and we were making that in a number
 17 of areas. In other areas, it was falling
 18 behind.
 19 MR. O'BRIEN:
 20 Q. Okay. And you've bumped that to 100 percent
 21 now in all areas?
 22 MR. HENDERSON:
 23 A. Yes.
 24 MR. O'BRIEN:
 25 Q. Okay.

Page 53

1 MR. HENDERSON:
 2 A. And what I'll say that with critical
 3 maintenance aspects of it, this would be the -
 4 - what we call critical winter ready for
 5 maintenance requirements. So, in our
 6 preventative maintenance program, there's many
 7 elements to that, which some of them I'll say
 8 aren't so critical for reliability, but they
 9 are important all the same. But my focus has
 10 been on those that are critical to system
 11 reliability. So if there's aspects of our
 12 maintenance program that's related -- and I'll
 13 give a very simple thing. We would put in a
 14 work order that says you should be mowing the
 15 lawn every month. That's in our preventative
 16 maintenance program in the work order system,
 17 but that's not a critical winter ready one.
 18 So that one, if you didn't make that in a
 19 month, that's okay, you know. So I'm just
 20 trying to -- and there's a wide range of
 21 those.
 22 MR. O'BRIEN:
 23 Q. I understand.
 24 MR. HENDERSON:
 25 A. So the focus is on what impacts reliability.

Page 54

1 MR. O'BRIEN:
 2 Q. So in terms of that, you've separated that out
 3 as to what's going to impact reliability and
 4 those the areas where it's 100 percent now?
 5 MR. HENDERSON:
 6 A. That's correct.
 7 MR. O'BRIEN:
 8 Q. And the other areas, are they still at 90 or
 9 are they -- does it vary?
 10 MR. HENDERSON:
 11 A. The other areas have not been something that I
 12 have a discussion on with the managers. The
 13 focus is on the winter ready, the reliability
 14 ones.
 15 MR. O'BRIEN:
 16 Q. Okay. And how have you gone about sort of
 17 determining which ones are the winter ready
 18 and reliability ones? Is that something that
 19 you determine or is it a group determination?
 20 How is that done?
 21 MR. HENDERSON:
 22 A. Well, that is determined, I guess, at a number
 23 of different levels. The chief operating
 24 officer has that discussion with each of the
 25 regional managers to ensure that we've got

Page 55

1 everything in there that needs to be in there,
 2 and there's been a review, a close review of
 3 all of the work orders or the PM activities to
 4 identify which ones are critical and those
 5 have all been identified and then what we do
 6 on a weekly basis -- this was part of what was
 7 happening at our regional area, but we've now
 8 got it so that I on a weekly basis am getting
 9 reports on how we're doing each week with
 10 respect to completion of our preventative
 11 maintenance program against our annual plan.
 12 MR. O'BRIEN:
 13 Q. And you're getting that now and you weren't
 14 before, were you?
 15 MR. HENDERSON:
 16 A. I was not getting a weekly report before. I
 17 was getting a monthly verbal report.
 18 MR. O'BRIEN:
 19 Q. Okay.
 20 MR. HENDERSON:
 21 A. But now it's a report that comes right from
 22 the planning group who schedule the work and
 23 the work execution group. They do a weekly
 24 report indicating how well they are tracking
 25 accordance with the plan for that year.

Page 56

1 (10:15 a.m.)
 2 MR. O'BRIEN:
 3 Q. And when did you start getting those weekly
 4 reports versus the monthly verbal reports?
 5 MR. HENDERSON:
 6 A. That began in 2014.
 7 MR. O'BRIEN:
 8 Q. 2014, okay. I wonder if we could turn to page
 9 four of this document and lines seven to ten.
 10 One of the comments there, and I'm assuming
 11 you will agree with this, is that effective
 12 deferral of corrective maintenance work takes
 13 place with risks that are known, but deferral
 14 of preventative maintenance work necessarily
 15 involves deferring work without having taken
 16 the appropriate actions designed to understand
 17 potential consequences. Do you agree with
 18 that statement?
 19 MR. HENDERSON:
 20 A. I'm not sure that I would agree because I
 21 think the asset manager who knows the
 22 equipment and is overseeing that ongoing
 23 maintenance, they can make judgments with
 24 respect to that from visible inspections and
 25 other things that they have available to them

Page 57

1 to make a judgment on that. So it's not a --
 2 I wouldn't say it's blanket.
 3 MR. O'BRIEN:
 4 Q. Okay.
 5 MR. HENDERSON:
 6 A. That there's circumstances in which the person
 7 who knows and is intimately -- has intimate
 8 knowledge with the equipment can make a
 9 judgment that can wait, that type of thing.
 10 MR. O'BRIEN:
 11 Q. Okay. And so it may not be that it
 12 necessarily involves deferring work without
 13 having taken appropriate actions if you've
 14 actually made a judgment call?
 15 MR. HENDERSON:
 16 A. You made a judgment call and made a decision
 17 based on what you know about that equipment.
 18 MR. O'BRIEN:
 19 Q. Okay. But I guess you would agree there is a
 20 potential, if the judgment's not right, that
 21 you are making -- by deferring preventative
 22 maintenance, there's some unknown risk there?
 23 MR. HENDERSON:
 24 A. There could be some unknown risk, but again,
 25 you're relying on the technical expertise of

Page 58

1 the people who know the equipment and you
 2 wouldn't make that decision very easily or
 3 without good very strong consideration.
 4 MR. O'BRIEN:
 5 Q. And if that's the case, I'm sort of back to
 6 where -- or one of the questions I asked
 7 before. Why not have some guidelines in place
 8 as to how to make those types of decisions and
 9 what to do when you're making that type of a
 10 decision?
 11 MR. HENDERSON:
 12 A. Well, the -- what I would say that we would
 13 expect it to be a documented change and if
 14 somebody is making those kinds of decisions
 15 that they should have documentation. That is
 16 -- we've established that's an expectation
 17 that people have is that there should be what
 18 we call change management process where they
 19 would evaluate the change and it's a very
 20 considered and deliberate decision.
 21 MR. O'BRIEN:
 22 Q. Okay. Well, let me take you on that point to
 23 page eight, lines 18 to 20. I want to get
 24 your comment on this because it sort of arises
 25 from what you've just said. "There remains

Page 59

1 after-hour inquiries and after examining
 2 Hydro's reply, no evidence of any form of
 3 structured or significant analysis of the
 4 risks of deferring maintenance versus the
 5 rewards of redirecting expenditures elsewhere.
 6 With no such analysis and no scheduled date
 7 for performance of the deferred maintenance on
 8 T1, we consider it incorrect to conclude that
 9 Hydro took a pragmatic" -- and I guess it's
 10 "pragmatic approach to deferral." Putting
 11 aside the idea of the T1 for now, the earlier
 12 portion of that statement that according to
 13 Liberty anyway, based on their view, there's
 14 no evidence of any form of structure or
 15 significant analysis of the risks of deferring
 16 maintenance versus the rewards of redirecting
 17 expenditures elsewhere. Can you comment on
 18 that?
 19 MR. HENDERSON:
 20 A. I'm not sure what they're basing their view
 21 on.
 22 MR. O'BRIEN:
 23 Q. And that's what I want to understand from you.
 24 Do you accept that comment?
 25 MR. HENDERSON:

Page 60

1 A. No, there is an expectation from our managers
 2 responsible for doing our maintenance to be
 3 doing a deliberate -- as I just said, a
 4 consideration of change.
 5 MR. O'BRIEN:
 6 Q. And how about scheduling date for performance
 7 of deferred maintenance in general, put aside
 8 the T1, but in general? Is that something you
 9 would think in a structured analysis, if
 10 you're going to defer maintenance, it would be
 11 a good idea to have a deferral date to when
 12 you're going to do it?
 13 MR. HENDERSON:
 14 A. Yes.
 15 MR. O'BRIEN:
 16 Q. And is that something that forms part of
 17 Hydro's processes?
 18 MR. HENDERSON:
 19 A. That should -- that is an expectation that
 20 people would be -- that's all part of the
 21 analysis is when are you deferring it to and
 22 the associated risk of it.
 23 MR. O'BRIEN:
 24 Q. Okay.
 25 CHAIRMAN:

Page 61

1 Q. Mr. O'Brien, I think it is programmatic
 2 though, not pragmatic.
 3 MR. O'BRIEN:
 4 Q. Is it? Okay.
 5 CHAIRMAN:
 6 Q. It is to me.
 7 MR. O'BRIEN:
 8 Q. All right.
 9 CHAIRMAN:
 10 Q. Because it implies a program.
 11 MR. O'BRIEN:
 12 Q. Oh no, I understand. I understand.
 13 CHAIRMAN:
 14 Q. Something can be pragmatic, but it doesn't
 15 have to be a -
 16 MR. O'BRIEN:
 17 Q. I suppose it can be both, but I understand the
 18 programmatic aspect of it, definitely.
 19 CHAIRMAN:
 20 Q. Can't be both to me, but could be wrong.
 21 MR. O'BRIEN:
 22 Q. Okay. I want to ask you about the office of
 23 asset management. That was something
 24 established in 2010? Is that right?
 25 MR. HENDERSON:

Page 62

1 A. That's right.
 2 MR. O'BRIEN:
 3 Q. And what was the purpose behind that office?
 4 MR. HENDERSON:
 5 A. That was a position that was established to
 6 provide, I'll say, a standardized approach
 7 across all of Nalcor in the manner in which we
 8 do all aspects of asset management. So this
 9 would be a technical expert who would be --
 10 act like a consultant for all areas of the
 11 company, all departments, to establish
 12 standards which we would apply in the manner
 13 in which we go about our asset management from
 14 all aspects of the program.
 15 MR. O'BRIEN:
 16 Q. Okay. And there's a reference I just want to
 17 take you to, just to confirm. Section 1 of
 18 the evidence, 1.34, page 1.34.
 19 MS. GRAY:
 20 Q. Sorry, what was the page number?
 21 MR. O'BRIEN:
 22 Q. Sorry, 1.34, lines one to four, I think.
 23 Okay. So at lines one to four there, "this
 24 included reorganization of the operations and
 25 engineering functions establishing a

Page 63

1 comprehensive 20-year plan and establishing an
 2 Office of Asset Management to provide strong
 3 oversight of asset management practices and
 4 standards." So that's what you're getting at
 5 in terms of across the organization?
 6 MR. HENDERSON:
 7 A. Yes.
 8 MR. O'BRIEN:
 9 Q. Okay. In Liberty's recent reply evidence,
 10 they suggested that there was maintenance
 11 backlogs back to 2011 in some cases. Is the
 12 office manager or Office of Asset Management
 13 engaged to look after those types of things,
 14 the maintenance backlogs?
 15 MR. HENDERSON:
 16 A. The Office of Asset Management does not have a
 17 direct role in execution. It's all to do with
 18 establishing standards of practice and
 19 consistency across the company throughout all
 20 of Nalcor. So they would establish the
 21 metrics that should be followed, the standards
 22 that the people who are responsible for
 23 executing the asset management program, the
 24 things that they should be doing.
 25 MR. O'BRIEN:

Page 64

1 Q. Okay.
 2 MR. HENDERSON:
 3 A. And it would be expected to be consistent
 4 across all areas, whether its in Hydro
 5 generation, thermal generation, in the rural
 6 areas.
 7 MR. O'BRIEN:
 8 Q. So in terms of say talking about our 90
 9 percent and 100 percent, is that something
 10 that comes out of the Office of Asset
 11 Management is the standard for preventative
 12 maintenance?
 13 MR. HENDERSON:
 14 A. The Office of Asset Management would be
 15 suggesting that these types of metrics should
 16 be there and would be working with the groups
 17 as to what the appropriate improvements should
 18 be, what the aspects of their asset -- where
 19 the asset management activities should be,
 20 areas of weakness, I'll say in different areas
 21 and again, as sort of an expert consultant
 22 there to help guide everybody in terms of
 23 where the priorities should be with respect to
 24 program type of activities, as opposed to the
 25 actual execution of the maintenance. So the

Page 65

1 office of asset management would not be part
 2 of the decision on deferral, but they would be
 3 part of the discussion as to what metrics we
 4 should be following and carrying out in terms
 5 of the way we execute our maintenance program.
 6 MR. O'BRIEN:
 7 Q. Okay. So they wouldn't have any sort of
 8 direct involvement with deferral. Would they
 9 have any direct involvement with, say on an
 10 annual basis, looking back and seeing where
 11 you were with respect to those metrics and
 12 what steps to take to improve?
 13 MR. HENDERSON:
 14 A. They may be involved in that kind of
 15 discussion as sort of, I'll say, an expert to
 16 help with the decision making, but the
 17 decisions are all with the operations people,
 18 not with the Office of Asset Management.
 19 MR. O'BRIEN:
 20 Q. Okay, all right. I wanted to ask you going
 21 forward now in terms of reliability for the
 22 system, Mr. Martin spoke about the importance
 23 of leadership in a regulated utility and he
 24 indicated some of the steps that he has taken
 25 in his role following the January '14, 2014

Page 66

1 events in order to take over leadership and
 2 deal with reliability going forward. Can you
 3 give us an idea as to what types of things
 4 you've done now since January 2014 to take
 5 more of a leadership role?
 6 MR. HENDERSON:
 7 A. Well, I'll say that the -- I'm thinking about
 8 your comment on more of a leadership role.
 9 MR. O'BRIEN:
 10 Q. And that's fine, then maybe just in terms of
 11 your role, yeah.
 12 MR. HENDERSON:
 13 A. In terms of changes that we've implemented
 14 that I've been part of the changes is we've --
 15 first of all, we've established the chief
 16 operating officer role. As I mentioned I
 17 think the other day that the chief operating
 18 officer is a person who is out working with
 19 the people in the field, working with them,
 20 understanding all of the issues. So there's a
 21 close, very close relationship there for day-
 22 to-day issues. It was something that I had
 23 been doing prior to that for a period of time
 24 until we established that role. So that role
 25 has made -- I'll say in having that additional

Page 67

1 focused person who can dedicate their time to
 2 that, that's been helpful, and will make a
 3 difference over the coming years. And that
 4 is, you know, reflective of our changing
 5 circumstances and our aging assets. It's a
 6 need to have that ongoing day-to-day focus.
 7 We've established -- as I mentioned,
 8 we've established the trending and discussion
 9 every week on preventative maintenance program
 10 completion. So that's an area that gets
 11 ongoing discussion from my level, as well as
 12 the chief operating officer.
 13 The other aspects of it is with respect
 14 to the combustion turbines, we've established
 15 a group that's got a focus on that, that's
 16 dedicated focus, and as the combustion
 17 turbines are going to be required much more,
 18 be operated much more, up until the time of
 19 interconnection with Labrador and over the
 20 Maritime Link, those requirements mean that
 21 there has to be that ongoing close monitoring
 22 of their performance and that has been another
 23 area that has been an increased focus that
 24 we've brought to bear in that area.
 25 The other items is that we've established

Page 68

1 certainly, for this year and for future years,
 2 what we're calling a reliability improvement
 3 program which will be ensuring that we act on
 4 the outstanding items that have come from the
 5 reviews that we've done and also seeking out
 6 additional reliability improvement
 7 opportunities that we can take with respect --
 8 in a number of different areas, but it's each
 9 of the managers in operations have, as part of
 10 their work place, is to seek out those types
 11 of things and again, that's an item that the
 12 chief operating officer is leading and he is
 13 reporting to me on progress on those things on
 14 a regular basis.
 15 So they're -- and that reliability
 16 improvement initiative, if you like, is one
 17 area that I'll say still needs to be fully
 18 completed, in terms of an ongoing multi-year
 19 plan, but that's another area that will have
 20 impact on reliability on a go-forward basis.
 21 (10:30 a.m.)
 22 MR. O'BRIEN:
 23 Q. And I presume as well, on that note, you've
 24 also began implementation of a lot of the
 25 recommendations of Liberty Consulting that

Page 69

1 arose out of the power outage inquiry. Is
 2 that right?
 3 MR. HENDERSON:
 4 A. Well, I would say that many of what Liberty
 5 had identified were exactly what we had
 6 identified ourselves in our review and the
 7 substantial items there were items that we had
 8 identified as areas of improvement and we are
 9 in agreement with Liberty that those are areas
 10 for future attention and ongoing attention, I
 11 should say.
 12 MR. O'BRIEN:
 13 Q. I wanted to ask you, you mentioned the CT and
 14 I wonder if we could bring up PR-DD-12? And
 15 this is a list of the -- during the year 2015
 16 -- of the times when the CT has been offline
 17 or unavailable for scheduled outages and
 18 planned outages and we see a full list there
 19 and the first one there, March 4th, I
 20 understand was even a school day at that point
 21 and the schools were closed, but as we go
 22 through, there's a fair number of those
 23 instances in which the CT was -- had either
 24 failed to start or there was scheduled outages
 25 or unscheduled outages. I think we can go on

Page 70

1 to the next page, there's a few more as well.
 2 Do you have any concern going forward about
 3 the CT and its availability for the system?
 4 MR. HENDERSON:
 5 A. No. No, I don't. The CT is in its first year
 6 of operation. It's not uncommon for when a
 7 new facility comes into operation that there
 8 are things that need to be adjusted and
 9 corrected as you run the machine for, you
 10 know, its first operating season. So there's
 11 -- taking scheduled outages are going to be
 12 part of the operation of any facility,
 13 particularly as it use it more, there's going
 14 to be need to have scheduled outages that you
 15 would schedule in a planned basis to go in and
 16 perhaps complete corrective maintenance or a
 17 part of your preventative maintenance program
 18 as to do things such as fuel filter changes,
 19 those types of things would be expected and
 20 they'd be scheduled by the system operator at
 21 an appropriate time that would be low impact
 22 or no impact on customers and on the reliable
 23 supply.
 24 Some of the other items there with
 25 respect to forced outages, these are again

Page 71

1 items that would not be unusual in the first
 2 start-up year of a new unit. I think we've --
 3 I think in evidence there is a bathtub curve
 4 that shows typical operation of new facilities
 5 or any generation facilities and how in the
 6 very early days of their operation, there can
 7 be and it's typical that there are operating
 8 challenges that could cause the unit to be
 9 unavailable for periods of time. Those should
 10 -- they do occur. They should be dealt with
 11 in a short time period and then we would
 12 expect a long period of reliable operation
 13 with very infrequent forced outages.
 14 MR. O'BRIEN:
 15 Q. So do you expect going forward now that the
 16 number of outages we see here to be smaller?
 17 MR. HENDERSON:
 18 A. On a go-forward basis, I would expect it to be
 19 typical of a combustion turbine and I have
 20 been given the reliability measures that we
 21 call it the UFOP or utilization forced outage
 22 probability and which is a measure that we use
 23 for reliability of these gas turbines which
 24 are combustion turbines that have -- they
 25 don't run very often, but their ability to

Page 72

1 supply power when needed, and the figures that
 2 I have been given up to the end of August
 3 indicate that this is -- the performance here
 4 is within the expected range of performance
 5 for combustion turbines. I think the number
 6 is around a five percent value for UFOP is
 7 what our planning people would expect for long
 8 term for this type of combustion turbine and I
 9 think the number -- and it's under five
 10 percent, but I can't quote it, but it might be
 11 three or four percent or something like that
 12 that we've experienced already. So it's --
 13 with the time that we've had, it isn't out of
 14 the range of normal performance.
 15 That being said, you know, I know that
 16 the couple of issues that we've had on start
 17 up have been related to the new equipment and
 18 things that we have learned about the new
 19 equipment that need to be -- you know, have
 20 higher attention, and so particularly the
 21 March 4th event where we had a valve that had
 22 moved its position that caused a delay in
 23 start. That was something that was part of
 24 the design that we had to adjust, to make an
 25 adjustment, and that's the type of thing that

Page 73

1 you would expect that you may incur when a new
 2 facility is coming into operation.
 3 MR. O'BRIEN:
 4 Q. If I could turn, Mr. Henderson, I'd like to
 5 talk a little bit about the deferral accounts
 6 and the first thing I think I'd like to talk
 7 about is the energy supply deferral account as
 8 it pertains to Exploits. Is this something
 9 that you're able to talk about or is it
 10 something that I should -- that's within your
 11 -- that's what I saw on the list.
 12 MR. HENDERSON:
 13 A. Certainly I'm prepared to answer. I may
 14 defer, depending on the detail that you're
 15 looking for.
 16 MR. O'BRIEN:
 17 Q. Okay, all right. So the operating expenses in
 18 the revenue requirement include the costs of
 19 purchased power from Exploits at I believe
 20 it's four cents a kilowatt hour. Is that
 21 right?
 22 MR. HENDERSON:
 23 A. That's correct.
 24 MR. O'BRIEN:
 25 Q. And that's been the cost since 2011 timeframe?

Page 74

1 MR. HENDERSON:
 2 A. That's correct.
 3 MR. O'BRIEN:
 4 Q. One of the RFIs seem to suggest there's no
 5 certainty about what this cost might be in the
 6 future. Can you expand on that? Have you had
 7 any discussions with Government about sort of
 8 where those costs may be going?
 9 MR. HENDERSON:
 10 A. With respect to the Exploits asset, our
 11 discussion with Government has been around
 12 changing the ownership of the facility for
 13 Hydro to take ownership of the facility.
 14 There's been no discussion or indication
 15 whatsoever of any change in the price. The
 16 focus has been on what -- putting in place
 17 what we need to put in place in order to
 18 enable a transfer of ownership.
 19 MR. O'BRIEN:
 20 Q. And I saw that in the initial filing that that
 21 appeared that was on the horizon and that was
 22 the plan in terms of transferring the asset to
 23 Hydro, but that hasn't come to fruition at
 24 this point. Is that something that is now
 25 closer than before?

Page 75

1 MR. HENDERSON:
 2 A. It certainly has advanced further along.
 3 There's a number of elements related to this
 4 that do take time to do in terms of the legal
 5 transfer and all of the various elements of
 6 it. There's the cost, what's the amount that
 7 Hydro would pay for it, if anything. And all
 8 those aspects of it. So there's a number of
 9 different elements that are taking time to
 10 resolve. So we're not there yet, but that
 11 work is progressing.
 12 MR. O'BRIEN:
 13 Q. Do you have any level of foreseeability sort
 14 of or foresight as to when we might see that
 15 transfer occurring?
 16 MR. HENDERSON:
 17 A. Right now, we're working towards a 2016
 18 transfer, but that's -- right now, I would say
 19 that that -- I can't say with certainty that
 20 that will happen, but that was the way that we
 21 had initiated our efforts in 2015 to -- was to
 22 move towards having that occur in 2016.
 23 MR. O'BRIEN:
 24 Q. And if there haven't been any discussions
 25 really about sort of price change or anything

Page 76

1 at this point in time, why would you look for
 2 a deferral account to cover the variability in
 3 sort of price changes for purchase power from
 4 Exploits?
 5 MR. HENDERSON:
 6 A. I'm not aware that we've asked for a deferral
 7 related to Exploits.
 8 MR. O'BRIEN:
 9 Q. I thought it was all power purchases.
 10 MR. HENDERSON:
 11 A. It is all power purchases. So it's related
 12 to, as you just said, it's all power
 13 purchases, and supply costs variations for the
 14 Island Interconnected System. So, there's a
 15 number of different parts to that which would
 16 be the volume of energy that's purchased
 17 through the power purchases, the price related
 18 to the power purchases. There's also the
 19 aspects of the other supply items that we
 20 have, which would be the combustion turbine
 21 fuel costs variability -- is another I'll say
 22 significant component of the variability of
 23 the total supply picture. And over time,
 24 since, you know, the last time Hydro put
 25 forward a GRA, we now have a significantly

Page 77	Page 79
<p>1 larger portion of our energy is supplied 2 through power purchase arrangements. I 3 believe back in 2007, there would have been 4 three and that has expanded. We have now the 5 addition of the wind and Exploits, which all 6 have volume variability and an element of 7 price variability.</p> <p>8 MR. O'BRIEN: 9 Q. In terms of price variability though, I guess, 10 with Exploits, you're not expecting any sort 11 of variability with that prior to any 12 transfer, are you?</p> <p>13 MR. HENDERSON: 14 A. No.</p> <p>15 MR. O'BRIEN: 16 Q. And in terms of say wind and that, do you see 17 a lot of variability in wind at this point in 18 time?</p> <p>19 MR. HENDERSON: 20 A. The wind has a variability element to it and 21 there's also a pricing variability component 22 of it.</p> <p>23 MR. O'BRIEN: 24 Q. Would you consider it volatile to the extent 25 that it should be covered in a deferral</p>	<p>1 variability that Hydro does not have control 2 over and that's the aspect of it. So from a 3 financial performance perspective, it's an 4 element that Hydro does not have control and 5 it's appropriate, in our view, that those 6 types of uncontrolled expenses, similar to 7 water variability, fuel price variability that 8 we have in the RSP, these are similar type of 9 things. My understanding is Newfoundland 10 Power has a similar type of thing for its 11 combustion turbine and diesel fuel 12 variability. It all is part of the normal 13 practice for utilities to -- for these types 14 of uncontrolled variability, to have deferral 15 mechanisms.</p> <p>16 MR. O'BRIEN: 17 Q. In terms of studies, have you looked at any 18 studies which would be, say, comparable to 19 Hydro and what other utilities such as Hydro, 20 not just distribution like Newfoundland Power, 21 but other utilities and what kind of deferral 22 accounts they've got?</p> <p>23 MR. HENDERSON: 24 A. I believe there's some evidence in our -- I 25 think our Finance department would be the best</p>
<p>1 account, I guess?</p> <p>2 MR. HENDERSON: 3 A. What we see is that all -- the combined supply 4 items are -- putting them all into one group, 5 which would include, as I said, the combustion 6 turbine fuel and the other elements that are 7 part of our energy supply. All of those items 8 together have a level of variability that we 9 believe is not something that we in any way 10 control and as a result of the uncontrolled 11 nature of it that it's appropriate for us to 12 seek and obtain a deferral.</p> <p>13 MR. O'BRIEN: 14 Q. And I guess in terms of that, when you're 15 looking for a deferral, you are, you'd agree, 16 looking to pass on risk to the rate payer 17 versus keeping it with Hydro, with the 18 company?</p> <p>19 MR. HENDERSON: 20 A. That's correct. It does allow the rate payer 21 or customer to obtain the benefit of greater - 22 - you know, whenever there is a positive, the 23 customers will gain and if there was a 24 negative, the customer would incur that 25 variability, but it's all related to</p>	<p>1 or Finance panel would be best to talk about 2 any of the studies that have been done or 3 their use?</p> <p>4 MR. O'BRIEN: 5 Q. There was a study referred to, but it was a 6 Newfoundland Power study that was a 7 distribution utility study only. I don't know 8 if you know of any studies for other utilities 9 that would be more apples to apples with 10 Hydro.</p> <p>11 (10:45 a.m.)</p> <p>12 MR. HENDERSON: 13 A. I'm aware that there's evidence regarding B.C. 14 Hydro, for example, showing what in particular 15 is applied in that circumstance, which my 16 understanding is it's very similar to the type 17 of situation that we are in.</p> <p>18 MR. O'BRIEN: 19 Q. Okay. And I guess I can take up the details 20 then with Finance on that. The Holyrood fuel 21 conversion factor, is that something that you 22 can speak to? I know I didn't see it on the 23 list.</p> <p>24 MR. HENDERSON: 25 A. I will respond to questions there.</p>
Page 77	Page 80

Page 81

1 MR. O'BRIEN:
 2 Q. Yeah, okay.
 3 MR. HENDERSON:
 4 A. Again, if it -- into detail, we'll go
 5 somewhere else.
 6 MR. O'BRIEN:
 7 Q. Yeah, I guess, you're seeking a deferral
 8 account with respect to some variability with
 9 the Holyrood fuel conversion factor. I wonder
 10 if we could pull up NP-191.
 11 MS. GRAY:
 12 Q. Revision 1?
 13 MR. O'BRIEN:
 14 Q. What's that?
 15 MS. GRAY:
 16 Q. Revision 1?
 17 MR. O'BRIEN:
 18 Q. Revision 1, please, yes. Okay, if we can
 19 scroll down a bit here. Yeah, I just wanted
 20 to check. So the 2015 test year Holyrood
 21 production is at 15 at 93. That's a fair bit
 22 higher than some of the previous years. Is
 23 that right?
 24 MR. HENDERSON:
 25 A. The production?

Page 82

1 MR. O'BRIEN:
 2 Q. Yes.
 3 MR. HENDERSON:
 4 A. Yes.
 5 MR. O'BRIEN:
 6 Q. And if we looked actually NP-379 I think we
 7 might get a better picture of a number of the
 8 -- yeah, okay. So we see Holyrood fuel
 9 conversion factor. I wonder if you can give
 10 us your overview of sort of the factors, the
 11 types of factors that Hydro feels are
 12 important in considering how to forecast for
 13 the conversion factor, Holyrood fuel
 14 conversion factor in the test years? What did
 15 you consider?
 16 MR. HENDERSON:
 17 A. So what we -- I can say that there's -- the
 18 system operations and planning panel will be
 19 ready to respond to this, but the basis
 20 elements is that we have -- we do an average
 21 hydraulic production forecast. We do a
 22 forecast on power purchases and we have a
 23 forecast of customer load. The difference
 24 between the customer load and the hydraulic
 25 production and the power purchase production

Page 83

1 is met primarily by the Holyrood thermal
 2 plant. So, we end up with a production
 3 estimate for the Holyrood thermal plant.
 4 MR. O'BRIEN:
 5 Q. Okay.
 6 MR. HENDERSON:
 7 A. Then the systems operations department then
 8 looks at how is that production to be
 9 scheduled out during the year, assuming a
 10 normal circumstance. So they do that and
 11 determine the number of hours each unit has to
 12 operate and from that, they determine what
 13 would be -- under that average scenario of
 14 hydraulic production, what the average unit
 15 loading would be on the units when they are
 16 online and then they would use that then to
 17 calculate what they expect to be the
 18 conversion rate of fuel at that load.
 19 MR. O'BRIEN:
 20 Q. Okay. So we've got a calculated fuel
 21 conversion forecast here for 2015 at 607. I
 22 understand that based on at least the evidence
 23 that's been filed, that the higher the
 24 Holyrood production, the higher the fuel
 25 conversion factor generally.

Page 84

1 MR. HENDERSON:
 2 A. That's not correct.
 3 MR. O'BRIEN:
 4 Q. Okay. Can you explain that to me?
 5 MR. HENDERSON:
 6 A. It's related to the average load that the unit
 7 has to produce.
 8 MR. O'BRIEN:
 9 Q. Okay.
 10 MR. HENDERSON:
 11 A. So the annual production isn't a measure to
 12 determine that. The annual production will
 13 generally trend with that, but what's changing
 14 is the demand on the power system, customer
 15 load requirements are changing, and that
 16 changes the manner in which the Holyrood plant
 17 has to be used during the year and that can
 18 result in the units operating for more hours
 19 than in prior years with the same production
 20 level, and as a result, the average load on
 21 the unit would be lower than in a similar
 22 production year. So, the very simple example
 23 would be if you go back far enough, the
 24 Holyrood plant did not operate at all during
 25 the summer and you could probably shut it down

Page 85

1 the end of May.
 2 MR. O'BRIEN:
 3 Q. Okay.
 4 MR. HENDERSON:
 5 A. And you got a certain production out of it in
 6 that period of time. While in 2015 and going
 7 forward, the Holyrood plant is expected to be
 8 on all year round for reliability purposes and
 9 as a result, you're getting more production
 10 but at a lower average unit load.
 11 MR. O'BRIEN:
 12 Q. Unit load. So the unit load is the key
 13 factor?
 14 MR. HENDERSON:
 15 A. The unit load is the key factor that
 16 influences the efficiency of the unit, and so
 17 that average unit load will change depending
 18 on your hydraulic conditions, depending on
 19 your customer demand, and they would be the
 20 two components. So, the system operator makes
 21 a decision as to when the unit needs to be on
 22 and that will depend on what else is happening
 23 on the system and what customer demand is.
 24 MR. O'BRIEN:
 25 Q. So if we go back -- like you say, if we go

Page 86

1 back to 2004 and -- say 2003 and 2004 where
 2 we've got high Holyrood production and high
 3 fuel conversion factor, while we see a trend,
 4 that's not necessarily a cause and effect type
 5 of a trend?
 6 MR. HENDERSON:
 7 A. That's right.
 8 MR. O'BRIEN:
 9 Q. And in terms of the running heat content,
 10 there's been some indication that the running
 11 heat content has been dropping. Can you give
 12 me any background on that, sort of what sort
 13 of testing you've done to see how you can
 14 bring up the heat content for the fuel used?
 15 MR. HENDERSON:
 16 A. Our fuel contract with our supplier for fuel
 17 in essence is buying BTUs.
 18 MR. O'BRIEN:
 19 Q. Right.
 20 MR. HENDERSON:
 21 A. Although everything that we do in terms of
 22 rate setting and the RSP is done on a kilowatt
 23 hour per barrel basis and a dollar per barrel
 24 basis, we are actually buying BTUs. So if the
 25 barrel that we get in a particular shipment

Page 87

1 has less BTUs in a barrel, we pay a lower
 2 price for the barrel than one that has higher
 3 BTUs in it. So in essence, we -- if the
 4 supplier doesn't provide the BTU, they get a
 5 lower price.
 6 MR. O'BRIEN:
 7 Q. And how do you determine that?
 8 MR. HENDERSON:
 9 A. The BTU content?
 10 MR. O'BRIEN:
 11 Q. Yeah.
 12 MR. HENDERSON:
 13 A. We do a fuel oil sampling when we purchase the
 14 fuel. Each shipment, there is a load port --
 15 when the fuel goes on board the tanker that
 16 brings the fuel in, there's samples taken of
 17 the fuel and those samples are sent to a lab
 18 which does an analysis of the fuel and
 19 determines the BTU content. We also do
 20 another test when the fuel is offloaded into
 21 our storage facility and we look at the BTU
 22 content there. They should be very, very
 23 similar, but you know, during the course of
 24 the sea travel, the fuel mixes, so you may get
 25 a little different reading. But basically,

Page 88

1 those readings establish the BTU content of
 2 the fuel that we're receiving.
 3 MR. O'BRIEN:
 4 Q. And have you had any discussions with your
 5 supplier as to having a lower BTU now over the
 6 last few years and whether or not it's
 7 possible to get fuel with a higher heating
 8 content?
 9 MR. HENDERSON:
 10 A. We have had discussions with our supplier and
 11 we have recently tendered for a new supply
 12 contract and the tender that we went had a
 13 higher heating content as the base heating
 14 content for our specification, but again, the
 15 supplier, when they source that oil, if they
 16 end up with a lower BTU content, we will pay
 17 less. So, they -- in terms of the incentive
 18 for the supplier to get a higher BTU content,
 19 we would pay a higher price for higher BTU
 20 content and that has always been the case for
 21 all our fuel. The variability is reflective
 22 of variability in the supply market and the
 23 changing -- number 6 oil market and where you
 24 can source number 6 oil. So, we had a
 25 consultant in 2000 and -- earlier this year,

Page 89

1 and I'm trying to think of time, but we
 2 basically had a consultant brought in to help
 3 us review what's happening in the market
 4 because of the changes that we're seeing, the
 5 changes in quality of the fuel and how we may
 6 address those types of things, and they
 7 basically have explained to us that the market
 8 is changing. There's fewer people buying
 9 number 6 fuel oil in the marketplace. There's
 10 fewer refineries that have that as a product
 11 out of their refinery. The product is now
 12 tending to be more of a blended product of
 13 different types of refinery oils. So that
 14 changes things and changes heat content. So
 15 there's a number of factors that are
 16 influencing that change.

17 MR. O'BRIEN:
 18 Q. This consultant, who was that consultant?
 19 MR. HENDERSON:
 20 A. Who?
 21 MR. O'BRIEN:
 22 Q. The consultant, yeah.
 23 MR. HENDERSON:
 24 A. It was Stantec.
 25 MR. O'BRIEN:

Page 90

1 Q. Stantec, okay. And have you engaged Stantec
 2 to assist in looking for higher BTU content
 3 oil or fuel?
 4 MR. HENDERSON:
 5 A. So what we -- they provided us advice on our
 6 fuel specification and we used their advice in
 7 our most recent tender for it.
 8 MR. O'BRIEN:
 9 Q. In your recent tender, okay. And so that
 10 tender went out again, when was that?
 11 MR. HENDERSON:
 12 A. That tender was just awarded.
 13 MR. O'BRIEN:
 14 Q. Just awarded, okay. And the specifications
 15 were for how much BTU in that?
 16 MR. HENDERSON:
 17 A. I don't remember the number off -- I know it's
 18 higher, but again, as I said, we will pay for
 19 whatever that is. The element here of this
 20 that people should be aware of is that we,
 21 from buying the fuel, we're buying BTU content
 22 which is what is the real heating value of the
 23 fuel to produce electricity. So we are paying
 24 for the BTUs. The problem for Hydro with this
 25 is that that fuel price variability goes into

Page 91

1 the RSP to customers. It does not come back
 2 to Hydro and Hydro suffers the consequence in
 3 a lower conversion factor and so, the manner
 4 in which the BTU -- the kilowatt hours per
 5 barrel number is fixed, but the BTU content
 6 varies. Hydro is taking that while it doesn't
 7 obtain any benefit, but the pricing
 8 improvement that you get by getting lower BTU
 9 falls out into the price of oil which goes
 10 through the RSP and benefits customers. So
 11 there's a disconnect, if you like, in terms of
 12 the benefit to customers versus the impact to
 13 Hydro.

14 MR. O'BRIEN:
 15 Q. In terms of the relationship or connection
 16 between the BTU and the fuel conversion
 17 factor, and looking at 2008 and 2009 where you
 18 have a higher BTU and lower Holyrood
 19 production, yet you have higher fuel
 20 conversion 625 and 612, in terms of that
 21 relationship of which -- sort of which factor
 22 is more important? Have you done any studies
 23 or commissioned any studies to see sort of is
 24 the fuel content more important, is the
 25 Holyrood production content more important,

Page 92

1 are there other factors that may be
 2 influencing what the fuel conversion factor
 3 is, apart from just providing a regression
 4 analysis?
 5 (11:00 a.m.)
 6 MR. HENDERSON:
 7 A. Well, the factors -- we have not commissioned
 8 a study on this, but the factors are, as we
 9 talked about, is it's the average unit loading
 10 is key and critical. The BTU content is key
 11 and critical, and they are the biggest
 12 influencers on the conversion. The manner in
 13 which the thermal plant operator controls the
 14 operation of the boiler also influences the
 15 conversion factor. And that comes out in
 16 terms of the thermal efficiency of the boiler.
 17 So if you look at the percentage efficiency of
 18 the boiler for a given load, the operators are
 19 working to try to be as efficient as possible
 20 at that particular load. So they have -- the
 21 operators and the managers of the Holyrood
 22 thermal plant follow what they call a guide
 23 curve, which shows how much -- how efficient
 24 you are at different loads and the objective
 25 and ongoing challenge to the operators is to

Page 93

1 get as many kilowatt hours out per barrel, out
 2 per BTU at different loads. And so that's
 3 what the operator is focused on. But they
 4 can't control the average unit loading. They
 5 can't control the BTU content. They can only
 6 control the combustion process in the boiler
 7 and they are constantly challenged to find
 8 ways to make that combustion process more
 9 efficient and they have a guide curve and it's
 10 reported up to the manager every month on how
 11 we're doing and the idea is to constantly
 12 improve. They have a number of tools there
 13 that they use to be able to monitor that and
 14 they're doing that online and if you go into
 15 the plant, you can see that that's one of the
 16 things that the operator does to control
 17 efficiency. But that has a -- it has an
 18 impact, but the -- and if you paid no
 19 attention to it, it could have a significant
 20 impact, but this is the critical component
 21 that they watch all the time and the bigger
 22 impacts is the average unit loading and the
 23 BTU content and I said, these are -- the
 24 average unit loading and the BTU content are
 25 driven primarily by things that are outside of

Page 94

1 Hydro's control because they're driven by
 2 customer demand and they're driven by the
 3 nature of the product and how the fuel product
 4 that we're getting.
 5 MR. O'BRIEN:
 6 Q. Perhaps we can stop at this point, Mr. Chair.
 7 CHAIRMAN:
 8 Q. Okay. We'll take our break.
 9 (BREAK - 11:02 a.m.)
 10 (RESUME - 11:34 a.m.)
 11 CHAIRMAN:
 12 Q. Oh, I'm sorry. Go ahead, sir.
 13 MR. O'BRIEN:
 14 Q. No problem. Thank you, Mr. Chair. When we
 15 left off, we were talking about I think the
 16 unit operating load being an important factor
 17 here for determining the Holyrood fuel
 18 conversion factor. I wonder if we could pull
 19 up NP-NLH-333? So there's a question put
 20 there to Hydro to explain the impact of the
 21 operation and maintenance issues associated
 22 with the following had on fuel conversion rate
 23 for Holyrood in 2013 and 2014. And I want to
 24 look, I guess if we turn to the next page, at
 25 the maintenance and repair question. So

Page 95

1 maintenance and repairs with the January 2014
 2 outages.
 3 "The lower generating levels experienced
 4 at unit three in December 2013 and January
 5 2014 in isolation would have lowered the
 6 overall plant conversion rate. However, with
 7 unit three derated, the other units were
 8 operated at a higher level of generation than
 9 they would otherwise have been for system
 10 security reasons. The fuel conversion rate of
 11 thermal units increases at higher level of
 12 generation." I want to ask in terms of
 13 generalities and maintenance and repairs, if
 14 more are required in the system than general -
 15 - than usual over an annual basis, will that
 16 affect the conversion rate?
 17 MR. HENDERSON:
 18 A. There are a number of factors that can affect
 19 conversion rate and if you take a unit out for
 20 a longer period of time than I'll say within
 21 the base plan, it will impact the conversion
 22 rate. It would also -- it could impact
 23 reliability because of the unit non-available.
 24 So there's different items that could affect
 25 that, yes.

Page 96

1 MR. O'BRIEN:
 2 Q. So if reliability increases in the future and
 3 there's less say corrective maintenance in
 4 that regard, would we expect to see a
 5 conversion rate increase?
 6 MR. HENDERSON:
 7 A. Not necessarily.
 8 MR. O'BRIEN:
 9 Q. And why is that?
 10 MR. HENDERSON:
 11 A. Because if your system requires, for
 12 reliability purposes, so many units on at a
 13 given period of time, so when you have all
 14 units running -- what your base assumption
 15 would be that -- for to make it simple is that
 16 during the winter period from December 1st,
 17 pick a date, to March 31st, you want three
 18 units on all of the time because that will
 19 give you the highest level of reliability that
 20 if you lose a unit for some reason, there's no
 21 impact, and so that would be your base where
 22 you want to be. If you have a problem with
 23 one of those units during that period of time,
 24 it comes off. It's shut down. The other --
 25 you're at a reliability risk, but your

Page 97

1 conversion rate could go up on your other
 2 units because they're moving up to a higher
 3 load to give you the same impact. So, if
 4 you're more reliable and let's say through
 5 that whole winter period a unit does not go
 6 down at all, but you need it on for the whole
 7 time, then your conversion rate will be lower
 8 because you didn't move up on the other units.
 9 MR. O'BRIEN:
 10 Q. Okay. So the more reliable you are, the lower
 11 the conversion rate?
 12 MR. HENDERSON:
 13 A. Well, it's -- that is certainly an impact,
 14 because if you do take a unit off, the other
 15 units go up. So that is the case. In terms
 16 of, I'll say, unit deratings, which is another
 17 aspect of reliability where a unit goes down
 18 partially on low, you could be taking some
 19 auxiliary equipment out that impacts some
 20 reliability or on the conversion and the
 21 efficiency. So there is a number of different
 22 factors because there's a lot of components in
 23 the Holyrood plant that can influence the
 24 conversion rate and the reliability.
 25 MR. O'BRIEN:

Page 98

1 Q. How about the CT, having the CT online, does
 2 that increase conversion?
 3 MR. HENDERSON:
 4 A. Having the CT online -- there's a balance here
 5 that the system operations department can talk
 6 to, but for instance, you could make a
 7 decision to put the combustion turbine on for
 8 eight hours during the day and keep a unit off
 9 at Holyrood off for 24 hours because it's the
 10 eight hours -- there's eight critical hours
 11 during the day that you need that Holyrood --
 12 that equivalent capacity that the combustion
 13 turbine brings. So, you could look at it and
 14 say we'll take Holyrood large thermal unit off
 15 because it's burning oil for 24 hours and put
 16 on a combustion turbine which is only going to
 17 burn oil for -- diesel fuel basically for
 18 eight hours, and it may be cheaper and more
 19 efficient for Holyrood to run the combustion
 20 turbine for those eight hours than run
 21 Holyrood for the 24 hours.
 22 So there's a cost analysis that you would
 23 do. The fuel going into the combustion
 24 turbine is more expensive. The cost per
 25 kilowatt hour coming out of the combustion

Page 99

1 turbine is more expensive than the cost per
 2 kilowatt hour of Holyrood, even when Holyrood
 3 is running at a very low load, but depending
 4 on the number of hours the unit is on, there
 5 could be an economic benefit to running
 6 Holyrood less and running the CT in its place.
 7 MR. O'BRIEN:
 8 Q. Okay. In one of the RFIs, if we could pull up
 9 IC-093, and you talked about earlier, I guess,
 10 just before the break, about the efficiencies
 11 that operations, I guess, employ on a regular
 12 basis to try to keep the units running
 13 efficiently and -
 14 MS. GRAY:
 15 Q. Sorry, Revision 1, Mr. O'Brien?
 16 MR. O'BRIEN:
 17 Q. Yes, sorry. Yeah, Revision 1, that's right.
 18 I believe that's it. Let me see here. No,
 19 that's not it. I'm wondering, page three to
 20 five, if we could -- yeah. Yes, so it's
 21 starting on page three, if we scroll down a
 22 bit. There's a number of routine activities
 23 that are listed there to try to maintain
 24 efficiencies at Holyrood. Are those the types
 25 of routine activities you'd be engaged in to

Page 100

1 try to keep Holyrood running efficiently?
 2 MR. HENDERSON:
 3 A. That is, yes.
 4 MR. O'BRIEN:
 5 Q. And if you're not engaged in those activities,
 6 would the fuel conversion factor, would you
 7 see that being affected?
 8 MR. HENDERSON:
 9 A. Yes, you would. And these items are part of
 10 our day-to-day routines. This is part of the
 11 job of the operator at the Holyrood plant, the
 12 operations team there, is to ensure all of
 13 these things are done to get optimum
 14 efficiency out of the plant. And that, I will
 15 say to you, is also part of our environmental
 16 management system and in terms of the
 17 objectives of trying to prevent pollution from
 18 the plant and to continually improve, which is
 19 our commitment in our environmental management
 20 system. This is part of our commitment there
 21 as well is to be doing these things.
 22 MR. O'BRIEN:
 23 Q. And if we scroll down, I think there's a
 24 couple of pages there of a number of different
 25 initiatives taken over the years. I'm just

Page 101

1 wondering, in terms of financial incentive, if
 2 the Board does decide to provide you with --
 3 or Hydro with a deferral account with respect
 4 to the Holyrood conversion factor, what
 5 incentive would Hydro have to continue to try
 6 to maintain efficiencies there, if everything
 7 is going to be captured in a deferral account?
 8 MR. HENDERSON:
 9 A. Well, Hydro has a commitment for least cost
 10 reliable electricity and this is part of that
 11 least cost mandate that we would continue to
 12 adhere to. The financial incentive is not
 13 what's driving this. It's our commitment to
 14 least cost reliable service. It's part of our
 15 commitment to the environment, our
 16 environmental management system, and it's the
 17 right thing to do. So, that's why we are
 18 doing that. And in our environmental
 19 management system, we are committed to
 20 continual improvement and that's why the -- in
 21 addition, you know, to the efficiency
 22 improvements, this reduces pollution and
 23 that's our commitment through that and we
 24 continue to put forward initiatives each year
 25 to improve our environmental performance and

Page 102

1 the items that happen at Holyrood are a part
 2 of that commitment.
 3 MR. O'BRIEN:
 4 Q. And with respect to the fuel conversion factor
 5 itself, I understand that the proposal is to
 6 put a band around sort of the deferral
 7 account. Is that right?
 8 MR. HENDERSON:
 9 A. On the efficiency factor?
 10 MR. O'BRIEN:
 11 Q. Sorry, not the efficiency factor. That was
 12 what Mr. Martin had thought might be the case.
 13 That's not the case in Holyrood?
 14 MR. HENDERSON:
 15 A. No, it's not.
 16 MR. O'BRIEN:
 17 Q. And the other deferral accounts, there's a
 18 band to be put in place for those. Just
 19 explain how that would work.
 20 (11:45 a.m.)
 21 MR. HENDERSON:
 22 A. So those bands are there to -- I'll say for
 23 each one of those, it's for the company to
 24 take some level of risk with respect to those
 25 particular measures.

Page 103

1 MR. O'BRIEN:
 2 Q. And why is it that Hydro hasn't proposed that
 3 for the Holyrood conversion factor?
 4 MR. HENDERSON:
 5 A. We haven't proposed it because when you
 6 consider the full of all the deferral
 7 accounts, the total exposure to the company
 8 that was in the -- with all three, we felt it
 9 was as much as the company should be taking
 10 with respect to all of these variability, all
 11 the variables of all three deferrals.
 12 MR. O'BRIEN:
 13 Q. And is it -- with respect to the other
 14 deferrals, one of the questions I had left in
 15 my head, I don't think I asked you, is with
 16 respect to the Exploits and I did ask you
 17 about the variability in price and that
 18 there's no indication, at least on a go-
 19 forward basis right now, as to variability on
 20 price. I'm wondering why it would be that
 21 you'd want that one included in the deferral
 22 accounts if there's no price variability?
 23 MR. HENDERSON:
 24 A. Well, the Exploits is a hydro electric
 25 facility and it has hydraulic variability. So

Page 104

1 there is a variability there with respect to
 2 the -- I guess, particularly the rainfall that
 3 occurs on the Exploits River and the amount of
 4 water that's available for that facility.
 5 That would be one of the larger variables that
 6 that facility can experience over time.
 7 MR. O'BRIEN:
 8 Q. And so that's similar to the hydraulic
 9 variability in the RSP is what you're -
 10 MR. HENDERSON:
 11 A. That's correct.
 12 MR. O'BRIEN:
 13 Q. Same thing. In terms of price though, is that
 14 something that would be prepared to take of a
 15 deferral account, any issue with respect to
 16 pricing of Exploits and just focus on the
 17 hydraulic aspect of it?
 18 MR. HENDERSON:
 19 A. Well, I guess that's not something that we
 20 have considered at this point in time. I'd
 21 need to talk to other people to understand
 22 what that exposure might be. So I wouldn't
 23 make a commitment right here, but I can say
 24 that the full anticipation is that there won't
 25 be and that there will be a transfer of

Page 105

1 ownership.
 2 MR. O'BRIEN:
 3 Q. Okay. And at that point, it wouldn't even be
 4 necessary to have a deferral account, I
 5 suppose. It will be built into Hydro's
 6 operations in the GRA anyway.
 7 MR. HENDERSON:
 8 A. It would be built in -- well, once that does
 9 occur, then we would have to be presenting it
 10 to the Public Utilities Board, that change.
 11 MR. O'BRIEN:
 12 Q. Sure.
 13 MR. HENDERSON:
 14 A. And the natural place for that to fit would be
 15 into the hydraulic variation of the RSP.
 16 MR. O'BRIEN:
 17 Q. But in terms of pricing aspect of it, the
 18 natural fit would be in terms of the GRA just
 19 like the rest of Hydro's operations?
 20 MR. HENDERSON:
 21 A. Well, it would be cost.
 22 MR. O'BRIEN:
 23 Q. Yeah, cost.
 24 MR. HENDERSON:
 25 A. So we would be speaking to the cost to operate

Page 106

1 that facility.
 2 MR. O'BRIEN:
 3 Q. Right.
 4 MR. HENDERSON:
 5 A. And what's the right amount in the base rates.
 6 MR. O'BRIEN:
 7 Q. Right, okay. I do want to ask you about one
 8 of the documents I'd asked to be provided. I
 9 can find it myself. And that's the September
 10 2015 Report to the Board on Generation
 11 Adequacy.
 12 MS. GLYNN:
 13 Q. So we'll enter that Information No. 9.
 14 MR. O'BRIEN:
 15 Q. Thank you. Are you familiar with this
 16 document, Mr. Henderson?
 17 MR. HENDERSON:
 18 A. Yes, I am.
 19 MR. O'BRIEN:
 20 Q. Okay. And just give us a brief overview of
 21 what it is.
 22 MR. HENDERSON:
 23 A. This is a report that was -- that we had
 24 agreed that we would provide to the Public
 25 Utilities Board in August of each year between

Page 107

1 now and the completion of the Labrador
 2 Interconnection, which provides a review of
 3 the current load forecast that we're expecting
 4 over the next time period and the reserves and
 5 reliability of the generation that's used to
 6 supply customers, relative to the load, and
 7 any concerns or issues related to that to keep
 8 the Board informed of how the changing in load
 9 forecast and changing in unit performance may
 10 impact on reliability from a generation supply
 11 perspective over that period.
 12 MR. O'BRIEN:
 13 Q. Okay. I wonder if we could turn to page two
 14 under Section 3.1, Capacity at Peak. Thank
 15 you. Really just a couple of questions I had
 16 for you on this document, Mr. Henderson.
 17 About halfway down there where it says, in
 18 Table 2, "the Black Start Diesel capacity has
 19 been increased to 16 megawatts. This reflects
 20 Hydro's current intention to submit a proposal
 21 to the Board to purchase these diesels and
 22 increase the system capacity to 16 megawatt."
 23 So I understand you've got 16 -- sorry, eight
 24 Black Start Diesels right now that are under
 25 lease. Is that right?

Page 108

1 MR. HENDERSON:
 2 A. That's correct.
 3 MR. O'BRIEN:
 4 Q. And I wonder can you give us just an overview
 5 of the -- of who made the decision and the
 6 reasons behind the decision to now look to
 7 purchase those diesels for system capacity?
 8 MR. HENDERSON:
 9 A. Well, what I would say first is this was a
 10 review that was completed by our system
 11 planning group looking at the diesels.
 12 Because the diesels were leased with a lease
 13 to purchase option that we felt that it would
 14 be a prudent thing to go is to look at how
 15 much it would cost to keep them, rather than
 16 turn them back. Because if that pricing is
 17 appropriate, it may be an opportunity that we
 18 should seize for the benefit of customers over
 19 the long term. Given that they're mobile,
 20 there's lots of items that they could -- the
 21 benefits that they could bring and we just
 22 wanted to make sure that we did not pass an
 23 opportunity by because of the lease to buy
 24 option. So that was why we've investigated it
 25 and we will -- it's fully expected, I'll say,

<p style="text-align: right;">Page 109</p> <p>1 that we would be putting forward something to 2 the Board with regard to this in the short 3 term, but you know, rather than -- I'd rather 4 not go into the detail because that's going to 5 be subject of another discussion. 6 MR. O'BRIEN: 7 Q. I understand, and I'm not going to necessarily 8 ask you the detail of it. I guess I'm more 9 interested in higher level sort of, if there 10 has been an analysis of least cost analysis 11 and you've indicated either there has been or 12 there intends to be? 13 MR. HENDERSON: 14 A. That work is pretty well -- well, complete. 15 It's just a matter of putting together what's 16 required for an application. 17 MR. O'BRIEN: 18 Q. Okay. And we'll see that in an application as 19 to what the least cost analysis was? 20 MR. HENDERSON: 21 A. Absolutely. 22 MR. O'BRIEN: 23 Q. Okay. And in terms of other options to deal 24 with system capacity, did you consider other 25 options or was it just a focus on whether or</p>	<p style="text-align: right;">Page 111</p> <p>1 been identified through the analysis that 2 we've done on those particular events. I 3 think they're all very well laid out and been 4 explained to the Board through our filings on 5 that. And I'm not aware that there was 6 anything at all there related to costs that 7 tied to the impact of those. So they're 8 unrelated. I think the cost side of things 9 are tied to the ongoing -- well, the aging of 10 our power system, the investment we need to be 11 putting into our power system to ensure the 12 equipment operates reliably. There was other 13 cost drivers I think we've talked about. I 14 think each of the panels that have been on 15 right now, up to now, have talked about the 16 salary aspects of the cost drivers which are 17 related to competitive salary payments to the 18 staff. So there's those aspects of it, you 19 know, are the things that influence cost and 20 affect reliability, but the fact that the 21 costs have gone up is not causing the 22 reliability to go down. Actually, the costs 23 that we have incurred are due to capital 24 investments to improve reliability. 25 MR. O'BRIEN:</p>
<p style="text-align: right;">Page 110</p> <p>1 not we keep these? 2 MR. HENDERSON: 3 A. In order to put forward something like that, 4 we would consider all the options that would 5 give you similar benefit for similar cost. 6 MR. O'BRIEN: 7 Q. For similar cost, okay, and that'll be part of 8 your proposal? 9 MR. HENDERSON: 10 A. Yes. 11 MR. O'BRIEN: 12 Q. Okay. I just have one final question for you, 13 Mr. Henderson. I guess since Nalcor, that 14 organization, has come into being back in 2007 15 and we've seen a steady increase in costs, a 16 significant increase in costs and we've seen 17 some recent reliability issues there as well. 18 Are you able to reconcile those two, why we're 19 seeing increased costs but lower reliability? 20 Do you have any general comments you can give 21 us on that? 22 MR. HENDERSON: 23 A. I would suggest to you that they are 24 unrelated. The performance on the power 25 system are related to the issues that have</p>	<p style="text-align: right;">Page 112</p> <p>1 Q. And I guess that wasn't necessarily the 2 connection I was making. I'm wondering 3 whether or not you can comment on wouldn't you 4 expect reliability to go up if costs go up, as 5 opposed to costs not causing lower 6 reliability. 7 MR. HENDERSON: 8 A. We expect that reliability will improve over 9 time, that the investments that we are making 10 into the power system, the efforts that we are 11 doing with respect to asset management and 12 structuring our operations for a high focus on 13 reliability, they will provide ongoing 14 reliability benefits into the future. 15 MR. O'BRIEN: 16 Q. I don't have any further questions for the 17 panel, Mr. Chair. 18 CHAIRMAN: 19 Q. Okay. So Mr. Johnson, I believe we're over to 20 you, sir. 21 MR. ROBERT HENDERSON, MR. DARREN MOORE AND MR. TERRY 22 GARDINER, CROSS-EXAMINATION BY THOMAS JOHNSON, Q.C. 23 JOHNSON, Q.C.: 24 Q. Gentlemen, I guess there's -- I'll say at the 25 outset, most of my questions obviously will be</p>

Page 113

1 directed towards Mr. Henderson, but there
 2 might be times when you will, as you've done
 3 with questions from my friend, Mr. O'Brien,
 4 provide some answers to some specifics.
 5 Obviously there's been a lot of ground
 6 covered in the last couple of days by Mr.
 7 O'Brien and I'd like to start off first though
 8 with the area of Hydro's costs and those
 9 controllable costs. And just to, I guess, get
 10 the premise right, Mr. Henderson, I take it
 11 that you, in sponsoring the section of
 12 evidence on operating costs, that you accept
 13 that Hydro has the burden of providing and
 14 putting forward the evidence to actually
 15 demonstrate to the Board that the costs to be
 16 recovered in this Application are appropriate
 17 to ensure safe, reliable and least cost
 18 electricity. We're clear on that, are we?
 19 That's the burden?
 20 MR. HENDERSON:
 21 A. Yes, it is.
 22 JOHNSON, Q.C.:
 23 Q. Okay. Now Mr. Henderson, one of your roles,
 24 and perhaps we could bring up PUB-229 in this
 25 regard, under key responsibility areas, it

Page 114

1 vets in you a financial management key
 2 responsibility area to provide leadership
 3 throughout Newfoundland and Labrador Hydro to
 4 maintain a high cost control environment to
 5 optimize costs for delivery of electricity
 6 related services to customers and further, and
 7 we can touch on the latter later, you have a
 8 human resource management key area to provide
 9 leadership throughout Hydro to ensure that you
 10 have a highly motivated and effective work
 11 force that is aligned with strategy direction
 12 of Hydro.
 13 Now, Mr. Henderson, we've already
 14 received the evidence through Mr. Martin's
 15 examination and through your earlier
 16 examination about some of the cost increases
 17 that we've been seeing in the controllable
 18 costs, some 43 percent on an inflation
 19 adjusted basis from '07 to 2015 in gross
 20 salary costs. That's 43 percent above
 21 inflation. Operations and maintenance costs,
 22 just another way of looking at cost expansion,
 23 operation and maintenance costs up by 33.3
 24 percent over inflation. Financial departments
 25 costs, 19.6 percent above inflation.

Page 115

1 Corporate relations department, 32 and a half
 2 percent. And just to understand your overall
 3 position, Mr. Henderson, it's your evidence, I
 4 take it, that these increases would be
 5 reflective of, tying back to the language of
 6 your key responsibility area, maintaining "a
 7 high cost control environment to optimize
 8 costs"? Would that be your take that this
 9 represents high cost control?
 10 (12:00 p.m.)
 11 MR. HENDERSON:
 12 A. This is reflecting high cost control in the
 13 balance of the other items that we have, in
 14 terms of asset management and reliability, to
 15 ensure reliable service to our customers. We
 16 looked at all of our costs to ensure that what
 17 we have in place in our costs is what's
 18 required. It's the least cost required to
 19 provide that reliable service that our
 20 customers expect.
 21 JOHNSON, Q.C.:
 22 Q. Okay. And I guess you -- and we'll get into
 23 some of the particulars, but do you understand
 24 why there will be some difficulty in accepting
 25 a remark that this would be reflective of high

Page 116

1 cost control? I mean, where you have
 2 increases galloping well ahead of inflation on
 3 a number of these indicators, you understand
 4 why there's a bit of a disconnect, at least in
 5 my head, between the concept of effective cost
 6 control and the performance we've seen over
 7 this period of time?
 8 MR. HENDERSON:
 9 A. I think as we looked at the items that are
 10 there in our proposal, the explanations are
 11 provided for those costs. I think Mr.
 12 McDonald and Mr. Roberts spent a considerable
 13 amount of time explaining the drivers for the
 14 changes in the salary costs, which is a large
 15 part. Well, you talked about 43 percent above
 16 inflation. They were explained there, as the
 17 drivers for that. That's a large part of the
 18 33 percent in the O&M. So we're talking the
 19 same, really the same driver there, a large
 20 part of that is the change in salaries over
 21 that period of time. So, ensuring that our
 22 work force is properly compensated and we have
 23 a competitive salary and benefits package is
 24 part of what's happened here and that's
 25 reflective of the transition that's happened

Page 117

1 in the general economic environment that we're
 2 working in and from where we recruit our
 3 people.
 4 JOHNSON, Q.C.:
 5 Q. And of course, you'll acknowledge that part of
 6 it is the salary increases, but a part of it
 7 is also the major expansion in people working
 8 at Hydro and for Hydro in terms of FTE count?
 9 MR. HENDERSON:
 10 A. That's correct. That is part of the element
 11 of this.
 12 JOHNSON, Q.C.:
 13 Q. And now I just want to go back, and again sort
 14 of at a higher level, but I want to talk about
 15 the period from 2007 to 2013 and I want to
 16 talk about the cost control experience during
 17 that period of time first, and in that regard,
 18 if I could direct your attention to page 1.28
 19 of Hydro's evidence? That would be in the
 20 introduction section. If you could scroll
 21 down a little, after that pie chart, we see
 22 Hydro indicating that as shown in the chart,
 23 Hydro says "over the period 2007 to 2013, the
 24 increases in Hydro's operating expenses have
 25 been maintained at inflationary levels with

Page 118

1 inflation averaging two percent annually over
 2 that period, while the increase in operating
 3 expenses have also averaged two percent
 4 annually." And then it shows a graph in Chart
 5 1.13 where it's looking to put that in a
 6 graphic type of presentation.
 7 Now, what we see here on the graph, based
 8 upon the way Hydro has presented it, is we see
 9 tracking sometime a little bit above inflation
 10 in '07/08 and then below inflation for '08/09,
 11 et cetera, and then really taking off in 2013.
 12 Now, Mr. Henderson, I understand however that
 13 this chart really doesn't explain to us the
 14 full picture on operating expenses because
 15 there's certain operating expenses that have
 16 been backed out of this chart, right?
 17 MR. HENDERSON:
 18 A. I'm not sure which ones.
 19 JOHNSON, Q.C.:
 20 Q. If I could refer you to footnote 26, and the
 21 footnote reads "for comparative purposes, the
 22 operating expense index excludes the effects
 23 of the impacts of accounting changes, as
 24 approved in Order No. P.U. 13('12)" but then,
 25 this is what I'm focusing on, "the period from

Page 119

1 '07 to 2013 excludes major repairs and
 2 inspections at Holyrood" and then you go on to
 3 say, "both operating expenses and inflation
 4 are presented for comparison purposes
 5 indexed."
 6 Now, first of all, I just want to get an
 7 understanding as to why you would -- there
 8 would be major repairs and inspections at
 9 Holyrood backed out.
 10 MR. HENDERSON:
 11 A. I believe that's due to the accounting changes
 12 related to the adoption of the IFRS Standard,
 13 and that there was in 2007, I believe, there
 14 was certain expenses in there that now would
 15 be capitalized as part of the overhauls that
 16 we do at Holyrood.
 17 JOHNSON, Q.C.:
 18 Q. Okay. Now if I could refer you for the moment
 19 to the Grant Thornton Report at Page 60.
 20 MS. GRAY:
 21 Q. Is that the June 12th report, Mr. Johnson?
 22 JOHNSON, Q.C.:
 23 Q. Yes, the financial consultants report. Now
 24 Grant Thornton's Report sets out Hydro's - at
 25 Table 36 and goes on to Table 37, Hydro's

Page 120

1 other costs by category. Now, I take it, Mr.
 2 Henderson, that these would be all the other
 3 costs of Hydro, there would be nothing
 4 excluded from this, I take it, when you folks
 5 met with Grant Thornton for the purpose of
 6 providing them information about your
 7 finances?
 8 MR. HENDERSON:
 9 A. I don't know the detail of what was provided
 10 to Grant Thornton. If they didn't make a
 11 comment on something being excluded, I would
 12 assume there is nothing excluded, but I wasn't
 13 part of that.
 14 JOHNSON, Q.C.:
 15 Q. So let's look at the categories that Grant
 16 Thornton has listed that come under other
 17 costs. We have salaries and fringe benefits.
 18 That would be a controllable cost, right?
 19 MR. HENDERSON:
 20 A. Salaries, yes.
 21 JOHNSON, Q.C.:
 22 Q. And fringe benefits. System and equipment
 23 maintenance, that would be a controllable
 24 expense?
 25 MR. HENDERSON:

Page 121

1 A. Yes.
 2 JOHNSON, Q.C.:
 3 Q. And likewise insurance, transportation, office
 4 supplies, building rental and maintenance,
 5 professional services, travel, equipment
 6 rentals, miscellaneous, would all be
 7 controllable?
 8 MR. HENDERSON:
 9 A. I think most of them are. There may be
 10 elements in here that aren't controllable. As
 11 an example, I believe it's in the
 12 miscellaneous expenses where the tax payments
 13 are made related to the service in rural
 14 areas, there's a component that we pay for
 15 municipalities for that. I think there's an
 16 element there that might be in the
 17 miscellaneous expenses, and I don't know if
 18 there's any others that are in there, but I'll
 19 say certainly for the majority of this, it is
 20 controllable costs.
 21 JOHNSON, Q.C.:
 22 Q. Yes, and then we have the final - the second
 23 last line, loss on disposal, and we see that
 24 number starts low in '07. Is this a number
 25 that you have a direct influence on?

Page 122

1 MR. HENDERSON:
 2 A. Well, it would be reflective of the capital
 3 program primarily that we have underway, and
 4 so it's reflective of the value of equipment
 5 that's removed from service and replaced
 6 through the capital program.
 7 JOHNSON, Q.C.:
 8 Q. I see in these numbers as I go across, even on
 9 the loss on disposal line, that it's low in
 10 '07, it creeps up to 2.5, and it's low to 1. 2
 11 in '09, very low in 2010 to .687, and, I
 12 guess, I bring you to this, Mr. Henderson,
 13 because while there might be some elements
 14 that may not be strictly non-controllable, I
 15 see the percentage change in these other costs
 16 categories as listed by Grant Thornton of in
 17 2008, 3.94 percent; 2009, 4.73 percent; 2010
 18 was .73 percent, 2011, 6.74 percent; 2012,
 19 6.27; 2013, 3.84; and I'm not sure how I can
 20 align this with being convinced that the
 21 controllable costs were actually tracking
 22 inflation because these figures are well above
 23 inflation?
 24 MR. HENDERSON:
 25 A. I take your point. I just don't know the math

Page 123

1 and the elements of uncontrollable and how
 2 well each year is comparing to another. There
 3 was that comment about the change in financial
 4 reporting. You know, all of those things come
 5 into play here, so I don't have - I can't
 6 really comment on that.
 7 JOHNSON, Q.C.:
 8 Q. Okay, I guess, given the position of Hydro
 9 that from '07 to 2013, the controllable costs
 10 were kept within inflation, I wonder would you
 11 undertake to provide the backup as to how that
 12 assertion was made, having regard to - how
 13 that assertion was made, and what was actually
 14 included in what you reported in Chart 1.13 in
 15 the company's evidence?
 16 MR. HENDERSON:
 17 A. Yes.
 18 JOHNSON, Q.C.:
 19 Q. Thank you.
 20 MS. GLYNN:
 21 Q. Duly noted on the record.
 22 JOHNSON, Q.C.:
 23 Q. Mr. Henderson, in terms of the burden of
 24 putting forward the evidence to demonstrate
 25 that your costs are reasonable and

Page 124

1 appropriate, I take it you understand that
 2 Hydro over the period of 2008 onward didn't
 3 set any targets in terms of KPIs that are
 4 reported as regards financial performance, is
 5 that correct?
 6 MR. HENDERSON:
 7 A. I'm not sure - I'll say what I understand, I
 8 think, in terms of KPI targets, is that the
 9 targets that you're referring to are the ones
 10 which are the OM & Acosts per, I'll say,
 11 installed generation, energy sold, there's a
 12 number of different KPIs that are part of the
 13 annual report that we give to the Board on KPI
 14 performance, and the targets at those levels
 15 requires the running of a cost to service, so
 16 you'd have to take your annual budget number
 17 and project out, take that and run it through
 18 a cost to service model in order to determine
 19 the right amount of money to allocate to each
 20 one of those factors, the amount to allocate
 21 to generation, the amount to allocate to the
 22 other elements of that, to be able to do your
 23 numerator over denominator calculation to
 24 establish what the target is. The target that
 25 we operate to is our O & M budget, and so

Page 125	Page 127
<p>1 those matrix that would be reported to the 2 Board are useful for identifying trends, but 3 they aren't numbers that we use to operate or 4 control the company and exercise our control. 5 Our focus is on these items you have here, 6 which are the controllable operating costs. 7 The other ones are useful for trending and 8 they are useful for comparator to other 9 companies that have similar type of 10 facilities, but establishing target that we 11 operate to, it's really a fallout of really 12 the budgeting and our budget number. 13 (12:15 p.m.) 14 JOHNSON, Q.C.: 15 Q. But to come back to the point now in terms of 16 this demonstration of cost control and the 17 burden that rests upon Hydro, your evidence is 18 that in terms of the filings with the Board, 19 there were no financial performance targets 20 filed from 2008 on, right? 21 MR. HENDERSON: 22 A. Meeting that format. Our quarterly reports 23 would show the budget, and how our O & M has 24 varied from budget, so that's there for the 25 Board to observe. At the end of the year,</p>	<p>1 what may have transpired or what 2 communications may have been had with respect 3 to the change and that we weren't reporting 4 the targets, but I understand that those 5 targets are calculated, the way it's been 6 explained to me, through operation - you have 7 to run a cost to service in order to allocate 8 the budget components out, but the target or 9 what we operate to is our operating budget, 10 which we do provide to the Board in our 11 quarterly reports. 12 JOHNSON, Q.C.: 13 Q. Could we bring up NP-NLH-93. This question 14 was asked, "For each financial performance 15 indicator reported annually to the Board as 16 provided in Exhibit 2 Appendix E", etc, 17 "please include Hydro's target for the years 18 2007 to 2012. In addition, please add these 19 values to each graph", and the question goes 20 on, and Hydro's answer is, "Please see the 21 table below for the 2007 targets. Hydro did 22 not set targets for 2008 to 2012 for the 23 performance indicators reported annually to 24 the Board as provided in Exhibit 2". So all 25 I'm getting at is that Hydro never filed these</p>
<p>Page 126</p> <p>1 once all of the costs are in, you can do a 2 cost of service model to run to come up with 3 these costs broken out by the different 4 categories to be able to demonstrate to the 5 Board the costs per generating asset, you 6 know, kilowatt hours - I'm sorry, maybe 7 kilowatt hours delivered or megawatts 8 installed, those types of things. 9 JOHNSON, Q.C.: 10 Q. I know you filed evidence that's there to be 11 observed or read, but the fact of the matter 12 is, is that Hydro filed no financial 13 performance targets from '08 on. I thought 14 that there was an agreement on that point. 15 MR. HENDERSON: 16 A. I can't speak to what agreement or what 17 discussions may have had - 18 JOHNSON, Q.C.: 19 Q. I mean, I'm referring to as between me and 20 you. I thought there would have been 21 agreement that Hydro, in fact, filed no 22 financial performance targets with the Board 23 from '08 on. 24 MR. HENDERSON: 25 A. I'm sorry, I can't speak to - I'm not sure</p>	<p>Page 128</p> <p>1 targets with the Board from 2008 on, right? 2 MR. HENDERSON: 3 A. Yes. 4 JOHNSON, Q.C.: 5 Q. Okay. Now can I turn you to CA-233. In this 6 question, I refer to your position of Vice 7 President, and cited how the role requires you 8 to provide leadership through NLH, to maintain 9 a high cost controlled environment, to 10 optimize cost for delivery of electricity 11 related services to customers, and then I 12 asked, "Please describe in detail how Hydro 13 measures whether it is achieving and 14 maintaining a high cost controlled 15 environment, and as part of the reply, please 16 specifically identify what targets Hydro has 17 set for itself to control costs over the past 18 five years, and how Hydro's performance 19 compares". Now Mr. Henderson, again in this 20 response, even when I asked about targets for 21 yourselves on controlling costs, I was not 22 told about any targets per se, isn't that 23 right? 24 MR. HENDERSON: 25 A. I'm just going to read the response here.</p>

Page 129

1 JOHNSON, Q.C.:

2 Q. Yes, that's fine.

3 MR. HENDERSON:

4 A. Can you continue to scroll, Jenny, please.

5 Continue down. Okay, sorry, can you repeat

6 your question?

7 JOHNSON, Q.C.:

8 Q. Yes. So when asked this question, you were

9 not able to come back and respond with any

10 targets that you had actually established as

11 regards the control of costs over any of the

12 past five years. That's right, correct?

13 MR. HENDERSON:

14 A. We have budget targets that we have - that we

15 would have had for each and every one of those

16 years.

17 JOHNSON, Q.C.:

18 Q. Okay, we'll talk about those in a second. Let

19 me bring your attention to Page 2 of 2, lines

20 1 to 3, where it indicates, "In 2013, Hydro

21 established additional financial matrix

22 regarding capital operating cost, cash flow,

23 and earnings that measure budget against

24 actual results". Do I take it that it wasn't

25 until 2013 that these additional financial

Page 130

1 matrix became incorporated into Hydro?

2 MR. HENDERSON:

3 A. The operating costs have always been part of

4 our matrix in terms of measuring how we

5 perform. The other items that are there are

6 other items that we discuss at the leadership

7 team that were, I guess, from this introduced

8 in 2013, or I wasn't part of it at that time,

9 I wasn't aware that that was an addition, but

10 I accept the wording here that it was

11 additional measures. I would expect that we

12 were monitoring those, in any event, but we

13 did have at the leadership team, once I became

14 part of the executive team, these items were

15 there and talked about each month with respect

16 to the capital, the operating cost, the cash

17 flow, and the net income.

18 JOHNSON, Q.C.:

19 Q. Now the concept of measuring budget against

20 actual results, this is the tracking exercise,

21 I take it, that you described with Mr. O'Brien

22 in terms of seeing how you're doing compared

23 to budget.

24 MR. HENDERSON:

25 A. Right.

Page 131

1 JOHNSON, Q.C.:

2 Q. But, I guess, it's not setting a target in

3 terms of what the budget level is set at from

4 year to year, so in terms of trying to set a

5 budget that's representative of inflation,

6 there's no target for something like that?

7 MR. HENDERSON:

8 A. The target per se is the O & M budget for that

9 year, which is established through out budget

10 process.

11 JOHNSON, Q.C.:

12 Q. So if the budget is 100 million in one year

13 and it's 120 million the following year, I

14 mean, what you're tracking is measuring to the

15 budget for that particular year, aren't you?

16 MR. HENDERSON:

17 A. That's correct.

18 JOHNSON, Q.C.:

19 Q. Okay, yeah. Now do you - would you agree with

20 me, Mr. Henderson, that it is important for

21 Hydro to identify efficiency initiatives

22 within its organization, given its mandate for

23 least cost reliable power?

24 MR. HENDERSON:

25 A. I would agree. I would agree that that's -

Page 132

1 any operation should be doing that.

2 JOHNSON, Q.C.:

3 Q. And can you explain how Hydro identifies

4 efficiency initiatives within its

5 organization?

6 MR. HENDERSON:

7 A. What we do is through again the budgeting

8 process, through our planning process in which

9 we develop our five year strategic plan as a

10 key input, we look at that to identify

11 initiatives that we could undertake to make us

12 more efficient. So through that strategic

13 planning process, we would be looking at what

14 we will be doing in terms of improvements on a

15 continuous improvement basis, and then through

16 the budgeting process, we would establish that

17 as well with monitoring what goes forward in

18 the budget in trying to keep costs within

19 inflationary pressures, to try to stay within

20 what is expected inflation, and that's done

21 through the budgeting process. So through

22 that, you drive actions to try to bring out

23 efficiencies.

24 JOHNSON, Q.C.:

25 Q. Mr. Henderson, to your knowledge, has Hydro

Page 133

1 made, I mean, a directed effort to identify
 2 efficiencies, or as Mr. O'Brien put it, to try
 3 to do more with less? I mean, a directed
 4 effort to identify such efficiencies within
 5 Hydro? Are you aware of any such directed
 6 effort?
 7 MR. HENDERSON:
 8 A. In terms of directed efforts, what we would be
 9 doing is through that budgeting process,
 10 through our work execution, looking at our
 11 long term asset plans, is looking for least
 12 cost solutions to everything that we do. So
 13 that would be part of looking at each capital
 14 proposal, any efficiency gains would be sought
 15 through that, so it's through a number of
 16 different avenues. There isn't a one
 17 subscribed "this is an efficiency improvement
 18 program", it's expected each and every manager
 19 is working to establish their work to be done
 20 in the most efficient manner. That challenge
 21 occurs through the strategic planning process,
 22 it occurs through the budgeting process, to
 23 ensure that those types of things are done.
 24 One area that we've been focusing on, in
 25 particular, and I think I may have spoken to

Page 134

1 Mr. O'Brien about that, is the work scheduling
 2 and planning area where we feel that there is
 3 gains to be made there that we're setting out
 4 objectives there to improve the amount of work
 5 that we complete in terms of work execution,
 6 which is all around asset management and
 7 maintenance to get more done, and to schedule
 8 it efficiently so that the cost to that annual
 9 maintenance work is at the least cost.
 10 JOHNSON, Q.C.:
 11 Q. But, I guess, it's - what you've explained to
 12 us in terms of what you do is not part of a
 13 directed effort, and, I guess, you would agree
 14 that what you've done and what you've
 15 described has led to a circumstance where
 16 costs have outstripped inflation by about 30
 17 odd percent, right?
 18 MR. HENDERSON:
 19 A. There's a number of things that are happening
 20 within the company related to the condition of
 21 our facilities, the aging of our assets, our
 22 capital investment program, the environment in
 23 which we work, our employees work, all of
 24 those items are putting upward cost pressure
 25 certainly to Hydro, and that we seek to manage

Page 135

1 those as efficiently as we can.
 2 JOHNSON, Q.C.:
 3 Q. Well, as part of seeking to manage them as
 4 efficiently as you can, can you explain why a
 5 directed effort has not been made? I mean, we
 6 talked about organizational excellence and,
 7 you know, high cost controlled environment.
 8 Can you explain why a directed effort has not
 9 been given, given the importance of
 10 identifying efficiency initiatives?
 11 MR. HENDERSON:
 12 A. Well, we have done a number of things over the
 13 years to look for those types of things, and
 14 we continue to look for those initiatives. To
 15 establish, I'll say, a separate initiative to
 16 pull people out of their jobs and go at that,
 17 we've opted not to do it that way, we do it
 18 through each manager who's expected to do that
 19 in their own work environment to ensure that
 20 they're doing it as efficiently as possible.
 21 We, as I said, work planning and scheduling
 22 was one area that we felt from an operations
 23 standpoint we can make improvements and are
 24 embarking on that as a critical piece to do
 25 our work execution in terms of our asset

Page 136

1 management and maintenance more efficiently.
 2 JOHNSON, Q.C.:
 3 Q. So you indicated that you opted not to go the
 4 route of a directed effort. When was that
 5 decided upon?
 6 MR. HENDERSON:
 7 A. Well, I say that and it's somewhat - I'll say,
 8 it's by default, that we didn't do it. I
 9 mean, the way we are doing it and looking
 10 after our facilities, as I said, is through
 11 challenges to each of our managers to stay
 12 within inflation with their operating budgets.
 13 JOHNSON, Q.C.:
 14 Q. If I could ask you to go to 229.
 15 MS. GRAY:
 16 Q. Sorry, PUB-229, Mr. Johnson?
 17 JOHNSON, Q.C.:
 18 Q. Yes, Page 7 of 19. These are the general
 19 managers and managers who report to you, and I
 20 don't have to read them, they're there on the
 21 screen. Is any of your managers specifically
 22 tasked in their job description with cost
 23 control? Is there a go to manager on, you
 24 know, the cost controls within your
 25 organization?

Page 137

1 (12:30 p.m.)
 2 MR. HENDERSON:
 3 A. The cost controls, there are - in terms of
 4 cost controls and cost management, each
 5 manager has a responsibility, they have a
 6 budget that they have to manage. They have
 7 people in their groups - I think in almost
 8 every case there is a financial person that
 9 works alongside with them to help manage their
 10 budgets, help them to exercise the cost
 11 control that they need by providing them
 12 reports and data on how things are going
 13 relative to the budget, how they are managing
 14 their expenses.
 15 JOHNSON, Q.C.:
 16 Q. Okay, so let us turn then to the efficiency
 17 initiatives that Hydro has identified. Let me
 18 just turn you to NP-NLH-057, Revision 1. This
 19 question asked, "Other than the sharing of
 20 services, please identify the efficiency
 21 initiatives and management's estimate of cost
 22 savings reflected in the 2013 test year", and
 23 of course, this has been updated,
 24 "attributable to these initiatives", and the
 25 answer says, "Please note that the reference

Page 138

1 and the question, introduction evidence now
 2 refers to another section", that's fine, and
 3 then it goes on at line 10, "Please refer to
 4 NP-098 for description of initiatives
 5 affecting the level of the rural deficit", and
 6 you say, "In addition", or Hydro says, "In
 7 addition to those initiatives, the following
 8 have resulted in cost savings reflected in
 9 2014 and 2015. The savings are listed below,
 10 with estimates of the annual savings". So the
 11 first one we'll talk about is the heading of
 12 "Asset Maintenance Practice Changes". Do you
 13 see that?
 14 MR. HENDERSON:
 15 A. Yes.
 16 JOHNSON, Q.C.:
 17 Q. Okay, and it goes on, and we'll discuss a few
 18 others because there's asset management
 19 practice changes, work execution practices,
 20 human resource cost savings, Mr. Henderson, do
 21 you know when this question was asked, how
 22 Hydro went about assembling the information to
 23 answer this question in terms of tell us what
 24 the initiatives were and what the cost savings
 25 were?

Page 139

1 MR. HENDERSON:
 2 A. I can't give you the detail of how that was
 3 assembled. I can only speculate, but it would
 4 have been the results of the - in each of
 5 these areas, the responsible managers
 6 indicating the things that they had done, I
 7 would expect is what is there.
 8 JOHNSON, Q.C.:
 9 Q. Okay, so you suspect going about asking can
 10 you name something that we've done, would that
 11 be accurate?
 12 MR. HENDERSON:
 13 A. I would say that to provide a list of what you
 14 have been doing in this regard that is
 15 quantifiable to present in response to this
 16 RFI.
 17 JOHNSON, Q.C.:
 18 Q. Okay, and I guess, if you ask the same
 19 question of your people, they'd have to go
 20 through the same process, wouldn't they,
 21 they'd have to - you wouldn't have your
 22 fingertips on a list of efficiencies that are
 23 being pursued and worked upon?
 24 MR. HENDERSON:
 25 A. What I would have is what I've already said,

Page 140

1 is that there's particular initiatives that we
 2 put into our work plan that I would expect
 3 that people are working those, and indicating
 4 how they are making out on their annual work
 5 plan with respect to the things that are in
 6 our corporate strategic plan, but in terms of
 7 specifics, costs, these particular types of
 8 items that you're suggesting, there isn't an
 9 ongoing list that is constantly being
 10 presented to me.
 11 JOHNSON, Q.C.:
 12 Q. So let's look at the initiatives and the
 13 savings. Under "Asset Maintenance Practice
 14 Changes", there's reference to something in
 15 2009, the Holyrood boiler overhaul approach
 16 was reviewed resulting in the concept of a
 17 minor overhaul on one of the three units and a
 18 standard overhaul on the other two, resulting
 19 in maintenance savings of one overhaul on each
 20 unit every three years for an estimated annual
 21 savings of \$100,000.00. So do you know how
 22 that review came about, Mr. Henderson, that
 23 led to that saving?
 24 MR. HENDERSON:
 25 A. I was not in this position in 2009, so I can't

Page 141

1 give you the - but what we did do, I know, is
 2 we did an asset maintenance review over that
 3 period of time. I expect it may have come out
 4 of that, which was we were looking at all of
 5 our maintenance tactics that we were applying
 6 in all of our facilities, we had a dedicated
 7 team, I'll say, pulled out of their regular
 8 job to look at asset maintenance and the
 9 tactics we were doing to ensure that we were
 10 doing the appropriate tactics to ensure high
 11 availability and reliability of our assets,
 12 and identifying any that would be ones that we
 13 can shift and maybe not do as frequently as we
 14 were doing. So that was an initiative to get
 15 our asset maintenance program to a point that
 16 was consistent with what we would have been
 17 advised from the original equipment
 18 manufacturers, as well as a review of what
 19 other utilities are doing. So at that time,
 20 there would have been a considerable effort
 21 made in looking at all of the manner in which
 22 we do our maintenance, and making sure that
 23 the right tactics were there, and that would
 24 have been what we used them on a go forward
 25 basis in terms of our maintenance, and I

Page 142

1 suspect, although as I said, I wasn't in the
 2 position to be able to talk specifics, but I
 3 suspect that that's the result of that review.
 4 JOHNSON, Q.C.:
 5 Q. But it wasn't a review in any way targeted at
 6 trying to do asset maintenance in a more cost
 7 effective arrangement?
 8 MR. HENDERSON:
 9 A. It was to make sure that we were doing the
 10 right maintenance at the right time to ensure
 11 reliable operation of our equipment.
 12 JOHNSON, Q.C.:
 13 Q. Yes. So as you sit there today, would you
 14 agree with me that there may well be other
 15 savings that could arise from a broader review
 16 of asset maintenance practices which would
 17 have a focus on better ways of carrying out
 18 the work, smarter ways, et cetera?
 19 MR. HENDERSON:
 20 A. Well this is something that we are
 21 continuously doing and that's always part of
 22 each manager's responsibility is to be looking
 23 for those more efficient and effective ways to
 24 do it, so that there is that continual
 25 opportunity at all times.

Page 143

1 JOHNSON, Q.C.:
 2 Q. But nothing per se directed, right?
 3 MR. HENDERSON:
 4 A. So a directive, these types of reviews, like
 5 we did the asset management review, each and
 6 every one of these activities that the
 7 managers take over time is directed at looking
 8 for savings, but there isn't a, you know, I'm
 9 taking what you're saying is that we should
 10 establish a team of people to go out and find
 11 efficiencies. Well what we do is we expect
 12 the managers to do that, that's part of their
 13 job.
 14 JOHNSON, Q.C.:
 15 Q. Let's turn to Work Execution Practices and
 16 this one, you speak about in the maintenance
 17 of hydraulic generation assets a great focus
 18 being placed on work packaging, on work, to
 19 optimize costs through better up-front
 20 planning and you give an example about when a
 21 crew is sent to Cat Arm, a full package of
 22 work is planned to take full advantage of the
 23 accommodations and cooking services and travel
 24 costs, the practice with respect to cooking on
 25 site is to provide a cook when there are at

Page 144

1 least four people, et cetera. There's a bit
 2 of an explanation on that, and I guess the
 3 upshot of that is manual savings of \$22,000,
 4 right?
 5 MR. HENDERSON:
 6 A. That's correct.
 7 JOHNSON, Q.C.:
 8 Q. And then there's reference to some travel
 9 savings, an estimate annual savings of \$40,000
 10 by using teleconferencing and
 11 videoconferencing when possible and a third
 12 demonstration of where savings had been made
 13 is making more use of contractors for road
 14 maintenance and the estimated annual savings
 15 are \$5,000. Now again, you know, these seem
 16 to be, in an organization the size of Hydro
 17 with that number of employees, and we're
 18 talking about, you know work execution
 19 practices, Mr. Henderson, it seems to be an
 20 awfully small amount of measures identified
 21 with attendant small savings, would you care
 22 to comment on that? I just put it to you.
 23 MR. HENDERSON:
 24 A. So these are the ones that people are able to
 25 specifically quantify that could be a dollar

Page 145

1 value, I would say that it's part of
 2 everybody's daily job is to look at the way
 3 that we're doing work, to look for--make sure
 4 that we're doing it as efficiently and
 5 effectively and that is also reflective of the
 6 growing requirement for work on our assets
 7 which are aging. The requirement for
 8 additional capital to invest, all of those
 9 things are happening. We're looking at the
 10 manner in which we execute projects to be most
 11 effective and efficient in the way we execute
 12 projects. We do ongoing reviews of our manner
 13 in which we do our maintenance and I talked
 14 about the scheduling as one area that we have
 15 been specific and there's other small areas
 16 that would have general application, but
 17 doesn't necessarily would be identifying a
 18 full dollar amount as specific as these
 19 examples are here.
 20 JOHNSON, Q.C.:
 21 Q. Have you thought about engaging any outside
 22 help or even the help within the Department of
 23 HROE on trying to identify more efficient work
 24 execution practices? Because the problem I
 25 have, I'll tell you, is that when you say

Page 146

1 "everybody is looking at this", I worry about,
 2 you know, is there a go-to accountable spot
 3 that we can say, look, here's the person who
 4 is in charge of this?
 5 (12:45 pm.)
 6 MR. HENDERSON:
 7 A. Well, I am in charge of Hydro and when I meet
 8 and talk to people within--people who report
 9 to me, this is part of that ongoing challenge
 10 to them. We do engage HROE to look at
 11 organization, how we've organized our work to
 12 see if there's more effective ways to do it,
 13 those types of things are part of ongoing day
 14 and day out type of activities. I know
 15 specifically with respect to transmission and
 16 rural operations area, Darren and I have
 17 talked about how we can be more efficient and
 18 effective in the way we do things there and
 19 he's looked at his organization, he's worked
 20 with HROE to see what changes they might
 21 effect there. These things are happening on a
 22 regular basis as part of the ongoing budget
 23 discussions when we have those each year and
 24 they are also, as we identify things during
 25 the year, we look for opportunities to

Page 147

1 improve.
 2 JOHNSON, Q.C.:
 3 Q. So you say you've gone to the Department of
 4 Human Resources, have they provided you any
 5 reports or analysis on how you could go about
 6 having more efficient work practices?
 7 MR. HENDERSON:
 8 A. They would help facilitate discussions and
 9 looking at options, but in terms of reports,
 10 no.
 11 JOHNSON, Q.C.:
 12 Q. So what does it mean when you say they "help
 13 facilitate discussions"?
 14 MR. HENDERSON:
 15 A. So they would put forward--work with our
 16 managers to look at are there ways that we
 17 could, just exploring ideas, suggesting ideas
 18 of things that could be looked at in terms of
 19 improving organization within that particular
 20 department.
 21 JOHNSON, Q.C.:
 22 Q. Well you've got two managers there with you,
 23 have either of you gentlemen had occasion to,
 24 you know, seek out HROE and if so, can you
 25 tell us specifically what it has been on, in

Page 148

1 terms of work execution practices?
 2 MR. MOORE:
 3 A. I can go first. I know myself, like when we
 4 were putting together our, I guess the 2014
 5 and 2015 test year that's put forward in this
 6 application, we, through TRO, I guess, we met
 7 with our HROE group in 2013 to have a real
 8 good look at, I guess the spread of resources
 9 across TRO and their geographic location and
 10 the particular skillsets that are involved,
 11 you know, dedicated to the different assets
 12 throughout TRO, and then we looked at our
 13 2014/15 annual work plan requirements to
 14 ensure, as Rob indicated earlier, that moving
 15 forward 100 percent completion of our critical
 16 annual work plan work each year is going to be
 17 achieved. So in that regard, with assistance
 18 from our HROE team, we were able to look at
 19 what was in place in 2013 and where we might
 20 need to make changes or additions or change of
 21 a skillset as, say an employee retires, to be
 22 focused on a different area of asset
 23 maintenance, such that what we're putting
 24 forward in 2014/15 in the test year for
 25 resource requirements to complete our annual

Page 149

1 work plan is the optimum level. So they
 2 helped us with that exercise back in 2013 to
 3 get ready for 2014 and '15 test year
 4 requirements.
 5 JOHNSON, Q.C.:
 6 Q. So do either of you gentlemen have any
 7 experience or training in relation to, you
 8 know, the deployment of workforce in an
 9 efficient manner or anything like that, or are
 10 you--just if you could shed some light on that
 11 for us.
 12 MR. HENDERSON:
 13 A. I'm not sure what you mean in terms of
 14 specific training.
 15 JOHNSON, Q.C.:
 16 Q. Well in terms of, you know, organizational
 17 effectiveness or any of these type of
 18 skillsets?
 19 MR. HENDERSON:
 20 A. Well I can say that we've all received
 21 different types of training throughout our
 22 careers, in terms of development, in terms of
 23 management skills, strategic planning skills,
 24 looking at--doing reviews in terms of, well
 25 again to the strategic planning process and

Page 150

1 how you would use that to mix drive out
 2 throughout your whole organization, full
 3 alignment by all of your staff to be meeting
 4 your objectives that you've set out each year,
 5 those types of things help to build an
 6 effective organization that is focused on what
 7 the company is trying to achieve.
 8 JOHNSON, Q.C.:
 9 Q. Now, if we look at your Human Resource cost
 10 savings, what we're told and this is again NP-
 11 57, Revision 1, line 20, "The current Hydro
 12 apprenticeship program has been enhanced and
 13 an opportunity to avail of funding from the
 14 provincial government has been realized.
 15 Estimated annual saving of 500,000, but this
 16 program has been terminated and will not be
 17 available in 2015." But I guess that's a cost
 18 savings, but that's not--that was just
 19 availing of a provincial government program,
 20 correct?
 21 MR. HENDERSON:
 22 A. That's what it is, yes.
 23 JOHNSON, Q.C.:
 24 Q. And the other one that would more, in terms of
 25 tied to a change or an initiative would be the

Page 151

1 second one, the introduction of four ten-hour
 2 shifts in the maintenance of the hydraulic
 3 generation fleet, reducing hotel travel and
 4 vehicle usage, but again, a very modest
 5 savings of 35,000 per year. So that's the sum
 6 total of the resource cost savings that you've
 7 been able to identify?
 8 MR. HENDERSON:
 9 A. These are the ones that we have been able to,
 10 I'll say enumerate in the manner requested.
 11 JOHNSON, Q.C.:
 12 Q. Okay. Can you be confident, Mr. Henderson,
 13 and I don't want to harp on it, but can you be
 14 confident that there would not be other
 15 savings realizable in Human Resource cost
 16 savings or work--arise from work management if
 17 there was not a directed effort given to these
 18 areas and perhaps with some external help, if
 19 necessary, but at least a directed effort?
 20 MR. HENDERSON:
 21 A. What I say is that we are--that's a constant
 22 focus, it's a constant question as to looking
 23 at those, so people are challenged on that.
 24 We have a growing work requirement because of
 25 aging assets. We have a growing capital

Page 152

1 program which requires additional resources
 2 and focus. We have growing customer demand
 3 that's driving us to have additional equipment
 4 and people required to operate those. When we
 5 have those types of things, we make sure that
 6 we look and benchmark what we're doing there,
 7 to what we put in place for those is an
 8 effective way of operating those facilities,
 9 so you know, I'm repeating myself, but that's
 10 the mandate that we have. To say that there's
 11 anything by doing what you said, I'll say that
 12 there's always opportunity, I can never say
 13 that there isn't opportunity, there's always
 14 opportunity to find additional savings and
 15 that's the challenge that we have, to be
 16 constantly on the look out and working with
 17 other utilities and organizations to see how
 18 we can achieve savings.
 19 JOHNSON, Q.C.:
 20 Q. And just before leaving this RFI, I note there
 21 was a couple of more not to proceed without
 22 bringing attention to them, finally on page 3
 23 there was some initiatives to reduce energy
 24 use in Hydro facilities and as well, a
 25 paragraph pertaining to energy conversion

Page 153

1 efficiency improvements, et cetera. Now, Mr.
 2 Henderson, do you know whether Hydro has good
 3 labour productivity?
 4 MR. HENDERSON:
 5 A. I'll say that we are working to always improve
 6 labour productivity and this goes to the work
 7 planning and scheduling and there are, I'll
 8 say in terms of doing the work that we plan
 9 and schedule to do each week is monitored by
 10 the work executive managers to ensure that
 11 there is effective utilization of that. I
 12 don't have a boiled up measure in terms of
 13 the--specifically, as you said, it's like a
 14 KPI that says dollars per employee per hour
 15 worked or something like that, if that's what
 16 you're referring to.
 17 JOHNSON, Q.C.:
 18 Q. Well, I was trying to get your sense of
 19 whether you believe Hydro had good labour
 20 productivity and you told me that, you know,
 21 we're always on the look out to try to improve
 22 it, and I get that, I understand that, but do
 23 you feel you've got good labour productivity?
 24 MR. HENDERSON:
 25 A. Since I've been in this role, I have not done

Page 154

1 any benchmarking to benchmark our, you know,
 2 in that regard for our workforce.
 3 JOHNSON, Q.C.:
 4 Q. And you're aware that some benchmarking is
 5 available, I take it?
 6 MR. HENDERSON:
 7 A. I'm not sure what's there but I expect that
 8 there are some things out there that we could
 9 be looking at.
 10 JOHNSON, Q.C.:
 11 Q. It's not something that you've inquired into,
 12 I take it?
 13 MR. HENDERSON:
 14 A. Not recently, no.
 15 JOHNSON, Q.C.:
 16 Q. When you say "not recently" -
 17 MR. HENDERSON:
 18 A. What I say, while I've been in this position
 19 for two years I have not embarked on that
 20 conversation to get that kind of--see what's
 21 available and what we might implement.
 22 JOHNSON, Q.C.:
 23 Q. Okay. And I guess a similar question, that
 24 question was about labour productivity and I
 25 guess I'll ask you the question flat out: do

Page 155

1 you know whether Hydro is efficient in its
 2 operation?
 3 MR. HENDERSON:
 4 A. I would say to you that we have a growing work
 5 load and we are focused on getting the right
 6 work done and spending the time on the right
 7 places that we are efficient and improving the
 8 effectiveness and efficiency in a way that we
 9 are doing that and we are, so there's always
 10 room for continual improvement, but I'd say we
 11 are improving efficiency year over year.
 12 JOHNSON, Q.C.:
 13 Q. So again, I guess I go back to a similar
 14 follow up then, you know, you're looking to
 15 improve efficiency and again, I get that, but
 16 as you sit here, are you able to say yes, I
 17 know Hydro, the company I am running, Hydro is
 18 efficient?
 19 MR. HENDERSON:
 20 A. What I can say to you is that we are, in terms
 21 of cost control and management, we are doing
 22 that effectively and are working to continuing
 23 to improve on that, but we are effective in
 24 the way that we are doing our work.
 25 JOHNSON, Q.C.:

Page 156

1 Q. Mr. Henderson, do you believe, as the Board
 2 stated and this was a quote put to Mr. Martin
 3 when he was on the stand, that the Board
 4 previously stated, as you're probably aware,
 5 that there was an onus on Hydro in there GRA
 6 and they said that in their 2001 GRA order,
 7 they said that there was an onus on Hydro in
 8 the GRA to bring forward performance measures
 9 which "clearly demonstrate the efficiency of
 10 its operations". You're familiar when that
 11 was discussed with Mr. Martin and the Board's
 12 quote in that regard?
 13 MR. HENDERSON:
 14 A. I am.
 15 JOHNSON, Q.C.:
 16 Q. You are?
 17 MR. HENDERSON:
 18 A. I recall that.
 19 JOHNSON, Q.C.:
 20 Q. And so therefore, given that onus and given
 21 what--that burden of proof, a clear
 22 demonstration of the efficiency of the
 23 operations with performance measures, can you
 24 point us specifically to the performance
 25 measures that Hydro is relying upon to

Page 157

1 demonstrate the efficiency of its operations?
 2 MR. HENDERSON:
 3 A. So the performance measures are management to
 4 our budget, the performance of our--it's the
 5 reliability that we are demonstrating. I
 6 would suggest that the overall matrix that
 7 were put forward in the KPI, the report that
 8 we talked about earlier, we talked about
 9 targets on them, but those measures in
 10 particular can be referenced to compare Hydro
 11 to other similar utilities on those dollar per
 12 installed kilowatt or dollar per kilowatt hour
 13 delivered and they are available.
 14 JOHNSON, Q.C.:
 15 Q. So you've talked about, you would look to your
 16 ability to manage, to your budget that would
 17 be part of the demonstration of the efficiency
 18 of your operations?
 19 MR. HENDERSON:
 20 A. It's that in the context of inflation and how
 21 we are doing with regard to that, in
 22 comparison to inflation and that's why we put
 23 forward the charts that we did is to assist in
 24 demonstrating the cost and how they're varying
 25 with respect to inflation and certainly that's

Page 158

1 part of the measure.
 2 (1:00 p.m.)
 3 JOHNSON, Q.C.:
 4 Q. So the use of inflation and where you are
 5 relative to inflation, that should be an
 6 indicator of how efficient you're being?
 7 MR. HENDERSON:
 8 A. That can be, it's part of a measure to show
 9 that. The thing that you have to also take
 10 into consideration is change in circumstances,
 11 that the company is in a situation where we do
 12 have aging infrastructure that requires
 13 additional attention from a maintenance
 14 perspective. There's a growing capital
 15 program, there's also growing customer
 16 requirements, all of those are variables that
 17 do not necessarily track inflation and they
 18 can drive costs to a different place than
 19 inflation. So it's not, you can't look at
 20 inflation in isolation.
 21 JOHNSON, Q.C.:
 22 Q. Okay, so let's look at the budget aspect then
 23 for a second and there was a fair bit of
 24 discussion with my friend, Mr. O'Brien, with
 25 you on that. You recall, Mr. Henderson, that

Page 159

1 the budget guidelines from 2013, they did not
 2 provide any guidance as regard the escalation
 3 over the previous years' forecast, correct?
 4 Do you recall that?
 5 MR. HENDERSON:
 6 A. I remember that there was a reference to it,
 7 but I think there was no number there.
 8 JOHNSON, Q.C.:
 9 Q. Yes, perhaps if we could bring up the Budget
 10 Guideline, I think that's undertaking or
 11 that's undertaking 4, I do believe. And it's
 12 on the screen now, but I guess, Mr. Henderson,
 13 can you confirm--what my understand was was
 14 that there was no escalation guidance in 2013.
 15 It may be necessary to scroll down at your
 16 will.
 17 MR. HENDERSON:
 18 A. I'll take your word that it's not there, I
 19 assume that you have reviewed it carefully to
 20 look for it.
 21 JOHNSON, Q.C.:
 22 Q. Yes, and so this document, who would this
 23 document have gone to within Hydro?
 24 MR. HENDERSON:
 25 A. At that particular time I would have expected

Page 160

1 that it went to the CFO. It would have also
 2 gone to the controller for Hydro who is
 3 looking after financial aspects of Hydro. It
 4 would have also gone, I expect, to Mr. Haynes
 5 who is my predecessor and Mr. Martin may have
 6 been involved as well, but I wouldn't know for
 7 sure.
 8 JOHNSON, Q.C.:
 9 Q. And from there does it go down the line to the
 10 managers who are out there across the province
 11 and at the Hydro building, et cetera, when
 12 they are developing their budgets, this type
 13 of guidance?
 14 MR. HENDERSON:
 15 A. It does.
 16 JOHNSON, Q.C.:
 17 Q. It does, yeah. So 2014 was the first year for
 18 guidance on escalation that you're aware of,
 19 is that right?
 20 MR. HENDERSON:
 21 A. It is there, yes.
 22 JOHNSON, Q.C.:
 23 Q. And do you know how the guidance on escalation
 24 came about for the 2014 budget preparation?
 25 MR. HENDERSON:

Page 161

1 A. That figure, I believe yesterday or maybe the
 2 day before, I guess it was yesterday, I
 3 indicated that Finance would be the best one
 4 to address the specifics on where the
 5 escalation factor came from.
 6 JOHNSON, Q.C.:
 7 Q. Okay. Now when the guidance is to maintain
 8 costs within an overall increase of, say, 2. 5
 9 percent as we saw in one year or 2.2 percent
 10 as we saw in another year, I think if we could
 11 go there, for instance in 2014 guidance is
 12 for, it indicates that all costs above 2. 2
 13 percent escalation over the August 2013
 14 forecast will be specifically highlighted
 15 during the review process. Where possible
 16 costs should be maintained. And you were
 17 asked about this yesterday by Mr. O'Brien and
 18 I'd just like to understand the sense of rigor
 19 that gets applied when people come to you or
 20 come to their managers and their costs are in
 21 excess of this guidance, in terms of the level
 22 of justification they have to put forward,
 23 could you expand on that?
 24 MR. HENDERSON:
 25 A. Well it presented to me--any line item that

Page 162

1 does exceed this is highlighted in their
 2 presentation to me and we would have a
 3 discussion on that to understand what is the
 4 driver for that and necessity for it and
 5 whether it's something that is indeed required
 6 to happen or whether it's something that--
 7 there should be found another way to achieve
 8 the same result for a lower cost.
 9 JOHNSON, Q.C.:
 10 Q. So is it practically like just an explanation,
 11 I think yesterday you referred to maybe a
 12 couple of bullet points or something?
 13 MR. HENDERSON:
 14 A. It could be, depending on different managers
 15 will take a different approach, but we
 16 basically gave them a template that they would
 17 follow which would be a PowerPoint type of
 18 presentation with bullets that they would talk
 19 to and explain.
 20 JOHNSON, Q.C.:
 21 Q. And in terms of, you know, and correct me if
 22 I'm wrong, Mr. Henderson, but I wasn't left
 23 with a high degree of comfort that there was a
 24 lot of rigor in terms of someone being put
 25 through the paces on trying to justify an

Page 163

1 increase above guidance.
 2 MR. HENDERSON:
 3 A. They would come into a meeting with me, with
 4 the Financial people as well and that's where
 5 the, in that meeting there would be a
 6 considerable amount of discussion to
 7 understand what's happening and people were
 8 directed to go back and make adjustments when
 9 the explanations were insufficient or to come
 10 back with greater evidence if that was not
 11 sufficient to meet the standard of which we
 12 had set here, which was a thorough explanation
 13 of why the costs are greater than inflation.
 14 JOHNSON, Q.C.:
 15 Q. The salaries, which of course are a huge input
 16 into your operating budgets, I guess that's by
 17 and large just delivered up to you. You don't
 18 have a lot of push back on salaries, I take
 19 it?
 20 MR. HENDERSON:
 21 A. The salaries generally fall, as I'm sure Mr.
 22 Roberts and Mr. McDonald explained how the
 23 salaries were determined, that they are then
 24 presented to us, present to me, but that's
 25 where the salaries have fallen out with

Page 164

1 respect to the adjustments, I'll say the
 2 commitments through our labour agreements, as
 3 well as generally inflationary increases. And
 4 in my time, it's been just that, there hasn't
 5 been any discussion on any major adjustments
 6 and scales. That happened before I got into
 7 the position, so I can't comment on what kind
 8 of discussion and how that was addressed at
 9 that time, but in the last two years, it's
 10 been pretty much inflationary type adjustments
 11 to stay within, you know, competitive salary
 12 offered.
 13 JOHNSON, Q.C.:
 14 Q. Mr. Henderson, in terms of, you know, the
 15 scrutiny of proposed expenditures in addition
 16 to, you know, the inflationary figure, do the
 17 managers at Hydro, are they provided with a,
 18 for instance the type of information that
 19 we've been provided with in this hearing that
 20 gives how your operation costs' growth, let's
 21 say from '07 to 2014, that whole long period,
 22 are they given a document like that in terms
 23 of, so they got a perspective on what's been
 24 happening with your controllable costs?
 25 MR. HENDERSON:

Page 165

1 A. They each have that information available to
 2 them. They all have, can go into our computer
 3 system and be able to see all of those costs
 4 laid out over time, over that time period.
 5 JOHNSON, Q.C.:
 6 Q. Okay. And I just wonder this is not something
 7 specifically brought to their attention in
 8 these annual meetings, this is just a source
 9 of information they can access?
 10 MR. HENDERSON:
 11 A. They can go back and see how things have
 12 changed. The focus is more looking at what we
 13 have to achieve in the upcoming year and
 14 achieving it, while maintaining those costs
 15 within inflation.
 16 JOHNSON, Q.C.:
 17 Q. Now, I understand that Hydro does not include
 18 a specific allowance for productivity
 19 improvements in its budget, is that correct?
 20 MR. HENDERSON:
 21 A. I'll say that it's not a specific number
 22 that's put in there, again when there's,
 23 people are held to get their overtime costs
 24 down or they're held to costs that they may
 25 have originally said "I think I need more",

Page 166

1 they're told, "No, do it without more" and so
 2 those things are put back to the managers to
 3 find those productivities, to stay within
 4 their budgets.
 5 JOHNSON, Q.C.:
 6 Q. Perhaps if I could direct your attention to
 7 NP-384 and this pertains to the test year
 8 operating expenses. It asks further to the
 9 response to CA-328, please confirm that Hydro
 10 has not included a specific allowance for
 11 productivity in its 2015 test year operating
 12 expenses. And the answer goes on to say that
 13 Hydro's budgeting methodology incorporates
 14 productivity improvements into its base
 15 budgets, but not as a specific allowance to be
 16 shown separately. And you go on to say "both
 17 methods have the same end result". And then
 18 it's cited an example of this, as is put here,
 19 "clearly shown in Hydro's response to CA- 328
 20 regarding Hydro's 2015 budget for overtime",
 21 and it goes on to state "as stated overtime
 22 costs in 2013 were 12.3 million and in 2014
 23 test year were 12.2 but Hydro's test year
 24 budget for overtime is 10.1 million with 2. 2
 25 million reduction overtime estimated for 2015

Page 167

1 is targeted to be accomplished through cost
 2 management initiatives." So with that, Mr.
 3 Henderson, I have the question because this
 4 has been characterized as, like in-built
 5 productivity and--but I guess the question I
 6 would have is why should we--Mr. O'Brien
 7 questioned you on this yesterday, but it
 8 occurs to me why should we not expect overtime
 9 to fall more in line with, say, earlier
 10 figures, like pre-2013 figures, given all of
 11 the work and effort that has been taken since
 12 the outages, for instance, of 2014. I mean,
 13 there's been a major push on to do maintenance
 14 practices and prevention, et cetera, which
 15 we've heard about, and I'm wondering why
 16 wouldn't we expect there to be a knock-on
 17 effect of that reducing overtime anyway, if
 18 you care to comment.
 19 (1:15 p.m.)
 20 MR. HENDERSON:
 21 A. Well some of the things that are going on
 22 here, you know, you have to look at the
 23 capital side of things and the drivers of work
 24 on the capital side that's driving costs, so
 25 going back over time, you have to also

Page 168

1 consider the capital and how that causes or
 2 drives overtime as well. So there is pressure
 3 on overtime in a number of different things,
 4 the outages that we take are constrained by
 5 customer requirements to minimize the impact
 6 on the power system, to get generation back up
 7 quickly when there's problems, there's a
 8 number of things that are putting pressure and
 9 those pressures are growing as your assets age
 10 and as the demand on the system grows. So all
 11 of those things are putting pressures on those
 12 types of expenses which you run into overtime
 13 when you have equipment with problems, you
 14 also run into overtime when you're trying to
 15 complete capital jobs within tight timelines
 16 to have minimum impact on customers. So it's
 17 all within that environment, that's a growing
 18 requirement, that we are constraining and
 19 establishing that the overtime will be at a
 20 lower level going forward and in 2015.
 21 JOHNSON, Q.C.:
 22 Q. But I guess in addition to the work that's
 23 been done since January 2014 events, et
 24 cetera, we also have the situation where
 25 Hydro's FTE count is increasing in both 2014

Page 169

1 and 2015, correct?
 2 MR. HENDERSON:
 3 A. That's right.
 4 JOHNSON, Q.C.:
 5 Q. Right, so relative to 2013, I understand that
 6 in engineering and operations the plan was to
 7 add 45 more FTEs, is that a figure you're
 8 familiar with?
 9 MR. HENDERSON:
 10 A. It's in that ballpark, yes.
 11 JOHNSON, Q.C.:
 12 Q. Yeah, and then again relative to 2013, you
 13 were looking at adding 67 more in 2015. That's
 14 just for the record. I think that's borne out
 15 in NP-395.
 16 MR. HENDERSON:
 17 A. Okay.
 18 JOHNSON, Q.C.:
 19 Q. Okay, and I guess, Mr. Henderson, you know,
 20 and even though there's some vacancies that
 21 are getting worked out, still you're going to
 22 be filling - the end result is you're going to
 23 have more people working at Hydro for Hydro in
 24 2014 and 2015 than you did back in 2012, 2013?
 25 MR. HENDERSON:

Page 170

1 A. Yes.
 2 JOHNSON, Q.C.:
 3 Q. And I'm trying to understand, you know, why
 4 Hydro seems to be taking a productivity credit
 5 for overtime because I would have thought that
 6 you'd expect to see overtime come down, you're
 7 adding people?
 8 MR. HENDERSON:
 9 A. Well, we are, and that is getting more
 10 efficient and effective by doing the work with
 11 those additional resources and reducing
 12 overtime.
 13 JOHNSON, Q.C.:
 14 Q. The reply to the RFI that is still up on the
 15 screen speaks in terms of a 2 million dollar
 16 reduction in overtime that's targeted, is to
 17 be accomplished to constant management
 18 initiatives; namely, redeployment of staff and
 19 recruitment initiatives, and could you be more
 20 specific as to the redeployment of staff
 21 you're referring to and the recruitment
 22 initiatives that's producing this
 23 productivity?
 24 MR. HENDERSON:
 25 A. Well, it's the greater emphasis in our work

Page 171

1 planning and scheduling group. There's also
 2 moving some of the - I'll say, in terms of
 3 redeployment, it's getting the additional
 4 resources in certain key areas, for instance,
 5 on the Avalon Peninsula in our transmission
 6 rural operations areas where we would be
 7 putting additional focus and staff. There's
 8 some other areas where we were experiencing
 9 significant cost and scheduling overtime
 10 issues that we were putting in additional
 11 resources where there was customer demand
 12 growth that was driving things into the
 13 Labrador area. Then the other areas would be,
 14 like, at the Holyrood facility, we brought
 15 forth more - we had basically an increase in
 16 electrical maintenance, instrumentation, and
 17 mechanical maintenance to address some of the
 18 growing corrective maintenance requirements
 19 that are becoming evident in the Holyrood
 20 plant as we are using it more and it's also
 21 aging at the same time. So those are the
 22 types of things that we've done from an
 23 operations standpoint in order to get these
 24 savings in overtime and to improve completion
 25 of work.

Page 172

1 JOHNSON, Q.C.:
 2 Q. And this RFI that we've been discussing points
 3 to productivity in connection with overtime.
 4 Where else is Hydro claiming that productivity
 5 improvement has been built into the base
 6 budget?
 7 MR. HENDERSON:
 8 A. Well, it would be by holding the line to
 9 inflation in certain areas.
 10 JOHNSON, Q.C.:
 11 Q. What areas would those be?
 12 MR. HENDERSON:
 13 A. Well, it would be those areas - I'll say it
 14 generally in terms of our system equipment and
 15 maintenance cost, and holding that in a number
 16 of different areas to inflation.
 17 JOHNSON, Q.C.:
 18 Q. If you could turn to again Page 61 of the
 19 Grant Thornton Report, Table 37, which talks
 20 about, amongst other things, system equipment
 21 and maintenance costs from actuals 2013 right
 22 over to forecast 2015. Could you explain
 23 where the productivity is built into system
 24 equipment and maintenance in these numbers,
 25 just tell me what your thought process is on

Page 173

1 that?

2 MR. HENDERSON:

3 A. Well, first of all, you're looking at a high

4 level, corporate level, system equipment and

5 maintenance. The drivers for increasing

6 system equipment and maintenance, and in

7 particular in 2015, is we have a combustion

8 turbine which requires additional cost and

9 maintenance that was not there in prior years.

10 So that's an element there of that increase.

11 So when you break out and look at other areas,

12 you would see that there are areas where those

13 controls or the limitation is there, but you

14 have to look at this in here in terms of the

15 fact that we did purchase and install a

16 combustion turbine which requires its

17 maintenance that you have to do. Also

18 affecting the system equipment and maintenance

19 is the acquisition of the Labrador West

20 transmission system, which was previously

21 owned by Twin Falls Corporation, and there's

22 the maintenance with regard to that that's

23 putting the cost for 2015 up relative to prior

24 years, but then if you look into different

25 areas within the company, you look at our

Page 174

1 hydro electric generation area that is not

2 affected by that, those are areas where we're

3 working to hold the line on those expenses.

4 JOHNSON, Q.C.:

5 Q. So you're saying that there's particular areas

6 besides overtime where the revenue

7 requirement, as presented on that line item,

8 is understated, is that -

9 MR. HENDERSON:

10 A. What I'm saying is that it's built into this

11 that all managers are expected to hold the

12 line with respect to general inflationary

13 pressures that they are seeing in their costs

14 for their expenses with respect to system

15 equipment, and they're also to manage their

16 overtime down. So those things are built into

17 this.

18 JOHNSON, Q.C.:

19 Q. And that's your interpretation of the

20 productivity allowance being built in?

21 MR. HENDERSON:

22 A. Yes.

23 JOHNSON, Q.C.:

24 Q. Mr. Henderson, yesterday you were - this is a

25 new topic area, Mr. Chairman, and it's - I

Page 175

1 don't think I can conclude it within the next

2 few minutes, so I'm in your hands as to

3 whether we want to push on, anyway, or -

4 CHAIRMAN:

5 Q. I don't think I'm going to insist that you go

6 on. We're adjourned.

7 (UPON CONCLUDING AT 1:26 P.M.)

Page 176

1

2 CERTIFICATE

3 I, Judy Moss, hereby certify that the foregoing is a true

4 and correct transcript of a hearing in the matter of

5 Newfoundland and Labrador Hydro's General Rate

6 Application heard on the 23rd of September, A.D., 2015

7 before the Commissioners of the Public Utilities Board,

8 St. John's, Newfoundland and Labrador and was transcribed

9 by me to the best of my ability by means of a sound

10 apparatus.

11 Dated at St. John's, Newfoundland and Labrador

12 this 23rd day of September, A.D., 2015

13 Judy Moss

<p>-#-</p> <p>#8 [1] 10:8</p> <hr/> <p>-\$-</p> <p>\$100,000.00 [1] 140:21 \$22,000 [1] 144:3 \$40,000 [1] 144:9 \$5,000 [1] 144:15</p> <hr/> <p>-&-</p> <p>& [5] 12:9 124:10,25 125:23 131:8</p> <hr/> <p>-'-</p> <p>'07 [6] 114:19 119:1 121:24 122:10 123:9 164:21 '07/08 [1] 118:10 '08 [2] 126:13,23 '08/09 [1] 118:10 '09 [1] 122:11 '12 [1] 118:24 '14 [1] 65:25 '15 [1] 149:3</p> <hr/> <p>-.-</p> <p>.687 [1] 122:11 .73 [1] 122:18</p> <hr/> <p>-1-</p> <p>1 [12] 10:5 31:11,20 62:17 81:12,16,18 99:15,17 129:20 137:18 150:11 1.13 [2] 118:5 123:14 1.2 [1] 122:10 1.28 [1] 117:18 1.34 [3] 62:18,18,22 10 [1] 138:3 10.1 [1] 166:24 100 [8] 51:11,12 52:13 52:20 54:4 64:9 131:12 148:15 10:00 [1] 43:10 10:15 [1] 56:1 10:30 [1] 68:21 10:45 [1] 80:11 11:00 [1] 92:5 11:02 [1] 94:9 11:34 [1] 94:10 11:45 [1] 102:20 12.2 [1] 166:23 12.3 [1] 166:22 120 [1] 131:13 12:00 [1] 115:10 12:15 [1] 125:13 12:30 [1] 137:1 12:45 [1] 146:5 12th [1] 119:21</p>	<p>13 [1] 118:24 15 [2] 49:10 81:21 16 [3] 107:19,22,23 17 [1] 49:10 17th [1] 48:22 18 [2] 48:23 58:23 19 [1] 136:18 19.6 [1] 114:25 1:00 [1] 158:2 1:15 [1] 167:19 1:26 [1] 175:7 1st [1] 96:16</p> <hr/> <p>-2-</p> <p>2 [9] 9:20 10:5 28:9 107:18 127:16,24 129:19 129:19 170:15 2.2 [3] 161:9,12 166:24 2.5 [2] 122:10 161:8 20 [2] 58:23 150:11 20-year [1] 63:1 2000 [1] 88:25 2001 [1] 156:6 2003 [1] 86:1 2004 [2] 86:1,1 2007 [8] 27:23 77:3 110:14 117:15,23 119:13 127:18,21 2008 [6] 91:17 122:17 124:2 125:20 127:22 128:1 2009 [5] 28:7 91:17 122:17 140:15,25 2010 [5] 10:18 28:7 61:24 122:11,17 2011 [4] 28:7 63:11 73:25 122:18 2012 [5] 28:7 122:18 127:18,22 169:24 2013 [56] 6:2,17 7:5,15 7:16,25 9:1 18:20 28:7 28:11,21 30:25 31:4,6 31:12 32:11 33:6,8,14 35:5,15 36:22,25 37:2,5 37:6,18,23 38:2 41:22 41:24 42:10 50:7 94:23 95:4 117:15,23 118:11 119:1 122:19 123:9 129:20,25 130:8 137:22 148:7,19 149:2 159:1,14 161:13 166:22 169:5,12 169:24 172:21 2014 [45] 2:13,20 3:1 6:18 7:12,20,25 10:18 28:8,12,21 32:11 33:7 33:14 35:6,15 36:22 37:18,19 38:3 41:23 42:11,16,20 44:4 51:17 56:6,8 65:25 66:4 94:23 95:1,5 138:9 148:4 149:3 160:17,24 161:11 164:21 166:22 167:12 168:23,25 169:24 2014/15 [2] 148:13,24 2015 [34] 1:1,21 2:20,22</p>	<p>3:7 4:3 7:12,21 10:5 33:14,21 48:22 69:15 75:21 81:20 83:21 85:6 106:10 114:19 138:9 148:5 150:17 166:11,20 166:25 168:20 169:1,13 169:24 172:22 173:7,23 176:6,12 2016 [3] 9:10 75:17,22 2017 [1] 9:6 2018 [1] 9:6 22 [1] 48:23 228 [1] 23:23 229 [1] 136:14 23 [1] 1:1 230 [2] 50:2,3 23rd [2] 176:6,12 24 [3] 98:9,15,21 26 [1] 118:20</p> <hr/> <p>-3-</p> <p>3 [2] 129:20 152:22 3.1 [1] 107:14 3.84 [1] 122:19 3.94 [1] 122:17 30 [1] 134:16 31st [1] 96:17 32 [1] 115:1 33 [1] 116:18 33.3 [1] 114:23 34 [1] 9:21 35,000 [1] 151:5 36 [1] 119:25 37 [2] 119:25 172:19</p> <hr/> <p>-4-</p> <p>4 [1] 159:11 4.73 [1] 122:17 40 [3] 1:16,18 10:18 43 [3] 114:18,20 116:15 45 [1] 169:7 4th [2] 69:19 72:21</p> <hr/> <p>-5-</p> <p>5 [1] 28:4 50 [1] 37:12 500,000 [1] 150:15 57 [1] 150:11</p> <hr/> <p>-6-</p> <p>6 [3] 88:23,24 89:9 6.27 [1] 122:19 6.74 [1] 122:18 60 [1] 119:19 607 [1] 83:21 61 [1] 172:18 612 [1] 91:20 625 [1] 91:20 64 [1] 10:18</p>	<p>65 [1] 1:21 67 [1] 169:13</p> <hr/> <p>-7-</p> <p>7 [1] 136:18</p> <hr/> <p>-9-</p> <p>9 [1] 106:13 90 [5] 52:11,12,15 54:8 64:8 93 [1] 81:21 9:05 [1] 1:2 9:15 [1] 9:14 9:30 [1] 20:21 9:45 [1] 32:20</p> <hr/> <p>-A-</p> <p>A.D [2] 176:6,12 a.m [12] 1:2 9:14 20:21 32:20 43:10 56:1 68:21 80:11 92:5 94:9,10 102:20 ability [3] 71:25 157:16 176:9 able [22] 3:5 13:10 14:11 16:16 17:3,10 26:15 44:23 46:15 73:9 93:13 110:18 124:22 126:4 129:9 142:2 144:24 148:18 151:7,9 155:16 165:3 above [7] 114:20,25 116:15 118:9 122:22 161:12 163:1 Absolutely [1] 109:21 accept [3] 59:24 113:12 130:10 accepting [1] 115:24 access [1] 165:9 accommodations [1] 143:23 accomplished [2] 167:1 170:17 accomplishing [1] 46:8 accordance [1] 55:25 according [1] 59:12 account [12] 29:2,10 30:3 73:7 76:2 78:1 81:8 101:3,7 102:7 104:15 105:4 accountable [1] 146:2 accounting [2] 118:23 119:11 accounts [5] 73:5 79:22 102:17 103:7,22 accurate [1] 139:11 achieve [4] 150:7 152:18 162:7 165:13 achieved [9] 28:18 31:2 35:5,6 36:25 38:8,10 42:17 148:17 achieving [2] 128:13 165:14</p>	<p>acknowledge [1] 117:5 acquisition [1] 173:19 act [2] 62:10 68:3 action [3] 37:13,24 42:5 actioned [1] 38:3 actions [5] 42:12 43:3 56:16 57:13 132:22 activities [10] 13:10 14:22 55:3 64:19,24 99:22,25 100:5 143:6 146:14 activity [1] 46:24 actual [4] 4:4 64:25 129:24 130:20 actuality [1] 1:21 actuals [4] 2:13,15,25 172:21 add [2] 127:18 169:7 adding [2] 169:13 170:7 addition [8] 77:5 101:21 127:18 130:9 138:6,7 164:15 168:22 additional [21] 7:11 14:17 21:25 32:2 36:23 44:20 66:25 68:6 129:21 129:25 130:11 145:8 152:1,3,14 158:13 170:11 171:3,7,10 173:8 additions [1] 148:20 address [14] 8:15 14:6 19:7 36:3,7 37:15 38:20 38:23 39:15 42:6 43:2 89:6 161:4 171:17 addressed [4] 35:25 37:2 42:13 164:8 addressing [4] 39:1 40:14 41:6 42:4 Adequacy [1] 106:11 adhere [1] 101:12 adjourned [1] 175:6 adjust [2] 35:9 72:24 adjusted [2] 70:8 114:19 adjusting [1] 35:18 adjustment [4] 1:14,16 16:2 72:25 adjustments [6] 46:14 46:22 163:8 164:1,5,10 adoption [1] 119:12 advanced [1] 75:2 advantage [1] 143:22 advice [2] 90:5,6 advised [1] 141:17 affect [5] 16:3 95:16,18 95:24 111:20 affected [3] 32:23 100:7 174:2 affecting [2] 138:5 173:18 after-hour [1] 59:1 again [29] 13:11 17:8 20:10 21:2 34:3 37:23 42:23 48:24 52:1 57:24 64:21 68:11 70:25 81:4 88:14 90:10,18 117:13</p>
--	---	--	---	--

<p>128:19 132:7 144:15 149:25 150:10 151:4 155:13,15 165:22 169:12 172:18 against [3] 55:11 129:23 130:19 age [2] 48:16 168:9 aging [7] 67:5 111:9 134:21 145:7 151:25 158:12 171:21 agree [15] 26:3,7,9,21 48:1 56:11,17,20 57:19 78:15 131:19,25,25 134:13 142:14 agreed [1] 106:24 agreement [4] 69:9 126:14,16,21 agreements [1] 164:2 ahead [2] 94:12 116:2 air [1] 50:2 align [1] 122:20 aligned [1] 114:11 alignment [1] 150:3 allocate [5] 22:19 124:19 124:20,21 127:7 allocated [1] 25:14 allocation [8] 11:6 18:18 18:22 19:1,12 20:4,10 22:21 allow [1] 78:20 allowance [6] 44:19,25 165:18 166:10,15 174:20 almost [1] 137:7 along [2] 46:3 75:2 alongside [1] 137:9 alternatives [1] 13:19 always [10] 51:5,7 88:20 130:3 142:21 152:12,13 153:5,21 155:9 amend [1] 6:16 amended [2] 18:24 19:19 amongst [2] 47:6 172:20 amount [16] 18:6 20:13 23:5 32:7,10 75:6 104:3 106:5 116:13 124:19,20 124:21 134:4 144:20 145:18 163:6 amounts [2] 10:17 23:25 analysis [18] 29:7 36:1 36:14 37:20 38:11 59:3 59:6,15 60:9,21 87:18 92:4 98:22 109:10,10,19 111:1 147:5 annual [27] 10:3,17,21 15:13 29:22 40:23 41:8 44:24 45:16 55:11 65:10 84:11,12 95:15 124:13 124:16 134:8 138:10 140:4,20 144:9,14 148:13 148:16,25 150:15 165:8 annually [4] 118:1,4 127:15,23 answer [6] 25:24 73:13 127:20 137:25 138:23 166:12</p>	<p>answers [1] 113:4 Anthony [1] 15:3 anticipation [1] 104:24 anyway [4] 59:13 105:6 167:17 175:3 apart [1] 92:3 apparatus [1] 176:10 appeared [1] 74:21 Appendix [1] 127:16 apples [2] 80:9,9 application [9] 7:15 18:19 21:9 109:16,18 113:16 145:16 148:6 176:6 applied [2] 80:15 161:19 apply [1] 62:12 applying [1] 141:5 apprenticeship [1] 150:12 approach [7] 24:25 26:5 26:7 59:10 62:6 140:15 162:15 appropriate [16] 7:10 7:20 19:2 21:12,17 48:2 56:16 57:13 64:17 70:21 78:11 79:5 108:17 113:16 124:1 141:10 appropriately [1] 26:2 approved [2] 18:21 118:24 April [1] 6:2 area [32] 2:23,23 12:17 13:15 14:15,16 17:9 18:1 20:25 35:25 45:23 46:11 51:19 55:7 67:10,23,24 68:17,19 113:8 114:2,8 115:6 133:24 134:2 135:22 145:14 146:16 148:22 171:13 174:1,25 areas [64] 12:16 13:5,18 14:4,6 15:4,7 16:10 20:5 24:24 25:7,13 30:19 35:24,25,25 36:16,23 37:1 40:17 41:3,6,15,16 41:17 43:5,24 50:20,23 50:25 51:2,23 52:17,17 52:21 54:4,8,11 62:10 64:4,6,20,20 68:8 69:8,9 113:25 121:14 139:5 145:15 151:18 171:4,6,8 171:13 172:9,11,13,16 173:11,12,25 174:2,5 arguments [1] 19:13 arise [2] 142:15 151:16 arises [1] 58:24 Arm [1] 143:21 arose [1] 69:1 arrangement [1] 142:7 arrangements [1] 77:2 aside [10] 12:1 16:12,15 19:17 22:4,7,18 23:5 59:11 60:7 asks [1] 166:8 aspect [10] 39:14,22 42:9 45:4 61:18 79:2 97:17</p>	<p>104:17 105:17 158:22 aspects [16] 25:12 37:22 38:18 39:9 40:13 53:3 53:11 62:8,14 64:18 67:13 75:8 76:19 111:16 111:18 160:3 assembled [1] 139:3 assembling [1] 138:22 assertion [2] 123:12,13 assess [1] 50:10 assessment [3] 20:3 38:25 46:13 assessments [1] 48:12 asset [40] 24:25 25:4 45:12,24 47:3 49:4,8 56:21 61:23 62:8,13 63:2 63:3,12,16,23 64:10,14 64:18,19 65:1,18 74:10 74:22 112:11 115:14 126:5 133:11 134:6 135:25 138:12,18 140:13 141:2,8,15 142:6,16 143:5 148:22 assets [8] 67:5 134:21 141:11 143:17 145:6 148:11 151:25 168:9 assigned [1] 37:14 assist [2] 90:2 157:23 assistance [1] 148:17 associated [2] 60:22 94:21 assume [4] 24:6,9 120:12 159:19 assuming [2] 56:10 83:9 assumption [1] 96:14 attendant [1] 144:21 attention [11] 39:12 69:10,10 72:20 93:19 117:18 129:19 152:22 158:13 165:7 166:6 attributable [1] 137:24 August [3] 72:2 106:25 161:13 auxiliary [1] 97:19 avail [1] 150:13 availability [2] 70:3 141:11 available [7] 56:25 104:4 150:17 154:5,21 157:13 165:1 availing [1] 150:19 Avalon [1] 171:5 avenues [1] 133:16 average [11] 82:20 83:13 83:14 84:6,20 85:10,17 92:9 93:4,22,24 averaged [1] 118:3 averaging [1] 118:1 avoid [1] 48:3 awarded [2] 90:12,14 aware [13] 19:10 31:4 33:1 43:8 76:6 80:13 90:20 111:5 130:9 133:5 154:4 156:4 160:18</p>	<p>away [4] 4:14,18,23 43:16 awfully [1] 144:20</p> <hr/> <p style="text-align: center;">-B-</p> <hr/> <p>B.C [1] 80:13 backed [2] 118:16 119:9 background [1] 86:12 backlogs [2] 63:11,14 backup [1] 123:11 balance [3] 46:17 98:4 115:13 balanced [1] 23:10 ballpark [1] 169:10 band [2] 102:6,18 bands [1] 102:22 barrel [7] 86:23,23,25 87:1,2 91:5 93:1 base [7] 88:13 95:21 96:14,21 106:5 166:14 172:5 based [14] 15:12 21:10 28:22 29:9 45:3,12 46:13 47:1 48:11 52:11 57:17 59:13 83:22 118:7 basic [1] 40:16 basing [1] 59:20 basis [23] 9:9 10:21 18:23 22:22 40:23 45:16 55:6 55:8 65:10 68:14,20 70:15 71:18 82:19 86:23 86:24 95:15 99:12 103:19 114:19 132:15 141:25 146:22 bathtub [1] 71:3 Bay [2] 14:9 30:1 bear [1] 67:24 bearings [1] 31:11 became [2] 130:1,13 becoming [1] 171:19 began [2] 56:6 68:24 behind [8] 3:2 30:21 36:2 38:14 43:9 52:18 62:3 108:6 below [3] 118:10 127:21 138:9 benchmark [2] 152:6 154:1 benchmarking [2] 154:1,4 benefit [6] 78:21 91:7,12 99:5 108:18 110:5 benefits [6] 91:10 108:21 112:14 116:23 120:17,22 best [9] 4:15,18 9:22 10:4 23:16 79:25 80:1 161:3 176:9 better [3] 82:7 142:17 143:19 between [9] 2:20 22:12 38:21 49:7 82:24 91:16 106:25 116:5 126:19 big [3] 9:17 17:8 18:3</p>	<p>bigger [2] 43:1 93:21 biggest [3] 8:10 25:10 92:11 bit [18] 7:24 11:6 23:22 25:23 27:20 30:8 34:9 34:16 38:7 43:12 73:5 81:19,21 99:22 116:4 118:9 144:1 158:23 Black [2] 107:18,24 blanket [1] 57:2 blast [1] 50:2 blended [1] 89:12 board [27] 8:22 11:19 18:21 44:3 87:15 101:2 105:10 106:10,25 107:8 107:21 109:2 111:4 113:15 124:13 125:2,18 125:25 126:5,22 127:10 127:15,24 128:1 156:1,3 176:7 Board's [1] 156:11 boiled [1] 153:12 boiler [5] 92:14,16,18 93:6 140:15 borne [2] 20:14 169:14 bottom [1] 2:21 break [4] 94:8,9 99:10 173:11 breaker [1] 50:21 breakers [1] 50:2 brief [2] 5:7 106:20 bring [13] 34:6 46:9 48:21 69:14 86:14 108:21 113:24 122:12 127:13 129:19 132:22 156:8 159:9 bringing [1] 152:22 brings [2] 87:16 98:13 broad [1] 42:13 broader [5] 37:22 42:6 42:9 43:4 142:15 broken [1] 126:3 brought [6] 16:21 42:18 67:24 89:2 165:7 171:14 BTU [22] 87:4,9,19,21 88:1,5,16,18,19 90:2,15 90:21 91:4,5,8,16,18 92:10 93:2,5,23,24 BTUs [5] 86:17,24 87:1 87:3 90:24 budget [38] 12:11,21 13:22,24 44:16,23 45:7 124:16,25 125:12,23,24 127:8,9 129:14,23 130:19 130:23 131:3,5,8,9,12 131:15 132:18 137:6,13 146:22 157:4,16 158:22 159:1,9 160:24 165:19 166:20,24 172:6 budgeting [11] 9:11 44:11,12,22 125:12 132:7 132:16,21 133:9,22 166:13 budgets [10] 12:18,19 15:20,22 136:12 137:10 160:12 163:16 166:4,15</p>
---	--	---	--	--

<p>build [1] 150:5 building [2] 121:4 160:11 built [11] 3:15 40:6,9 45:6 105:5,8 172:5,23 174:10,16,20 bullet [1] 162:12 bullets [1] 162:18 bumped [1] 52:20 burden [5] 113:13,19 123:23 125:17 156:21 burn [1] 98:17 burning [1] 98:15 business [1] 26:11 buy [1] 108:23 buying [5] 86:17,24 89:8 90:21,21</p> <hr/> <p style="text-align: center;">-C-</p> <p>CA-233 [1] 128:5 CA-328 [2] 166:9,19 calculate [1] 83:17 calculated [2] 83:20 127:5 calculation [1] 124:23 capability [3] 29:21 31:14 39:8 capacity [6] 98:12 107:14,18,22 108:7 109:24 capital [23] 8:19 13:8,9 13:15,24 31:24 45:13 48:13 50:8 111:23 122:2 122:6 129:22 130:16 133:13 134:22 145:8 151:25 158:14 167:23,24 168:1,15 capitalized [1] 119:15 captured [1] 101:7 care [3] 37:17 144:21 167:18 careers [1] 149:22 carefully [2] 49:18 159:19 carried [1] 33:9 carry [2] 33:11,12 carrying [2] 65:4 142:17 case [14] 5:25 6:4,7,8 7:13 9:4,6,19 58:5 88:20 97:15 102:12,13 137:8 cases [1] 63:11 cash [2] 129:22 130:16 CASS [1] 4:13 Cat [1] 143:21 categories [3] 120:15 122:16 126:4 category [1] 120:1 caused [2] 31:7 72:22 causes [1] 168:1 causing [4] 32:9 50:10 111:21 112:5 central [2] 15:4 16:10</p>	<p>centrally [1] 18:9 cents [1] 73:20 certain [8] 14:22 43:24 46:19 85:5 118:15 119:14 171:4 172:9 certainly [10] 4:10 7:17 32:17 68:1 73:13 75:2 97:13 121:19 134:25 157:25 certainty [2] 74:5 75:19 CERTIFICATE [1] 176:2 certify [1] 176:3 cetera [7] 118:11 142:18 144:1 153:1 160:11 167:14 168:24 CF [3] 25:9,9,20 CFO [2] 6:24 160:1 Chair [6] 1:7 4:14 5:4 94:6,14 112:17 Chairman [11] 1:3 60:25 61:5,9,13,19 94:7 94:11 112:18 174:25 175:4 challenge [7] 51:5,15,16 92:25 133:20 146:9 152:15 challenged [3] 51:9 93:7 151:23 challenges [3] 46:8 71:8 136:11 challenging [2] 14:13 17:1 change [21] 18:6,23 19:10,12 22:23 58:13,18 58:19 60:4 74:15 75:25 85:17 89:16 105:10 116:20 122:15 123:3 127:3 148:20 150:25 158:10 changed [1] 165:12 changes [22] 8:3,7 26:11 34:5 36:2 66:13,14 70:18 76:3 84:16 89:4,5,14,14 116:14 118:23 119:11 138:12,19 140:14 146:20 148:20 changing [10] 19:25 20:2 67:4 74:12 84:13,15 88:23 89:8 107:8,9 characterized [1] 167:4 charge [2] 146:4,7 charged [3] 1:22 25:15 25:17 charging [2] 23:23 25:18 chart [6] 117:21,22 118:4 118:13,16 123:14 charts [1] 157:23 cheaper [1] 98:18 check [1] 81:20 chief [5] 54:23 66:15,17 67:12 68:12 Churchill [3] 22:14,16 25:11 circuit [2] 50:2,21</p>	<p>circumstance [5] 23:13 47:24 80:15 83:10 134:15 circumstances [3] 57:6 67:5 158:10 cited [2] 128:7 166:18 City [1] 32:8 claiming [1] 172:4 clear [3] 43:19 113:18 156:21 clearly [2] 156:9 166:19 climbing [1] 10:17 close [4] 55:2 66:21,21 67:21 closed [1] 69:21 closer [1] 74:25 Co [3] 25:9,9,20 coast [1] 14:10 combined [1] 78:3 combustion [20] 8:4 67:14,16 71:19,24 72:5 72:8 76:20 78:5 79:11 93:6,8 98:7,12,16,19,23 98:25 173:7,16 comfort [1] 162:23 coming [9] 7:3 16:10 21:16 31:9 32:6 52:9 67:3 73:2 98:25 comment [13] 31:20 49:16 58:24 59:17,24 66:8 112:3 120:11 123:3 123:6 144:22 164:7 167:18 comments [6] 48:19 49:1,2,21 56:10 110:20 commissioned [2] 91:23 92:7 Commissioners [1] 176:7 commitment [8] 100:19 100:20 101:9,13,15,23 102:2 104:23 commitments [1] 164:2 committed [1] 101:19 committee [1] 32:24 common [3] 25:7,13,19 communications [1] 127:2 communities [3] 14:19 18:2,11 community [3] 14:21 14:21,23 companies [1] 125:9 company [16] 12:9 18:16 30:18 39:23 62:11 63:19 78:18 102:23 103:7,9 125:4 134:20 150:7 155:17 158:11 173:25 company's [1] 123:15 comparable [1] 79:18 comparative [1] 118:21 comparator [1] 125:8 compare [1] 157:10 compared [1] 130:22 compares [1] 128:19</p>	<p>comparing [1] 123:2 comparison [2] 119:4 157:22 compensated [1] 116:22 competitive [3] 111:17 116:23 164:11 complete [7] 44:17,24 70:16 109:14 134:5 148:25 168:15 completed [4] 42:14 51:21 68:18 108:10 completion [8] 51:11 51:13 52:7 55:10 67:10 107:1 148:15 171:24 compliance [5] 50:23 51:10,24 52:2,13 component [4] 76:22 77:21 93:20 121:14 components [3] 85:20 97:22 127:8 comprehensive [1] 63:1 computer [1] 165:2 concept [3] 116:5 130:19 140:16 concern [5] 21:6 41:6 44:4 50:18 70:2 concerned [3] 35:14,17 37:1 concerning [2] 24:12 43:22 concerns [3] 41:4 43:21 107:7 conclude [2] 59:8 175:1 CONCLUDING [1] 175:7 condition [5] 45:25 47:1 47:3 48:12 134:20 conditions [1] 85:18 confident [2] 151:12,14 confirm [4] 49:13 62:17 159:13 166:9 connection [3] 91:15 112:2 172:3 consequence [1] 91:2 consequences [1] 56:17 conservation [1] 13:12 consider [14] 21:17,18 22:5 23:7 29:15 30:4 40:2 59:8 77:24 82:15 103:6 109:24 110:4 168:1 considerable [4] 24:23 116:12 141:20 163:6 consideration [6] 23:3 29:22 33:16 58:3 60:4 158:10 considered [2] 58:20 104:20 considering [2] 20:4 82:12 consistency [1] 63:19 consistent [3] 49:18 64:3 141:16 constant [3] 151:21,22 170:17</p>	<p>constantly [4] 93:7,11 140:9 152:16 constrained [1] 168:4 constraining [1] 168:18 consultant [7] 62:10 64:21 88:25 89:2,18,18 89:22 consultants [1] 119:23 Consulting [3] 43:20 48:19 68:25 consumption [2] 13:7 13:17 contact [1] 5:22 content [23] 86:9,11,14 87:9,19,22 88:1,8,13,14 88:16,18,20 89:14 90:2 90:21 91:5,24,25 92:10 93:5,23,24 context [3] 23:7 26:24 157:20 continual [3] 101:20 142:24 155:10 continually [2] 36:17 100:18 continue [9] 18:7,21 51:5 101:5,11,24 129:4 129:5 135:14 continued [3] 32:11 37:18 38:3 continuing [1] 155:22 continuous [1] 132:15 continuously [1] 142:21 contract [3] 2:8 86:16 88:12 contractors [1] 144:13 contracts [5] 39:11,19 40:7,7 52:1 control [24] 12:6 78:10 79:1,4 93:4,5,6,16 94:1 114:4 115:7,9,12 116:1 116:6 117:16 125:4,4,16 128:17 129:11 136:23 137:11 155:21 controllable [13] 12:12 16:13 113:9 114:17 120:18,23 121:7,10,20 122:21 123:9 125:6 164:24 controlled [3] 128:9,14 135:7 controller [1] 160:2 controlling [1] 128:21 controls [5] 92:13 136:24 137:3,4 173:13 conversation [3] 38:21 103:3 154:20 conversion [33] 80:21 81:9 82:9,13,14 83:18 83:21,25 86:3 91:3,16 91:20 92:2,12,15 94:18 94:22 95:6,10,16,19,21 96:5 97:1,7,11,20,24 98:2 100:6 101:4 102:4 152:25 convinced [1] 122:20 cook [1] 143:25</p>
--	--	--	---	---

<p>cooking [2] 143:23,24 corporate [4] 11:6 115:1 140:6 173:4 Corporation [1] 173:21 correct [25] 1:23 21:14 30:13 35:3 44:5,7 48:6 54:6 73:23 74:2 78:20 84:2 104:11 108:2 117:10 124:5 129:12 131:17 144:6 150:20 159:3 162:21 165:19 169:1 176:4 corrected [1] 70:9 corrective [8] 44:20 45:1 45:6 48:3 56:12 70:16 96:3 171:18 correspond [1] 2:15 cost [84] 11:4 13:20 16:12 18:1,15 19:2 20:15 21:23 26:15 27:7,14 46:17 73:25 74:5 75:6 98:22 98:24 99:1 101:9,11,14 105:21,23,25 108:15 109:10,19 110:5,7 111:8 111:13,16,19 113:17 114:4,16,22 115:7,9,12 115:18 116:1,5 117:16 120:18 124:15,18 125:16 126:2 127:7 128:9,10,14 129:22 130:16 131:23 133:12 134:8,9,24 135:7 136:22,24 137:3,4,4,10 137:21 138:8,20,24 142:6 150:9,17 151:6,15 155:21 157:24 162:8 167:1 171:9 172:15 173:8,23 costs [70] 8:5 11:6 15:23 16:5 21:25 48:4 73:18 74:8 76:13,21 110:15,16 110:19 111:6,21,22 112:4 112:5 113:8,9,12,15 114:5,18,20,21,23,25 115:8,16,17 116:11,14 120:1,3,17 121:20 122:15 122:21 123:9,25 124:10 125:6 126:1,3,5 128:17 128:21 129:11 130:3 132:18 134:16 140:7 143:19,24 158:18 161:8 161:12,16,20 163:13 164:24 165:3,14,23,24 166:22 167:24 172:21 174:13 costs' [1] 164:20 count [2] 117:8 168:25 couple [7] 14:17 72:16 100:24 107:15 113:6 152:21 162:12 course [7] 31:10 46:6,19 87:23 117:5 137:23 163:15 cover [1] 76:2 covered [2] 77:25 113:6 credit [1] 170:4 creeps [1] 122:10 crew [1] 143:21 crews [1] 15:2 critical [13] 40:14 53:2,4</p>	<p>53:8,10,17 55:4 92:10 92:11 93:20 98:10 135:24 148:15 CROSS-EXAMINATION [4] 1:8,9,10 112:22 CT [9] 69:13,16,23 70:3 70:5 98:1,1,4 99:6 current [3] 107:3,20 150:11 curve [3] 71:3 92:23 93:9 customer [17] 14:24 21:2 22:22 23:1 32:10 78:21 78:24 82:23,24 84:14 85:19,23 94:2 152:2 158:15 168:5 171:11 customers [27] 20:7,8 20:15 21:18,20,24 22:6 22:9,20 23:4 36:9,10 41:5 46:16 47:9 70:22 78:23 91:1,10,12 107:6 108:18 114:6 115:15,20 128:11 168:16</p> <hr/> <p style="text-align: center;">-D-</p> <p>D'Espoir [1] 30:2 DAFOR [3] 29:21,22 31:12 daily [1] 145:2 damage [2] 31:10,19 Darren [4] 1:8 16:22 112:21 146:16 Darren's [1] 39:16 data [3] 38:13 40:3 137:12 date [7] 3:13 4:11 9:24 59:6 60:6,11 96:17 Dated [1] 176:11 day-to-day [2] 67:6 100:10 days [2] 71:6 113:6 deal [3] 35:17 66:2 109:23 dealing [1] 14:7 dealt [1] 71:10 December [2] 95:4 96:16 decide [2] 18:23 101:2 decided [1] 136:5 decision [18] 6:16,21 21:16 23:8 46:18,23 47:7 50:15 57:16 58:2,10,20 65:2,16 85:21 98:7 108:5 108:6 decisions [4] 12:14 58:8 58:14 65:17 dedicate [1] 67:1 dedicated [3] 67:16 141:6 148:11 default [1] 136:8 defer [5] 45:18 46:24 50:16 60:10 73:14 deferral [31] 43:23 44:15 49:7,16,22,23 50:19 56:12,13 59:10 60:11 65:2,8 73:5,7 76:2,6</p>	<p>77:25 78:12,15 79:14,21 81:7 101:3,7 102:6,17 103:6,21 104:15 105:4 deferrals [6] 43:13 49:3 49:13 50:4 103:11,14 deferred [3] 44:10 59:7 60:7 deferring [7] 47:18 56:15 57:12,21 59:4,15 60:21 deficit [21] 9:17 10:1,3 10:16,20 11:3,5,9 12:1 12:13,25 15:13 17:22 18:19 19:1 20:14 22:5,8 22:19 23:6 138:5 definitely [3] 8:24 35:24 61:18 degree [1] 162:23 delay [1] 72:22 deliberate [2] 58:20 60:3 delivered [3] 126:7 157:13 163:17 delivery [4] 34:11,14 114:5 128:10 demand [8] 13:15 84:14 85:19,23 94:2 152:2 168:10 171:11 demonstrate [5] 113:15 123:24 126:4 156:9 157:1 demonstrating [2] 157:5,24 demonstration [4] 125:16 144:12 156:22 157:17 denominator [1] 124:23 department [7] 79:25 83:7 98:5 115:1 145:22 147:3,20 departments [2] 62:11 114:24 depend [1] 85:22 depending [8] 15:3 34:16 39:17 73:14 85:17 85:18 99:3 162:14 deployment [1] 149:8 depreciation [1] 12:15 depth [1] 37:21 derated [1] 95:7 deratings [1] 97:16 describe [1] 128:12 described [2] 130:21 134:15 description [2] 136:22 138:4 design [1] 72:24 designed [1] 56:16 detail [9] 4:9 23:15 73:14 81:4 109:4,8 120:9 128:12 139:2 details [3] 19:18 23:25 80:19 determination [1] 54:19 determine [9] 11:5 36:1 46:14 54:19 83:11,12 84:12 87:7 124:18</p>	<p>determined [2] 54:22 163:23 determines [1] 87:19 determining [2] 54:17 94:17 develop [1] 132:9 developing [1] 160:12 development [1] 149:22 diesel [12] 14:4,18,19 15:1,24 17:5,9 18:9,11 79:11 98:17 107:18 diesels [6] 18:12 107:21 107:24 108:7,11,12 difference [3] 22:12 67:3 82:23 differences [2] 2:20 3:3 different [36] 2:22,23 3:17 7:24 20:5 21:2 22:20 25:23 28:11 37:21 38:18 46:21 54:23 64:20 68:8 75:9 76:15 87:25 89:13 92:24 93:2 95:24 97:21 100:24 124:12 126:3 133:16 148:11,22 149:21 158:18 162:14,15 168:3 172:16 173:24 difficulty [1] 115:24 direct [6] 63:17 65:8,9 117:18 121:25 166:6 directed [14] 113:1 133:1 133:3,5,8 134:13 135:5 135:8 136:4 143:2,7 151:17,19 163:8 direction [1] 114:11 directive [1] 143:4 directives [1] 6:9 disagrees [1] 49:15 disconnect [2] 91:11 116:4 discuss [4] 5:7 41:18 130:6 138:17 discussed [8] 1:13 11:21 12:2 13:22,23 19:19 38:19 156:11 discussing [2] 12:5 172:2 discussion [37] 4:22 6:6 6:11 12:18,23 19:15,24 20:12,18,19,24 21:4,10 21:22 23:22 24:23 39:6 42:21 43:14 46:3,12 47:6 51:23 54:12,24 65:3,15 67:8,11 74:11,14 109:5 158:24 162:3 163:6 164:5 164:8 discussions [19] 6:2 11:13 25:16,17 26:12 39:23 40:23 41:11 45:20 45:22 47:13 74:7 75:24 88:4,10 126:17 146:23 147:8,13 dispatch [4] 14:8,14 16:14,16 disposal [2] 121:23 122:9 dispute [1] 21:6</p>	<p>distribution [11] 14:7 31:25 32:3,8,12,15,19 33:6,20 79:20 80:7 document [12] 2:18 10:11 24:3,12 28:13 48:22 56:9 106:16 107:16 159:22,23 164:22 documentation [1] 58:15 documented [1] 58:13 documents [2] 2:12 106:8 doesn't [6] 2:14 61:14 87:4 91:6 118:13 145:17 dollar [6] 86:23 144:25 145:18 157:11,12 170:15 dollars [1] 153:14 done [38] 4:17,18,21,24 6:20 11:2,8 17:12 18:13 20:3 28:3 29:20 36:1 44:11 46:5,9 54:20 66:4 68:5 80:2 86:13,22 91:22 100:13 111:2 113:2 132:20 133:19,23 134:7 134:14 135:12 139:6,10 153:25 155:6 168:23 171:22 down [23] 12:25 15:14 39:13 41:8 43:6 48:4,4 81:19 84:25 96:24 97:6 97:17 99:21 100:23 107:17 111:22 117:21 129:5 159:15 160:9 165:24 170:6 174:16 dramatic [1] 18:5 draws [1] 49:7 drive [4] 13:15 132:22 150:1 158:18 driven [3] 93:25 94:1,2 driver [2] 116:19 162:4 drivers [6] 111:13,16 116:13,17 167:23 173:5 drives [1] 168:2 driving [4] 101:13 152:3 167:24 171:12 drop [1] 16:4 dropping [1] 86:11 DSR [1] 17:6 DSRs [1] 15:25 due [2] 111:23 119:11 Duly [1] 123:21 during [21] 13:22 44:16 44:21 45:2 46:6,18,22 50:9,14 69:15 83:9 84:17 84:24 87:23 96:16,23 98:8,11 117:16 146:24 161:15</p> <hr/> <p style="text-align: center;">-E-</p> <p>E [1] 127:16 early [3] 41:23 42:19 71:6 earnings [1] 129:23 easily [1] 58:2 easy [1] 16:6</p>
---	---	---	---	--

<p>economic [2] 99:5 117:1 effect [4] 13:13 86:4 146:21 167:17 effective [14] 13:21 56:11 114:10 116:5 142:7 142:23 145:11 146:12,18 150:6 152:8 153:11 155:23 170:10 effectively [4] 14:12,15 145:5 155:22 effectiveness [2] 149:17 155:8 effects [1] 118:22 efficiencies [8] 99:10,24 101:6 132:23 133:2,4 139:22 143:11 efficiency [25] 13:6 85:16 92:16,17 93:17 97:21 100:14 101:21 102:9,11 131:21 132:4 133:14,17 135:10 137:16 137:20 153:1 155:8,11 155:15 156:9,22 157:1 157:17 efficient [17] 92:19,23 93:9 98:19 132:12 133:20 142:23 145:11,23 146:17 147:6 149:9 155:1,7,18 158:6 170:10 efficiently [10] 14:12 16:16 99:13 100:1 134:8 135:1,4,20 136:1 145:4 effort [12] 34:2 133:1,4 133:6 134:13 135:5,8 136:4 141:20 151:17,19 167:11 efforts [4] 47:8 75:21 112:10 133:8 eight [10] 28:10 41:24 42:22 58:23 98:8,10,10 98:18,20 107:23 either [5] 39:17 69:23 109:11 147:23 149:6 elaborate [1] 14:2 electric [2] 103:24 174:1 electrical [1] 171:16 electricity [11] 21:20 22:8,10,13,18 23:5 90:23 101:10 113:18 114:5 128:10 element [9] 31:21 32:3 77:6,20 79:4 90:19 117:10 121:16 173:10 elements [13] 48:13 50:9 51:25 53:7 75:3,5,9 78:6 82:20 121:10 122:13 123:1 124:22 elsewhere [2] 59:5,17 embarked [1] 154:19 embarking [1] 135:24 emphasis [3] 38:11 50:13 170:25 employ [1] 99:11 employee [2] 148:21 153:14 employees [2] 134:23</p>	<p>144:17 enable [3] 14:24 15:25 74:18 end [10] 4:3 11:7 42:20 72:2 83:2 85:1 88:16 125:25 166:17 169:22 energy [10] 13:5,12 26:16 73:7 76:16 77:1 78:7 124:11 152:23,25 engage [1] 146:10 engaged [4] 63:13 90:1 99:25 100:5 engaging [1] 145:21 engineering [2] 62:25 169:6 engineers [1] 47:23 enhanced [1] 150:12 ensure [14] 54:25 100:12 111:11 113:17 114:9 115:15,16 133:23 135:19 141:9,10 142:10 148:14 153:10 ensuring [2] 68:3 116:21 enter [2] 10:7 106:13 enumerate [1] 151:10 environment [10] 101:15 114:4 115:7 117:1 128:9,15 134:22 135:7 135:19 168:17 environmental [5] 100:15,19 101:16,18,25 equipment [27] 2:7 29:24 47:1,2,4 56:22 57:8,17 58:1 72:17,19 97:19 111:12 120:22 121:5 122:4 141:17 142:11 152:3 168:13 172:14,20,24 173:4,6,18 174:15 equivalent [1] 98:12 escalation [6] 159:2,14 160:18,23 161:5,13 essence [2] 86:17 87:3 establish [11] 29:4,24 48:11 62:11 63:20 88:1 124:24 132:16 133:19 135:15 143:10 established [17] 28:22 33:5,8 39:21 52:10 58:16 61:24 62:5 66:15,24 67:7 67:8,14,25 129:10,21 131:9 establishing [6] 46:1 62:25 63:1,18 125:10 168:19 estimate [3] 83:3 137:21 144:9 estimated [4] 140:20 144:14 150:15 166:25 estimates [1] 138:10 et [7] 118:11 142:18 144:1 153:1 160:11 167:14 168:23 etc [1] 127:16 evaluate [1] 58:19 event [10] 29:13,14 31:5</p>	<p>34:13,14 36:5,13 38:25 72:21 130:12 events [9] 32:14,15 34:17 34:20 37:5 39:5 66:1 111:2 168:23 everybody [3] 31:4 64:22 146:1 everybody's [1] 145:2 everyday [1] 40:10 evidence [24] 27:22 43:20 48:20 49:6 50:1 59:2,14 62:18 63:9 71:3 79:24 80:13 83:22 113:12 113:14 114:14 115:3 117:19 123:15,24 125:17 126:10 138:1 163:10 evident [1] 171:19 evolving [2] 27:9 50:14 exactly [3] 27:17 36:4 69:5 examination [2] 114:15 114:16 examining [1] 59:1 example [5] 80:14 84:22 121:11 143:20 166:18 examples [1] 145:19 exceed [1] 162:1 excellence [1] 135:6 except [1] 30:16 exceptional [1] 29:11 excess [1] 161:21 excluded [3] 120:4,11 120:12 excludes [2] 118:22 119:1 execute [4] 50:4 65:5 145:10,11 executed [1] 49:18 executing [1] 63:23 execution [13] 46:4 47:4 55:23 63:17 64:25 133:10 134:5 135:25 138:19 143:15 144:18 145:24 148:1 executive [2] 130:14 153:10 exercise [5] 47:24 125:4 130:20 137:10 149:2 Exhibit [2] 127:16,24 expand [2] 74:6 161:23 expanded [1] 77:4 expansion [2] 114:22 117:7 expect [25] 2:16 17:21 34:4 46:11 58:13 71:12 71:15,18 72:7 73:1 83:17 96:4 112:4,8 115:20 130:11 139:7 140:2 141:3 143:11 154:7 160:4 167:8 167:16 170:6 expectation [3] 58:16 60:1,19 expected [13] 4:4 39:19 46:25 64:3 70:19 72:4 85:7 108:25 132:20</p>	<p>133:18 135:18 159:25 174:11 expecting [3] 39:21 77:10 107:3 expenditures [3] 59:5 59:17 164:15 expense [4] 8:12 12:7 118:22 120:24 expenses [24] 2:4 8:22 12:9,10,17,20 15:6 18:7 73:17 79:6 117:24 118:3 118:14,15 119:3,14 121:12,17 137:14 166:8 166:12 168:12 174:3,14 expensive [3] 16:9 98:24 99:1 experience [8] 33:23 34:17,19 36:11 45:3 104:6 117:16 149:7 experienced [6] 18:15 36:11 37:23 47:22 72:12 95:3 experiencing [1] 171:8 expert [3] 62:9 64:21 65:15 expertise [1] 57:25 explain [9] 84:4 94:20 102:19 118:13 132:3 135:4,8 162:19 172:22 explained [7] 19:11 89:7 111:4 116:16 127:6 134:11 163:22 explaining [1] 116:13 explanation [3] 144:2 162:10 163:12 explanations [2] 116:10 163:9 Exploits [11] 73:8,19 74:10 76:4,7 77:5,10 103:16,24 104:3,16 explore [1] 5:9 exploring [1] 147:17 exposure [2] 103:7 104:22 extent [1] 77:24 external [1] 151:18</p>	<p>factors [12] 17:23 23:11 31:16 82:10,11 89:15 92:1,7,8 95:18 97:22 124:20 fail [1] 48:15 failed [1] 69:24 fair [10] 7:23 11:5 20:9 22:21 23:12,22 38:7 69:22 81:21 158:23 fairly [1] 49:20 fairness [4] 19:8 20:4 21:1 23:7 fall [3] 39:13 163:21 167:9 fallen [1] 163:25 falling [1] 52:17 fallout [1] 125:11 fallouts [1] 12:14 falls [2] 91:9 173:21 familiar [3] 106:15 156:10 169:8 far [1] 84:23 feeder [1] 32:7 feels [1] 82:11 felt [6] 7:8 8:24 23:11 103:8 108:13 135:22 few [7] 5:5,7,21 70:1 88:6 138:17 175:2 fewer [2] 89:8,10 field [1] 66:19 figure [5] 15:12,13 161:1 164:16 169:7 figures [6] 1:20 34:1 72:1 122:22 167:10,10 file [3] 6:9 7:10,20 filed [9] 9:23 21:9 43:20 83:23 125:20 126:10,12 126:21 127:25 filing [5] 6:17 8:14 18:24 19:20 74:20 filings [2] 111:4 125:18 filling [1] 169:22 filter [1] 70:18 final [2] 110:12 121:22 finally [1] 152:22 Finance [5] 6:25 79:25 80:1,20 161:3 finances [1] 120:7 financial [21] 7:2,3,9 28:2 79:3 101:1,12 114:1 114:24 119:23 123:3 124:4 125:19 126:12,22 127:14 129:21,25 137:8 160:3 163:4 fine [4] 4:24 66:10 129:2 138:2 fingerprints [1] 139:22 first [17] 28:17 30:16 52:14 66:15 69:19 70:5 70:10 71:1 73:6 108:9 113:7 117:17 119:6 138:11 148:3 160:17 173:3 fit [2] 105:14,18</p>
---	--	--	--	--

-F-

<p>facilitate [2] 147:8,13 facilities [10] 48:14,16 71:4,5 125:10 134:21 136:10 141:6 152:8,24 facility [11] 70:7,12 73:2 74:12,13 87:21 103:25 104:4,6 106:1 171:14 fact [8] 22:5 23:3 24:4 30:25 111:20 126:11,21 173:15 factor [28] 17:25 23:10 29:21 31:14 39:8 80:21 81:9 82:9,13,14 83:25 85:13,15 86:3 91:3,17 91:21 92:2,15 94:16,18 100:6 101:4 102:4,9,11 103:3 161:5</p>
--

<p>five [6] 72:6,9 99:20 128:18 129:12 132:9</p> <p>fixed [1] 91:5</p> <p>flat [1] 154:25</p> <p>flatten [1] 18:6</p> <p>fleet [1] 151:3</p> <p>flow [2] 129:22 130:17</p> <p>fly [1] 15:2</p> <p>focus [27] 12:8,11 13:4 14:16 42:11 47:8 51:12 51:19 52:6 53:9,25 54:13 67:6,15,16,23 74:16 104:16 109:25 112:12 125:5 142:17 143:17 151:22 152:2 165:12 171:7</p> <p>focused [10] 15:8 39:18 42:3 48:24 51:16 67:1 93:3 148:22 150:6 155:5</p> <p>focusing [3] 41:15 118:25 133:24</p> <p>folks [3] 14:20 50:10 120:4</p> <p>follow [5] 37:14 47:17 92:22 155:14 162:17</p> <p>followed [1] 63:21</p> <p>following [7] 11:7 38:1 65:4,25 94:22 131:13 138:7</p> <p>footnote [2] 118:20,21</p> <p>force [2] 114:11 116:22</p> <p>forced [5] 30:5 32:15 70:25 71:13,21</p> <p>forecast [17] 2:14,17 4:5 7:23,24 9:3,10 82:12,21 82:22,23 83:21 107:3,9 159:3 161:14 172:22</p> <p>forefront [1] 40:18</p> <p>foregoing [1] 176:3</p> <p>foreseeability [1] 75:13</p> <p>foresight [1] 75:14</p> <p>form [2] 59:2,14</p> <p>format [1] 125:22</p> <p>forms [1] 60:16</p> <p>forth [2] 36:7 171:15</p> <p>forward [44] 7:12 9:5,9 16:21 19:13 20:12 23:12 27:3 29:3,9,19 30:9 32:6 33:10,11,13 35:19 41:13 43:18 44:23 45:14 65:21 66:2 70:2 71:15 76:25 85:7 101:24 103:19 109:1 110:3 113:14 123:24 132:17 141:24 147:15 148:5,15,24 156:8 157:7 157:23 161:22 168:20</p> <p>found [2] 39:2 162:7</p> <p>four [7] 56:9 62:22,23 72:11 73:20 144:1 151:1</p> <p>frequency [1] 17:2</p> <p>frequently [1] 141:13</p> <p>friend [2] 113:3 158:24</p> <p>fringe [2] 120:17,22</p> <p>fruition [1] 74:23</p>	<p>FTE [2] 117:8 168:25</p> <p>FTEs [2] 3:19 169:7</p> <p>fuel [47] 13:7 70:18 76:21 78:6 79:7,11 80:20 81:9 82:8,13 83:18,20,24 86:3 86:14,16,16 87:13,14,15 87:16,17,18,20,24 88:2 88:7,21 89:5,9 90:3,6,21 90:23,25 91:16,19,24 92:2 94:3,17,22 95:10 98:17,23 100:6 102:4</p> <p>fulfilled [1] 25:25</p> <p>full [8] 69:18 103:6 104:24 118:14 143:21,22 145:18 150:2</p> <p>fully [2] 68:17 108:25</p> <p>functions [1] 62:25</p> <p>funding [1] 150:13</p> <p>fuses [1] 17:11</p> <p>future [11] 29:12 33:12 36:12 39:7 43:18 48:4 68:1 69:10 74:6 96:2 112:14</p>	<p>132:17 138:3,17 153:6 166:12,21</p> <p>gone [8] 15:14 41:22 54:16 111:21 147:3 159:23 160:2,4</p> <p>good [13] 19:14 48:2 49:4 49:8,14,19 50:25 58:3 60:11 148:8 153:2,19,23</p> <p>Goose [1] 14:9</p> <p>government [8] 5:23 6:3 6:10,12 74:7,11 150:14 150:19</p> <p>GRA [8] 21:1 27:24 76:25 105:6,18 156:5,6 156:8</p> <p>Grant [8] 28:5 119:19 119:24 120:5,10,15 122:16 172:19</p> <p>graph [3] 118:4,7 127:19</p> <p>graphic [1] 118:6</p> <p>GRAY [7] 9:25 62:19 81:11,15 99:14 119:20 136:15</p> <p>great [2] 34:10 143:17</p> <p>greater [4] 78:21 163:10 163:13 170:25</p> <p>greatest [1] 46:15</p> <p>greatly [1] 31:12</p> <p>Greene [2] 24:11 25:22</p> <p>gross [1] 114:19</p> <p>ground [1] 113:5</p> <p>group [15] 13:12,16 25:6 29:7 32:25 38:19 47:6 54:19 55:22,23 67:15 78:4 108:11 148:7 171:1</p> <p>groups [3] 21:2 64:16 137:7</p> <p>growing [11] 50:8 145:6 151:24,25 152:2 155:4 158:14,15 168:9,17 171:18</p> <p>grows [1] 168:10</p> <p>growth [5] 13:9,14,18 164:20 171:12</p> <p>guess [63] 1:17 3:12 4:25 6:16,17 12:24 16:12 19:17 20:5 21:6 22:25 23:15 26:14 30:8,11,16 33:16 35:2 40:4,21,24 41:21 45:12 54:22 57:19 59:9 77:9 78:1,14 80:19 81:7 94:24 99:9,11 104:2 104:19 109:8 110:13 112:1,24 113:9 115:22 122:12 123:8 130:7 131:2 134:11,13 139:18 144:2 148:4,6,8 150:17 154:23 154:25 155:13 159:12 161:2 163:16 167:5 168:22 169:19</p> <p>guidance [9] 159:2,14 160:13,18,23 161:7,11 161:21 163:1</p> <p>guide [3] 64:22 92:22 93:9</p> <p>Guideline [1] 159:10</p>	<p>guidelines [4] 47:17,21 58:7 159:1</p> <p style="text-align: center;">-H-</p> <p>half [1] 115:1</p> <p>halfway [1] 107:17</p> <p>handle [1] 35:16</p> <p>hands [1] 175:2</p> <p>happening [13] 1:25 19:10 33:4 34:6 41:10 55:7 85:22 89:3 134:19 145:9 146:21 163:7 164:24</p> <p>Happy [2] 14:9 15:2</p> <p>hard [1] 36:13</p> <p>harp [1] 151:13</p> <p>Haynes [1] 160:4</p> <p>head [3] 5:8 103:15 116:5</p> <p>heading [1] 138:11</p> <p>heard [2] 167:15 176:6</p> <p>hearing [7] 5:6 19:15 20:25 35:3,4 164:19 176:4</p> <p>heat [4] 86:9,11,14 89:14</p> <p>heating [4] 88:7,13,13 90:22</p> <p>held [2] 165:23,24</p> <p>help [16] 14:22 15:1 17:21,25 48:3 64:22 65:16 89:2 137:9,10 145:22,22 147:8,12 150:5 151:18</p> <p>helped [1] 149:2</p> <p>helpful [1] 67:2</p> <p>Henderson [289] 1:9,12 1:24 2:5 3:4,11,18,23 4:7 5:21 6:5,22 8:1,9,20 9:7 10:22 11:1,16 12:4 13:2 15:18 16:19 17:18,24 18:25 19:6,21 20:1,22 21:13,21 22:11,17 23:9 23:18,21 24:18 26:4,8 26:17,22 27:16 28:14,20 29:1 30:12,20 31:3 33:3 35:2,10,20 37:4,10 38:15 40:12 41:1 42:1,24 43:12 43:25 44:6,14 45:8,21 47:14,20 48:5,9 49:25 50:22 51:3,18 52:5,22 53:1,24 54:5,10,21 55:15 55:20 56:5,19 57:5,15 57:23 58:11 59:19,25 60:13,18 61:25 62:4 63:6 63:15 64:2,13 65:13 66:6 66:12 69:3 70:4 71:17 73:4,12,22 74:1,9 75:1 75:16 76:5,10 77:13,19 78:2,19 79:23 80:12,24 81:3,24 82:3,16 83:6 84:1,5,10 85:4,14 86:6 86:15,20 87:8,12 88:9 89:19,23 90:4,11,16 92:6 95:17 96:6,10 97:12 98:3 100:2,8 101:8 102:8,14 102:21 103:4,23 104:10 104:18 105:7,13,20,24 106:4,16,17,22 107:16</p>	<p>108:1,8 109:13,20 110:2 110:9,13,22 112:7,21 113:1,10,20,23 114:13 115:3,11 116:8 117:9 118:12,17 119:10 120:2 120:8,19,25 121:8 122:1 122:12,24 123:16,23 124:6 125:21 126:15,24 128:2,19,24 129:3,13 130:2,24 131:7,16,20,24 132:6,25 133:7 134:18 135:11 136:6 137:2 138:14,20 139:1,12,24 140:22,24 142:8,19 143:3 144:5,19,23 146:6 147:7 147:14 149:12,19 150:21 151:8,12,20 153:2,4,24 154:6,13,17 155:3,19 156:1,13,17 157:2,19 158:7,25 159:5,12,17,24 160:14,20,25 161:24 162:13,22 163:2,20 164:14,25 165:10,20 167:3,20 169:2,9,16,19 169:25 170:8,24 172:7 172:12 173:2 174:9,21 174:24</p> <p>hereby [1] 176:3</p> <p>high [21] 17:2 34:19,24 41:5,12 51:24 52:2 86:2 86:2 112:12 114:4 115:7 115:9,12,25 128:9,14 135:7 141:10 162:23 173:3</p> <p>higher [23] 8:25 19:18 23:4 33:22 72:20 81:22 83:23,24 87:2 88:7,13 88:18,19,19 90:2,18 91:18,19 95:8,11 97:2 109:9 117:14</p> <p>highest [1] 96:19</p> <p>highlighted [2] 161:14 162:1</p> <p>highly [1] 114:10</p> <p>hiring [1] 2:8</p> <p>historic [7] 28:22 29:2,4 29:18 30:23 31:15 45:3</p> <p>historical [1] 29:16</p> <p>historically [1] 30:18</p> <p>history [1] 29:13</p> <p>hold [2] 174:3,11</p> <p>holding [2] 172:8,15</p> <p>Holyrood [41] 31:7,11 80:20 81:9,20 82:8,13 83:1,3,24 84:16,24 85:7 86:2 91:18,25 92:21 94:17,23 97:23 98:9,11 98:14,19,21 99:2,2,6,24 100:1,11 101:4 102:1,13 103:3 119:2,9,16 140:15 171:14,19</p> <p>horizon [1] 74:21</p> <p>hotel [1] 151:3</p> <p>hour [6] 73:20 86:23 98:25 99:2 153:14 157:12</p> <p>hours [19] 24:2,5,10,15 83:11 84:18 91:4 93:1 98:8,9,10,10,15,18,20</p>
<p>-G-</p> <p>gain [1] 78:23</p> <p>gains [2] 133:14 134:3</p> <p>galloping [1] 116:2</p> <p>GARDINER [2] 1:10 112:22</p> <p>garner [1] 20:12</p> <p>gas [1] 71:23</p> <p>general [14] 6:25 8:22 18:14 41:2 43:5 60:7,8 95:14 110:20 117:1 136:18 145:16 174:12 176:5</p> <p>generalities [1] 95:13</p> <p>generally [8] 21:19 25:18 43:8 83:25 84:13 163:21 164:3 172:14</p> <p>generated [2] 11:11,14</p> <p>generating [4] 29:24 31:8 95:3 126:5</p> <p>generation [15] 13:19 64:5,5 71:5 95:8,12 106:10 107:5,10 124:11 124:21 143:17 151:3 168:6 174:1</p> <p>generator [2] 14:8 30:1 147:23 149:6</p> <p>gentlemen [3] 112:24 147:23 149:6</p> <p>geographic [1] 148:9</p> <p>given [17] 7:4 19:13 32:5 71:20 72:2 92:18 96:13 108:19 123:8 131:22 135:9,9 151:17 156:20 156:20 164:22 167:10</p> <p>GLYNN [5] 5:13,17 10:6 106:12 123:20</p> <p>go-forward [2] 68:20 71:18</p> <p>go-to [1] 146:2</p> <p>goes [12] 87:15 90:25 91:9 97:17 119:25 127:19</p>		<p>greater [4] 78:21 163:10 163:13 170:25</p> <p>greatest [1] 46:15</p> <p>greatly [1] 31:12</p> <p>Greene [2] 24:11 25:22</p> <p>gross [1] 114:19</p> <p>ground [1] 113:5</p> <p>group [15] 13:12,16 25:6 29:7 32:25 38:19 47:6 54:19 55:22,23 67:15 78:4 108:11 148:7 171:1</p> <p>groups [3] 21:2 64:16 137:7</p> <p>growing [11] 50:8 145:6 151:24,25 152:2 155:4 158:14,15 168:9,17 171:18</p> <p>grows [1] 168:10</p> <p>growth [5] 13:9,14,18 164:20 171:12</p> <p>guess [63] 1:17 3:12 4:25 6:16,17 12:24 16:12 19:17 20:5 21:6 22:25 23:15 26:14 30:8,11,16 33:16 35:2 40:4,21,24 41:21 45:12 54:22 57:19 59:9 77:9 78:1,14 80:19 81:7 94:24 99:9,11 104:2 104:19 109:8 110:13 112:1,24 113:9 115:22 122:12 123:8 130:7 131:2 134:11,13 139:18 144:2 148:4,6,8 150:17 154:23 154:25 155:13 159:12 161:2 163:16 167:5 168:22 169:19</p> <p>guidance [9] 159:2,14 160:13,18,23 161:7,11 161:21 163:1</p> <p>guide [3] 64:22 92:22 93:9</p> <p>Guideline [1] 159:10</p>	<p>heat [4] 86:9,11,14 89:14</p> <p>heating [4] 88:7,13,13 90:22</p> <p>held [2] 165:23,24</p> <p>help [16] 14:22 15:1 17:21,25 48:3 64:22 65:16 89:2 137:9,10 145:22,22 147:8,12 150:5 151:18</p> <p>helped [1] 149:2</p> <p>helpful [1] 67:2</p> <p>Henderson [289] 1:9,12 1:24 2:5 3:4,11,18,23 4:7 5:21 6:5,22 8:1,9,20 9:7 10:22 11:1,16 12:4 13:2 15:18 16:19 17:18,24 18:25 19:6,21 20:1,22 21:13,21 22:11,17 23:9 23:18,21 24:18 26:4,8 26:17,22 27:16 28:14,20 29:1 30:12,20 31:3 33:3 35:2,10,20 37:4,10 38:15 40:12 41:1 42:1,24 43:12 43:25 44:6,14 45:8,21 47:14,20 48:5,9 49:25 50:22 51:3,18 52:5,22 53:1,24 54:5,10,21 55:15 55:20 56:5,19 57:5,15 57:23 58:11 59:19,25 60:13,18 61:25 62:4 63:6 63:15 64:2,13 65:13 66:6 66:12 69:3 70:4 71:17 73:4,12,22 74:1,9 75:1 75:16 76:5,10 77:13,19 78:2,19 79:23 80:12,24 81:3,24 82:3,16 83:6 84:1,5,10 85:4,14 86:6 86:15,20 87:8,12 88:9 89:19,23 90:4,11,16 92:6 95:17 96:6,10 97:12 98:3 100:2,8 101:8 102:8,14 102:21 103:4,23 104:10 104:18 105:7,13,20,24 106:4,16,17,22 107:16</p>	<p>108:1,8 109:13,20 110:2 110:9,13,22 112:7,21 113:1,10,20,23 114:13 115:3,11 116:8 117:9 118:12,17 119:10 120:2 120:8,19,25 121:8 122:1 122:12,24 123:16,23 124:6 125:21 126:15,24 128:2,19,24 129:3,13 130:2,24 131:7,16,20,24 132:6,25 133:7 134:18 135:11 136:6 137:2 138:14,20 139:1,12,24 140:22,24 142:8,19 143:3 144:5,19,23 146:6 147:7 147:14 149:12,19 150:21 151:8,12,20 153:2,4,24 154:6,13,17 155:3,19 156:1,13,17 157:2,19 158:7,25 159:5,12,17,24 160:14,20,25 161:24 162:13,22 163:2,20 164:14,25 165:10,20 167:3,20 169:2,9,16,19 169:25 170:8,24 172:7 172:12 173:2 174:9,21 174:24</p> <p>hereby [1] 176:3</p> <p>high [21] 17:2 34:19,24 41:5,12 51:24 52:2 86:2 86:2 112:12 114:4 115:7 115:9,12,25 128:9,14 135:7 141:10 162:23 173:3</p> <p>higher [23] 8:25 19:18 23:4 33:22 72:20 81:22 83:23,24 87:2 88:7,13 88:18,19,19 90:2,18 91:18,19 95:8,11 97:2 109:9 117:14</p> <p>highest [1] 96:19</p> <p>highlighted [2] 161:14 162:1</p> <p>highly [1] 114:10</p> <p>hiring [1] 2:8</p> <p>historic [7] 28:22 29:2,4 29:18 30:23 31:15 45:3</p> <p>historical [1] 29:16</p> <p>historically [1] 30:18</p> <p>history [1] 29:13</p> <p>hold [2] 174:3,11</p> <p>holding [2] 172:8,15</p> <p>Holyrood [41] 31:7,11 80:20 81:9,20 82:8,13 83:1,3,24 84:16,24 85:7 86:2 91:18,25 92:21 94:17,23 97:23 98:9,11 98:14,19,21 99:2,2,6,24 100:1,11 101:4 102:1,13 103:3 119:2,9,16 140:15 171:14,19</p> <p>horizon [1] 74:21</p> <p>hotel [1] 151:3</p> <p>hour [6] 73:20 86:23 98:25 99:2 153:14 157:12</p> <p>hours [19] 24:2,5,10,15 83:11 84:18 91:4 93:1 98:8,9,10,10,15,18,20</p>

<p>98:21 99:4 126:6,7 HROE [6] 145:23 146:10 146:20 147:24 148:7,18 huge [1] 163:15 human [5] 114:8 138:20 147:4 150:9 151:15 hydraulic [10] 82:21,24 83:14 85:18 103:25 104:8 104:17 105:15 143:17 151:2 hydro [97] 6:16 12:24 18:23 24:4,15,24 25:2 25:15,17,20,25 26:9 27:24 41:11,14 49:9,17 49:24 59:9 64:4 74:13 74:23 75:7 76:24 78:17 79:1,4,19,19 80:10,14 82:11 90:24 91:2,2,6,13 94:20 101:3,5,9 103:2 103:24 113:13 114:3,9 114:12 117:8,8,22,23 118:8 120:3 123:8 124:2 125:17 126:12,21 127:21 127:25 128:12,16 129:20 130:1 131:21 132:3,25 133:5 134:25 137:17 138:6,22 144:16 146:7 150:11 152:24 153:2,19 155:1,17,17 156:5,7,25 157:10 159:23 160:2,3 160:11 164:17 165:17 166:9 169:23,23 170:4 172:4 174:1 Hydro's [27] 5:24 7:9 18:19 41:7 43:22 49:6 49:15 59:2 60:17 94:1 105:5,19 107:20 113:8 117:19,24 119:24,25 127:17,20 128:18 166:13 166:19,20,23 168:25 176:5</p> <hr/> <p style="text-align: center;">-I-</p> <p>IC-093 [1] 99:9 idea [5] 30:19 59:11 60:11 66:3 93:11 ideas [2] 147:17,17 identified [12] 37:11,13 37:16 38:2 42:12 55:5 69:5,6,8 111:1 137:17 144:20 identifies [1] 132:3 identify [12] 36:6,16 55:4 128:16 131:21 132:10 133:1,4 137:20 145:23 146:24 151:7 identifying [4] 125:2 135:10 141:12 145:17 IFRS [1] 119:12 impact [31] 3:25 8:5 12:7 16:8 18:3 25:1,8 31:10 31:18 36:15 41:5 42:6 42:10,13 54:3 68:20 70:21,22 91:12 93:18,20 94:20 95:21,22 96:21 97:3,13 107:10 111:7 168:5,16 impacted [3] 31:12,13</p>	<p>50:15 impacts [6] 2:6,8 53:25 93:22 97:19 118:23 implement [1] 154:21 implementation [1] 68:24 implemented [2] 26:10 66:13 implementing [1] 37:25 implies [1] 61:10 importance [2] 65:22 135:9 important [8] 40:3 53:9 82:12 91:22,24,25 94:16 131:20 impression [2] 18:4 32:16 improve [23] 26:11 27:3 29:5 30:19 36:17 37:15 38:3 51:6,7,9 65:12 93:12 100:18 101:25 111:24 112:8 134:4 147:1 153:5,21 155:15,23 171:24 improvement [14] 30:6 30:23 36:16 43:5 68:2,6 68:16 69:8 91:8 101:20 132:15 133:17 155:10 172:5 improvements [8] 29:4 64:17 101:22 132:14 135:23 153:1 165:19 166:14 improving [4] 27:9 147:19 155:7,11 in-built [1] 167:4 incentive [6] 40:9,15 88:17 101:1,5,12 include [5] 44:25 73:18 78:5 127:17 165:17 included [5] 18:20 62:24 103:21 123:14 166:10 income [1] 130:17 incorporated [1] 130:1 incorporates [1] 166:13 incorrect [1] 59:8 increase [11] 8:23 96:5 98:2 107:22 110:15,16 118:2 161:8 163:1 171:15 173:10 increased [3] 67:23 107:19 110:19 increases [9] 18:15 95:11 96:2 114:16 115:4 116:2 117:6,24 164:3 increasing [3] 16:5 168:25 173:5 incur [2] 73:1 78:24 incurred [1] 111:23 indeed [1] 162:5 index [1] 118:22 indexed [1] 119:5 indicate [2] 3:24 72:3 indicated [7] 9:12 27:22 65:24 109:11 136:3</p>	<p>148:14 161:3 indicates [3] 49:14 129:20 161:12 indicating [4] 55:24 117:22 139:6 140:3 indication [3] 74:14 86:10 103:18 indicative [1] 29:11 indicator [2] 127:15 158:6 indicators [6] 27:22 28:1 28:6 37:3 116:3 127:23 inefficient [1] 7:17 infamous [1] 23:22 inflation [29] 114:18,21 114:24,25 116:2,16 118:1 118:9,10 119:3 122:22 122:23 123:10 131:5 132:20 134:16 136:12 157:20,22,25 158:4,5,17 158:19,20 163:13 165:15 172:9,16 inflationary [6] 117:25 132:19 164:3,10,16 174:12 influence [6] 13:14 30:2 34:20 97:23 111:19 121:25 influenced [5] 31:17 32:13,14 34:9,12 influencers [1] 92:12 influences [3] 39:6 85:16 92:14 influencing [2] 89:16 92:2 information [13] 3:10 5:10 7:4,11 10:8 11:18 28:4 106:13 120:6 138:22 164:18 165:1,9 informed [1] 107:8 infrastructure [1] 158:12 infrequent [1] 71:13 initial [1] 74:20 initiated [2] 37:17 75:21 initiative [4] 68:16 135:15 141:14 150:25 initiatives [29] 12:25 13:3,25 15:11,16 27:2,4 27:12 29:5 100:25 101:24 131:21 132:4,11 135:10 135:14 137:17,21,24 138:4,7,24 140:1,12 152:23 167:2 170:18,19 170:22 input [2] 132:10 163:15 inquired [1] 154:11 inquiries [1] 59:1 inquiry [1] 69:1 insist [1] 175:5 insisted [1] 33:16 inspections [3] 56:24 119:2,8 install [1] 173:15 installed [3] 124:11</p>	<p>126:8 157:12 instance [9] 2:9 12:15 25:9 39:15 98:6 161:11 164:18 167:12 171:4 instances [1] 69:23 instrumentation [1] 171:16 insufficient [1] 163:9 insurance [1] 121:3 intends [1] 109:12 intent [1] 44:17 intention [1] 107:20 interacting [2] 25:5,6 interactions [1] 24:20 Interconnect [1] 22:7 Interconnected [5] 20:7 21:20 22:1,9 76:14 interconnection [2] 67:19 107:2 interest [1] 25:19 interested [1] 109:9 interim [1] 44:4 internally [2] 15:15 29:7 interpretation [1] 174:19 intimate [1] 57:7 intimately [1] 57:7 introduced [1] 130:7 introduction [3] 117:20 138:1 151:1 invest [1] 145:8 investigated [1] 108:24 investment [3] 13:16 111:10 134:22 investments [3] 31:24 111:24 112:9 involved [13] 6:20,23 11:23 25:16 33:15 45:19 46:2,4 47:12 52:15 65:14 148:10 160:6 involvement [2] 65:8,9 involves [2] 56:15 57:12 Island [2] 22:6 76:14 isolate [1] 27:5 isolated [3] 13:4 14:3,19 isolation [2] 95:5 158:20 issue [4] 19:8 38:20 43:1 104:15 issues [19] 14:24 17:3 19:9 25:2 35:16 36:2 37:15 38:24 41:3 42:4 50:6 66:20,22 72:16 94:21 107:7 110:17,25 171:10 item [5] 10:8 31:13 68:11 161:25 174:7 items [39] 8:12 9:17 12:6 12:12,12 15:21 26:25 27:4 37:11,13,15,24 38:2 43:1 46:20,21 50:5,11 67:25 68:4 69:7,7 70:24 71:1 76:19 78:4,7 95:24 100:9 102:1 108:20 115:13 116:9 125:5 130:5</p>	<p>130:6,14 134:24 140:8 itself [5] 5:25 12:1,2 102:5 128:17</p> <hr/> <p style="text-align: center;">-J-</p> <p>January [13] 31:6 37:6 37:19,23 42:10,19 50:7 51:17 65:25 66:4 95:1,4 168:23 Jennifer [1] 9:21 Jenny [1] 129:4 job [5] 100:11 136:22 141:8 143:13 145:2 jobs [3] 40:14 135:16 168:15 John's [2] 176:8,11 Johnson [99] 9:22 10:11 10:13 112:19,22,23 113:22 115:21 117:4,12 118:19 119:17,21,22 120:14,21 121:2,21 122:7 123:7,18,22 125:14 126:9 126:18 127:12 128:4 129:1,7,17 130:18 131:1 131:11,18 132:2,24 134:10 135:2 136:2,13 136:16,17 137:15 138:16 139:8,17 140:11 142:4 142:12 143:1,14 144:7 145:20 147:2,11,21 149:5 149:15 150:8,23 151:11 152:19 153:17 154:3,10 154:15,22 155:12,25 156:15,19 157:14 158:3 158:21 159:8,21 160:8 160:16,22 161:6 162:9 162:20 163:14 164:13 165:5,16 166:5 168:21 169:4,11,18 170:2,13 172:1,10,17 174:4,18,23 judgment [5] 47:24 57:1 57:9,14,16 judgment's [1] 57:20 judgments [1] 56:23 Judy [2] 176:3,13 July [1] 18:20 June [1] 119:21 justification [1] 161:22 justify [1] 162:25</p> <hr/> <p style="text-align: center;">-K-</p> <p>keep [10] 1:18 12:24 43:15 98:8 99:12 100:1 107:7 108:15 110:1 132:18 keeping [3] 12:20 20:20 78:17 kept [1] 123:10 key [15] 27:21,25 28:6 40:16 41:15 85:12,15 92:10,10 113:25 114:1,8 115:6 132:10 171:4 kilowatt [10] 73:20 86:22 91:4 93:1 98:25 99:2 126:6,7 157:12,12 kind [12] 2:24 3:3 5:4</p>
---	---	--	---	--

<p>6:11 15:7,16 21:3 27:12 65:14 79:21 154:20 164:7</p> <p>kinds [1] 58:14</p> <p>knock-on [1] 167:16</p> <p>knocked [1] 34:14</p> <p>knowledge [2] 57:8 132:25</p> <p>known [1] 56:13</p> <p>knows [2] 56:21 57:7</p> <p>KPI [4] 124:8,13 153:14 157:7</p> <p>KPIs [9] 28:11 29:9 38:9 38:18 39:23 40:3 42:22 124:3,12</p> <p>kV [1] 50:3</p> <hr/> <p style="text-align: center;">-L-</p> <hr/> <p>L [3] 25:9,20</p> <p>lab [1] 87:17</p> <p>labour [9] 2:8 8:19,19 153:3,6,19,23 154:24 164:2</p> <p>Labrador [16] 14:10 20:7,14 21:19 22:1,9,14 32:8 67:19 107:1 114:3 171:13 173:19 176:5,8 176:11</p> <p>laid [2] 111:3 165:4</p> <p>landed [1] 11:9</p> <p>language [1] 115:5</p> <p>large [9] 25:1 36:12 37:24 50:3 98:14 116:14 116:17,19 163:17</p> <p>larger [2] 77:1 104:5</p> <p>last [10] 2:12 11:22 14:17 17:7 27:24 76:24 88:6 113:6 121:23 164:9</p> <p>latter [1] 114:7</p> <p>lawn [1] 53:15</p> <p>leadership [20] 11:13 11:21 12:3,5 23:23 24:3 24:7,14,22 26:2,21 65:23 66:1,5,8 114:2,9 128:8 130:6,13</p> <p>leading [1] 68:12</p> <p>learned [1] 72:18</p> <p>lease [3] 107:25 108:12 108:23</p> <p>leased [1] 108:12</p> <p>least [19] 17:22 26:15 27:14 51:21 83:22 101:9 101:11,14 103:18 109:10 109:19 113:17 115:18 116:4 131:23 133:11 134:9 144:1 151:19</p> <p>leave [2] 18:4 32:16</p> <p>leaving [1] 152:20</p> <p>led [3] 22:2 134:15 140:23</p> <p>left [4] 5:20 94:15 103:14 162:22</p> <p>legal [1] 75:4</p> <p>length [2] 7:4,7</p> <p>less [5] 87:1 88:17 96:3 99:6 133:3</p>	<p>level [26] 16:23 19:18,18 26:20 36:10 39:20 40:20 41:5,12 67:11 75:13 78:8 84:20 95:8,11 96:19 102:24 109:9 117:14 131:3 138:5 149:1 161:21 168:20 173:4,4</p> <p>levels [4] 54:23 95:3 117:25 124:14</p> <p>Liberty [9] 43:20,21 48:19 49:2,14 59:13 68:25 69:4,9</p> <p>Liberty's [2] 49:12 63:9</p> <p>light [1] 149:10</p> <p>likely [1] 7:13</p> <p>likewise [1] 121:3</p> <p>limitation [1] 173:13</p> <p>limited [1] 17:10</p> <p>line [14] 17:10,13 31:13 121:23 122:9 138:3 150:11 160:9 161:25 167:9 172:8 174:3,7,12</p> <p>lines [8] 17:11 48:23 49:10 56:9 58:23 62:22 62:23 129:19</p> <p>Link [1] 67:20</p> <p>list [7] 69:15,18 73:11 80:23 139:13,22 140:9</p> <p>listed [4] 99:23 120:16 122:16 138:9</p> <p>live [1] 14:21</p> <p>load [23] 13:11,18 82:23 82:24 83:18 84:6,15,20 85:10,12,12,15,17 87:14 92:18,20 94:16 97:3 99:3 107:3,6,8 155:5</p> <p>loading [5] 83:15 92:9 93:4,22,24</p> <p>loads [2] 92:24 93:2</p> <p>located [1] 18:10</p> <p>location [1] 148:9</p> <p>locations [1] 14:5</p> <p>longer [1] 95:20</p> <p>look [57] 10:4,5 13:5,9 13:19 25:25 27:8 28:1,4 28:9,10 29:8,13,25 30:9 30:17,21 35:7 36:13 38:12,19 41:23 63:13 76:1 87:21 92:17 94:24 98:13 108:6,14 120:15 132:10 135:13,14 140:12 141:8 145:2,3 146:3,10 146:25 147:16 148:8,18 150:9 152:6,16 153:21 157:15 158:19,22 159:20 167:22 173:11,14,24,25</p> <p>looked [16] 2:11 7:9,23 16:20 20:3,13 22:20 35:14 37:2 79:17 82:6 115:16 116:9 146:19 147:18 148:12</p> <p>looking [42] 8:8 9:12 13:17 14:3,11,13 20:8 20:10 29:18 30:15,17 43:18 47:18 65:10 73:15 78:15,16 90:2 91:17 108:11 114:22 118:5</p>	<p>132:13 133:10,11,13 136:9 141:4,21 142:22 143:7 145:9 146:1 147:9 149:24 151:22 154:9 155:14 160:3 165:12 169:13 173:3</p> <p>looks [2] 20:24 83:8</p> <p>lose [1] 96:20</p> <p>loss [2] 121:23 122:9</p> <p>lots [1] 108:20</p> <p>low [9] 31:23 32:18 70:21 97:18 99:3 121:24 122:9 122:10,11</p> <p>lower [18] 24:5 25:11 84:21 85:10 87:1,5 88:5 88:16 91:3,8,18 95:3 97:7,10 110:19 112:5 162:8 168:20</p> <p>lowered [1] 95:5</p> <hr/> <p style="text-align: center;">-M-</p> <hr/> <p>M [4] 12:9 124:25 125:23 131:8</p> <p>machine [1] 70:9</p> <p>MacIsaac [2] 25:5,7</p> <p>main [1] 31:16</p> <p>maintain [8] 17:22 18:8 18:11 99:23 101:6 114:4 128:8 161:7</p> <p>maintained [2] 117:25 161:16</p> <p>maintaining [3] 115:6 128:14 165:14</p> <p>maintenance [95] 2:7 43:13,23 44:10,15,18,20 45:1,14,15,18 46:2,24 47:19 48:3,10,11 49:3,8 49:13,17,24 50:19,24 51:10,21,25 52:7 53:3,5 53:6,12,16 55:11 56:12 56:14,23 57:22 59:4,7 59:16 60:2,7,10 63:10 63:14 64:12,25 65:5 67:9 70:16,17 94:21,25 95:1 95:13 96:3 114:21,23 120:23 121:4 134:7,9 136:1 138:12 140:13,19 141:2,5,8,15,22,25 142:6 142:10,16 143:16 144:14 145:13 148:23 151:2 158:13 167:13 171:16,17 171:18 172:15,21,24 173:5,6,9,17,18,22</p> <p>major [6] 42:4 117:7 119:1,8 164:5 167:13</p> <p>majority [1] 121:19</p> <p>makes [2] 49:15 85:20</p> <p>manage [10] 12:19 39:20 40:4 46:16 134:25 135:3 137:6,9 157:16 174:15</p> <p>management [41] 24:25 25:4 38:19,22 39:22 45:13 49:4,8 58:18 61:23 62:8,13 63:2,3,12,16,23 64:11,14,19 65:1,18 100:16,19 101:16,19 112:11 114:1,8 115:14</p>	<p>134:6 136:1 137:4 138:18 143:5 149:23 151:16 155:21 157:3 167:2 170:17</p> <p>management's [1] 137:21</p> <p>manager [12] 6:25 7:1 41:9 46:4,10 56:21 63:12 93:10 133:18 135:18 136:23 137:5</p> <p>manager's [1] 142:22</p> <p>managers [31] 39:10,14 39:16,24 40:5 44:23 45:25 47:23 51:8,23 54:12,25 60:1 68:9 92:21 136:11,19,19,21 139:5 143:7,12 147:16,22 153:10 160:10 161:20 162:14 164:17 166:2 174:11</p> <p>managing [2] 12:10 137:13</p> <p>mandate [7] 25:25 26:16 27:11,15 101:11 131:22 152:10</p> <p>manner [11] 62:7,12 84:16 91:3 92:12 133:20 141:21 145:10,12 149:9 151:10</p> <p>manual [1] 144:3</p> <p>manufacturers [1] 141:18</p> <p>March [4] 10:4 69:19 72:21 96:17</p> <p>Maritime [1] 67:20</p> <p>market [4] 88:22,23 89:3 89:7</p> <p>marketplace [1] 89:9</p> <p>Martin [15] 24:1,21 27:21 38:12 40:20 41:2 41:10,18 42:18,25 65:22 102:12 156:2,11 160:5</p> <p>Martin's [1] 114:14</p> <p>math [1] 122:25</p> <p>matrix [8] 31:20 39:7 41:12 125:1 129:21 130:1 130:4 157:6</p> <p>matter [4] 29:17 109:15 126:11 176:4</p> <p>matters [1] 1:4</p> <p>may [43] 1:21 2:7 5:1 12:24 13:9 16:1,13,13 16:22 29:10,11,13 30:2 36:6 43:4 44:4 45:2 46:19,21 48:15 57:11 65:14 73:1,13 74:8 85:1 87:24 89:5 92:1 98:18 107:9 108:17 121:9 122:14 126:17 127:1,2 133:25 141:3 142:14 159:15 160:5 165:24</p> <p>McDonald [6] 3:20 24:11,21 25:22 116:12 163:22</p> <p>mean [13] 10:10 26:16 67:20 116:1 126:19 131:14 133:1,3 135:5</p>	<p>136:9 147:12 149:13 167:12</p> <p>means [1] 176:9</p> <p>measure [7] 39:10 71:22 84:11 129:23 153:12 158:1,8</p> <p>measures [14] 34:1 39:4 39:13 41:7 71:20 102:25 128:13 130:11 144:20 156:8,23,25 157:3,9</p> <p>measuring [3] 130:4,19 131:14</p> <p>mechanical [1] 171:17</p> <p>mechanisms [1] 79:15</p> <p>meet [3] 35:18 146:7 163:11</p> <p>meeting [5] 12:19 125:22 150:3 163:3,5</p> <p>meetings [2] 25:3 165:8</p> <p>megawatt [1] 107:22</p> <p>megawatts [2] 107:19 126:7</p> <p>mentioned [4] 36:20 66:16 67:7 69:13</p> <p>merit [2] 20:9,20</p> <p>met [7] 33:9,13 41:25 42:23 83:1 120:5 148:6</p> <p>methodology [2] 18:22 166:13</p> <p>methods [1] 166:17</p> <p>metrics [5] 52:7 63:21 64:15 65:3,11</p> <p>middle [1] 9:10</p> <p>might [20] 1:22 5:22 9:20 9:22,23 10:3 14:11 21:19 72:10 74:5 75:14 82:7 102:12 104:22 113:2 121:16 122:13 146:20 148:19 154:21</p> <p>million [7] 10:18 131:12 131:13 166:22,24,25 170:15</p> <p>minimize [2] 15:6 168:5</p> <p>minimum [1] 168:16</p> <p>minor [1] 140:17</p> <p>minutes [3] 5:6,7 175:2</p> <p>miscellaneous [3] 121:6 121:12,17</p> <p>mix [1] 150:1</p> <p>mixes [1] 87:24</p> <p>mobile [1] 108:19</p> <p>model [2] 124:18 126:2</p> <p>modest [1] 151:4</p> <p>moment [1] 119:18</p> <p>money [1] 124:19</p> <p>monitor [1] 93:13</p> <p>monitored [2] 39:2 153:9</p> <p>monitoring [4] 46:1 67:21 130:12 132:17</p> <p>month [4] 53:15,19 93:10 130:15</p> <p>monthly [2] 55:17 56:4</p>
---	--	--	---	---

<p>Moore [4] 1:8 14:1 112:21 148:2 morning [1] 5:6 Moss [2] 176:3,13 most [12] 7:10 9:23 19:1 23:12 30:15 47:11 50:25 90:7 112:25 121:9 133:20 145:10 motivated [1] 114:10 move [5] 34:2,16 35:23 75:22 97:8 moved [1] 72:22 moving [3] 97:2 148:14 171:2 mowing [1] 53:14 Ms [14] 5:13,17 9:25 10:6 24:10 25:22 62:19 81:11 81:15 99:14 106:12 119:20 123:20 136:15 multi-year [1] 68:18 municipalities [1] 121:15</p>	<p>83:10 normalization [1] 30:8 normally [1] 17:12 Northern [2] 34:10,18 note [4] 43:14 68:23 137:25 152:20 noted [2] 36:22 123:21 notes [1] 2:21 nothing [4] 16:21 120:3 120:12 143:2 notice [2] 33:5,21 November [1] 6:18 now [56] 3:8 9:9,11 16:2 17:17 18:22 29:20 42:19 43:12,19 51:16 52:14,21 54:4 55:7,13,21 59:11 65:21 66:4 71:15 74:24 75:17,18 76:25 77:4 88:5 89:11 103:19 107:1,24 108:6 111:15,15 113:23 114:13 117:13 118:7,12 119:6,14,18,23 120:1 125:15 128:5,19 130:19 131:19 138:1 144:15 150:9 153:1 159:12 161:7 165:17</p>	<p>20:17 21:5,15 22:3,15 22:24 23:14,20 25:21 26:6,13,19 27:10,18 28:16,24 30:7,14,24 32:21 35:1,13 36:19 37:8 38:5 40:1,19 41:20 42:15 43:11 44:2,8 45:5,10 47:10,16,25 48:7,17 50:17 51:1,14 52:3,19 52:24 53:22 54:1,7,15 55:12,18 56:2,7 57:3,10 57:18 58:4,21 59:22 60:5 60:15,23 61:1,3,7,11,16 61:21 62:2,15,21 63:8 63:25 64:7 65:6,19 66:9 68:22 69:12 71:14 73:3 73:16,24 74:3,19 75:12 75:23 76:8 77:8,15,23 78:13 79:16 80:4,18 81:1 81:6,13,17 82:1,5 83:4 83:19 84:3,8 85:2,11,24 86:8,18 87:6,10 88:3 89:17,21,25 90:8,13 91:14 94:5,13 96:1,8 97:9,25 99:7,15,16 100:4 100:22 102:3,10,16 103:1 103:12 104:7,12 105:2 105:11,16,22 106:2,6,14 106:19 107:12 108:3 109:6,17,22 110:6,11 111:25 112:15 113:3,7 130:21 133:2 134:1 158:24 161:17 167:6</p>	<p>oil [9] 87:13 88:15,23,24 89:9 90:3 91:9 98:15,17 oils [1] 89:13 OM [1] 124:10 once [4] 11:7 105:8 126:1 130:13 one [66] 2:11 3:3 6:1 7:15 8:3,3,11 9:17,24 14:15 17:23 18:10 20:23 23:1 23:12 24:1 28:5 34:13 36:21 37:20 39:3,8,12 39:13 41:17 43:7 48:23 49:4 51:22 53:17,18 56:10 58:6 62:22,23 68:16 69:19 74:4 78:4 87:2 93:15 96:23 99:8 102:23 103:14,21 104:5 106:7 110:12 113:23 124:20 129:15 131:12 133:16,24 135:22 138:11 140:17,19 143:6,16 145:14 150:24 151:1 161:3,9 ones [10] 54:14,17,18 55:4 118:18 124:9 125:7 141:12 144:24 151:9 ongoing [18] 17:6,19 39:22 52:6 56:22 67:6 67:11,21 68:18 69:10 92:25 111:9 112:13 140:9 145:12 146:9,13,22 online [4] 83:16 93:14 98:1,4 onus [3] 156:5,7,20 onward [1] 124:2 operate [8] 83:12 84:24 105:25 124:25 125:3,11 127:9 152:4 operated [2] 67:18 95:8 operates [1] 111:12 operating [37] 8:12 12:7 12:9,16 13:22 15:6,20 15:22 18:6 27:1 54:23 66:16,17 67:12 68:12 70:10 71:7 73:17 84:18 94:16 113:12 117:24 118:2,14,15,22 119:3 125:6 127:9 129:22 130:3 130:16 136:12 152:8 163:16 166:8,11 operation [16] 39:25 70:6,7,12 71:4,6,12 73:2 92:14 94:21 114:23 127:6 132:1 142:11 155:2 164:20 operations [23] 5:24 38:16 62:24 65:17 68:9 82:18 83:7 98:5 99:11 100:12 105:6,19 112:12 114:21 135:22 146:16 156:10,23 157:1,18 169:6 171:6,23 operator [6] 70:20 85:20 92:13 93:3,16 100:11 operators [4] 17:9 92:18 92:21,25 opportunities [3] 13:20 68:7 146:25</p>	<p>opportunity [8] 36:16 108:17,23 142:25 150:13 152:12,13,14 opposed [4] 48:25 50:20 64:24 112:5 opted [2] 135:17 136:3 optimize [4] 114:5 115:7 128:10 143:19 optimum [2] 100:13 149:1 option [3] 23:1 108:13 108:24 options [5] 20:23 109:23 109:25 110:4 147:9 order [14] 11:4 13:1 14:5 50:4 53:14,16 66:1 74:17 110:3 118:24 124:18 127:7 156:6 171:23 orders [1] 55:3 organization [15] 27:1 27:2 40:5 41:9 63:5 110:14 131:22 132:5 136:25 144:16 146:11,19 147:19 150:2,6 organizational [2] 135:6 149:16 organizations [1] 152:17 organized [1] 146:11 original [2] 18:19 141:17 originally [1] 165:25 otherwise [1] 95:9 ourselves [1] 69:6 outage [6] 30:1 31:22 32:15,17 69:1 71:21 outages [24] 17:15 29:23 30:5 32:2,7,10,22 33:17 33:24 34:3 38:22 43:4 69:17,18,24,25 70:11,14 70:25 71:13,16 95:2 167:12 168:4 outlook [2] 7:2,9 outset [1] 112:25 outside [2] 93:25 145:21 outstanding [1] 68:4 outstripped [1] 134:16 overall [4] 95:6 115:2 157:6 161:8 overhaul [4] 140:15,17 140:18,19 overhauls [2] 18:12 119:15 overseeing [1] 56:22 oversight [2] 40:20 63:3 overtime [2] 1:22 165:23 166:20,21,24,25 167:8,17 168:2,3,12,14 168:19 170:5,6,12,16 171:9,24 172:3 174:6,16 overview [3] 82:10 106:20 108:4 own [1] 135:19 owned [1] 173:21 ownership [4] 74:12,13 74:18 105:1</p>
-N-				
<p>Nalcor [9] 23:23 24:4,15 24:22 25:13,14 62:7 63:20 110:13 name [1] 139:10 namely [1] 170:18 natural [2] 105:14,18 nature [3] 34:23 78:11 94:3 necessarily [10] 2:16 24:10 56:14 57:12 86:4 96:7 109:7 112:1 145:17 158:17 necessary [3] 105:4 151:19 159:15 necessity [1] 162:4 need [15] 5:8 17:4 35:16 67:6 70:8,14 72:19 74:17 97:6 98:11 104:21 111:10 137:11 148:20 165:25 needed [1] 72:1 needs [3] 55:1 68:17 85:21 negative [1] 78:24 net [1] 130:17 never [2] 127:25 152:12 new [8] 70:7 71:2,4 72:17 72:18 73:1 88:11 174:25 Newfoundland [13] 9:18 20:6 21:18,24 22:6 23:4 79:9,20 80:6 114:3 176:5,8,11 next [5] 9:6 70:1 94:24 107:4 175:1 night [1] 2:12 NLH [1] 128:8 non-available [1] 95:23 non-controllable [1] 122:14 none [2] 31:1 41:25 normal [3] 72:14 79:12</p>	<p>NP [1] 150:10 NP-098 [1] 138:4 NP-191 [1] 81:10 NP-379 [1] 82:6 NP-384 [1] 166:7 NP-395 [1] 169:15 NP-NLH-034 [1] 9:20 NP-NLH-057 [1] 137:18 NP-NLH-333 [1] 94:19 NP-NLH-93 [1] 127:13 number [57] 2:3 12:12 17:4 19:9 24:24 30:4 34:11,13,16 37:11,12,21 37:24 41:15 46:20 48:13 52:8,16 54:22 62:20 68:8 69:22 71:16 72:5,9 75:3 75:8 76:15 82:7 83:11 88:23,24 89:9,15 90:17 91:5 93:12 95:18 97:21 99:4,22 100:24 116:3 121:24,24 124:12,16 125:12 133:15 134:19 135:12 144:17 159:7 165:21 168:3,8 172:15 numbers [5] 32:4 34:21 122:8 125:3 172:24 numerator [1] 124:23</p>	<p>objective [1] 92:24 objectives [3] 100:17 134:4 150:4 obligation [1] 27:13 observe [1] 125:25 observed [1] 126:11 obtain [3] 78:12,21 91:7 obvious [2] 8:3,14 obviously [7] 2:14 20:23 21:22 22:12 39:6 112:25 113:5 occasion [1] 147:23 occur [9] 25:17 27:5 39:5 44:21 45:22 50:13 71:10 75:22 105:9 occurred [4] 7:5 31:19 32:14 50:13 occurring [4] 13:18 26:25 50:9 75:15 occurs [6] 34:24 44:16 104:3 133:21,22 167:8 odd [1] 134:17 off [13] 5:5,20 31:9 34:11 90:17 94:15 96:24 97:14 98:8,9,14 113:7 118:11 offered [1] 164:12 office [12] 15:4 61:22 62:3 63:2,12,12,16 64:10 64:14 65:1,18 121:3 officer [5] 54:24 66:16 66:18 67:12 68:12 offline [1] 69:16 offloaded [1] 87:20 often [1] 71:25</p>	<p>oil [9] 87:13 88:15,23,24 89:9 90:3 91:9 98:15,17 oils [1] 89:13 OM [1] 124:10 once [4] 11:7 105:8 126:1 130:13 one [66] 2:11 3:3 6:1 7:15 8:3,3,11 9:17,24 14:15 17:23 18:10 20:23 23:1 23:12 24:1 28:5 34:13 36:21 37:20 39:3,8,12 39:13 41:17 43:7 48:23 49:4 51:22 53:17,18 56:10 58:6 62:22,23 68:16 69:19 74:4 78:4 87:2 93:15 96:23 99:8 102:23 103:14,21 104:5 106:7 110:12 113:23 124:20 129:15 131:12 133:16,24 135:22 138:11 140:17,19 143:6,16 145:14 150:24 151:1 161:3,9 ones [10] 54:14,17,18 55:4 118:18 124:9 125:7 141:12 144:24 151:9 ongoing [18] 17:6,19 39:22 52:6 56:22 67:6 67:11,21 68:18 69:10 92:25 111:9 112:13 140:9 145:12 146:9,13,22 online [4] 83:16 93:14 98:1,4 onus [3] 156:5,7,20 onward [1] 124:2 operate [8] 83:12 84:24 105:25 124:25 125:3,11 127:9 152:4 operated [2] 67:18 95:8 operates [1] 111:12 operating [37] 8:12 12:7 12:9,16 13:22 15:6,20 15:22 18:6 27:1 54:23 66:16,17 67:12 68:12 70:10 71:7 73:17 84:18 94:16 113:12 117:24 118:2,14,15,22 119:3 125:6 127:9 129:22 130:3 130:16 136:12 152:8 163:16 166:8,11 operation [16] 39:25 70:6,7,12 71:4,6,12 73:2 92:14 94:21 114:23 127:6 132:1 142:11 155:2 164:20 operations [23] 5:24 38:16 62:24 65:17 68:9 82:18 83:7 98:5 99:11 100:12 105:6,19 112:12 114:21 135:22 146:16 156:10,23 157:1,18 169:6 171:6,23 operator [6] 70:20 85:20 92:13 93:3,16 100:11 operators [4] 17:9 92:18 92:21,25 opportunities [3] 13:20 68:7 146:25</p>	<p>opportunity [8] 36:16 108:17,23 142:25 150:13 152:12,13,14 opposed [4] 48:25 50:20 64:24 112:5 opted [2] 135:17 136:3 optimize [4] 114:5 115:7 128:10 143:19 optimum [2] 100:13 149:1 option [3] 23:1 108:13 108:24 options [5] 20:23 109:23 109:25 110:4 147:9 order [14] 11:4 13:1 14:5 50:4 53:14,16 66:1 74:17 110:3 118:24 124:18 127:7 156:6 171:23 orders [1] 55:3 organization [15] 27:1 27:2 40:5 41:9 63:5 110:14 131:22 132:5 136:25 144:16 146:11,19 147:19 150:2,6 organizational [2] 135:6 149:16 organizations [1] 152:17 organized [1] 146:11 original [2] 18:19 141:17 originally [1] 165:25 otherwise [1] 95:9 ourselves [1] 69:6 outage [6] 30:1 31:22 32:15,17 69:1 71:21 outages [24] 17:15 29:23 30:5 32:2,7,10,22 33:17 33:24 34:3 38:22 43:4 69:17,18,24,25 70:11,14 70:25 71:13,16 95:2 167:12 168:4 outlook [2] 7:2,9 outset [1] 112:25 outside [2] 93:25 145:21 outstanding [1] 68:4 outstripped [1] 134:16 overall [4] 95:6 115:2 157:6 161:8 overhaul [4] 140:15,17 140:18,19 overhauls [2] 18:12 119:15 overseeing [1] 56:22 oversight [2] 40:20 63:3 overtime [2] 1:22 165:23 166:20,21,24,25 167:8,17 168:2,3,12,14 168:19 170:5,6,12,16 171:9,24 172:3 174:6,16 overview [3] 82:10 106:20 108:4 own [1] 135:19 owned [1] 173:21 ownership [4] 74:12,13 74:18 105:1</p>
-O-				
<p>O [4] 12:9 124:25 125:23 131:8 O&M [1] 116:18 O'Brien [20] 1:5,6,8,9 1:10,11 2:1,10 3:6,14,21 4:1,19 5:4,11,15,19 6:13 7:22 8:6,17 9:2,15 10:2 10:7,9,15,24 11:10,24 12:22 15:9 16:11 17:16 17:20 18:17 19:4,16,23</p>	<p>O [4] 12:9 124:25 125:23 131:8 O&M [1] 116:18 O'Brien [20] 1:5,6,8,9 1:10,11 2:1,10 3:6,14,21 4:1,19 5:4,11,15,19 6:13 7:22 8:6,17 9:2,15 10:2 10:7,9,15,24 11:10,24 12:22 15:9 16:11 17:16 17:20 18:17 19:4,16,23</p>	<p>O [4] 12:9 124:25 125:23 131:8 O&M [1] 116:18 O'Brien [20] 1:5,6,8,9 1:10,11 2:1,10 3:6,14,21 4:1,19 5:4,11,15,19 6:13 7:22 8:6,17 9:2,15 10:2 10:7,9,15,24 11:10,24 12:22 15:9 16:11 17:16 17:20 18:17 19:4,16,23</p>	<p>O [4] 12:9 124:25 125:23 131:8 O&M [1] 116:18 O'Brien [20] 1:5,6,8,9 1:10,11 2:1,10 3:6,14,21 4:1,19 5:4,11,15,19 6:13 7:22 8:6,17 9:2,15 10:2 10:7,9,15,24 11:10,24 12:22 15:9 16:11 17:16 17:20 18:17 19:4,16,23</p>	<p>O [4] 12:9 124:25 125:23 131:8 O&M [1] 116:18 O'Brien [20] 1:5,6,8,9 1:10,11 2:1,10 3:6,14,21 4:1,19 5:4,11,15,19 6:13 7:22 8:6,17 9:2,15 10:2 10:7,9,15,24 11:10,24 12:22 15:9 16:11 17:16 17:20 18:17 19:4,16,23</p>

<p style="text-align: center;">-P-</p> <p>p.m [6] 115:10 125:13 137:1 158:2 167:19 175:7</p> <p>P.U [1] 118:24</p> <p>paces [1] 162:25</p> <p>package [2] 116:23 143:21</p> <p>packaging [1] 143:18</p> <p>page [19] 10:5 28:9 48:23 49:10 56:8 58:23 62:18 62:20 70:1 94:24 99:19 99:21 107:13 117:18 119:19 129:19 136:18 152:22 172:18</p> <p>pages [1] 100:24</p> <p>paid [1] 93:18</p> <p>panel [4] 19:3 80:1 82:18 112:17</p> <p>panels [1] 111:14</p> <p>paragraph [1] 152:25</p> <p>part [62] 21:22 25:10 27:11,15 29:15 30:15 35:2,4,7 40:10,13,16 43:14 45:7 46:11 47:12 55:6 60:16,20 65:1,3 66:14 68:9 70:12,17 72:23 78:7 79:12 100:9 100:10,15,20 101:10,14 102:1 110:7 116:15,17 116:20,24 117:5,6,10 119:15 120:13 124:12 128:15 130:3,8,14 133:13 134:12 135:3 142:21 143:12 145:1 146:9,13 146:22 157:17 158:1,8</p> <p>partially [1] 97:18</p> <p>particular [29] 6:1 9:19 11:20 12:8 15:20 17:25 20:5 27:7 32:3,6 38:17 41:7 46:23 50:15 80:14 86:25 92:20 102:25 111:2 131:15 133:25 140:1,7 147:19 148:10 157:10 159:25 173:7 174:5</p> <p>particularly [4] 36:13 70:13 72:20 104:2</p> <p>particulars [1] 115:23</p> <p>parts [1] 76:15</p> <p>party [2] 6:6,11</p> <p>pass [2] 78:16 108:22</p> <p>past [6] 29:6,7 36:11 42:19 128:17 129:12</p> <p>pay [10] 21:19 22:8 23:4 40:15 75:7 87:1 88:16 88:19 90:18 121:14</p> <p>payer [2] 78:16,20</p> <p>paying [2] 20:16 90:23</p> <p>payments [2] 111:17 121:12</p> <p>Peak [1] 107:14</p> <p>Peninsula [3] 34:10,18 171:5</p> <p>people [41] 6:23 12:19 14:8,14,18 16:10 18:8,9 24:22 37:14 47:4,22 58:1</p>	<p>58:17 60:20 63:22 65:17 66:19 72:7 89:8 90:20 104:21 117:3,7 135:16 137:7 139:19 140:3 143:10 144:1,24 146:8,8 151:23 152:4 161:19 163:4,7 165:23 169:23 170:7</p> <p>per [19] 23:1 43:7 86:23 86:23 91:4 93:1,2 98:24 99:1 124:10 126:5 128:22 131:8 143:2 151:5 153:14 153:14 157:11,12</p> <p>percent [31] 51:11,12 52:11,12,13,15,20 54:4 64:9,9 72:6,10,11 114:18 114:20,24,25 115:2 116:15,18 118:1,3 122:17 122:17,18,18 134:17 148:15 161:9,9,13</p> <p>percentage [2] 92:17 122:15</p> <p>perfect [1] 2:17</p> <p>perform [1] 130:5</p> <p>performance [55] 26:11 27:3,21,25 28:2,6,23 29:3,5,8,12,16,18 30:23 31:16 34:10 35:23 36:3 36:8,10 37:3 39:7,10,11 39:19,20 40:6,7 41:19 43:8 52:1 59:7 60:6 67:22 72:3,4,14 79:3 101:25 107:9 110:24 116:6 124:4,14 125:19 126:13,22 127:14,23 128:18 156:8,23,24 157:3 157:4</p> <p>performed [1] 26:9</p> <p>performing [1] 52:12</p> <p>perhaps [9] 4:14 9:21 37:22 70:16 94:6 113:24 151:18 159:9 166:6</p> <p>period [25] 11:22 14:16 27:8 66:23 71:11,12 85:6 95:20 96:13,16,23 97:5 107:4,11 116:7,21 117:15 117:17,23 118:2,25 124:2 141:3 164:21 165:4</p> <p>periods [1] 71:9</p> <p>person [6] 19:3 57:6 66:18 67:1 137:8 146:3</p> <p>perspective [5] 22:21 79:3 107:11 158:14 164:23</p> <p>pertaining [1] 152:25</p> <p>pertains [2] 73:8 166:7</p> <p>philosophy [2] 25:1 43:22</p> <p>pick [3] 1:12 21:24 96:17</p> <p>picked [1] 17:8</p> <p>picture [3] 76:23 82:7 118:14</p> <p>pie [1] 117:21</p> <p>piece [3] 11:18 40:14 135:24</p> <p>pinpoint [1] 17:4</p> <p>place [17] 15:21 17:17</p>	<p>27:25 52:7,8 56:13 58:7 68:10 74:16,17 99:6 102:18 105:14 115:17 148:19 152:7 158:18</p> <p>placed [1] 143:18</p> <p>places [2] 14:9 155:7</p> <p>plan [29] 7:4 9:5 29:23 29:23 30:1,17 36:7 41:8 41:11 44:24 45:13,13 48:3,10 55:11,25 63:1 68:19 74:22 95:21 132:9 140:2,5,6 148:13,16 149:1 153:8 169:6</p> <p>planned [9] 32:17,22 33:17,19 34:3 49:18 69:18 70:15 143:22</p> <p>planners [2] 45:24 47:3</p> <p>planning [16] 13:16 47:18 55:22 72:7 82:18 108:11 132:8,13 133:21 134:2 135:21 143:20 149:23,25 153:7 171:1</p> <p>plans [1] 133:11</p> <p>plant [16] 15:1 17:9 83:2 83:3 84:16,24 85:7 92:13 92:22 93:15 95:6 97:23 100:11,14,18 171:20</p> <p>plants [3] 13:7 14:18 18:9</p> <p>play [1] 123:5</p> <p>pm [2] 55:3 146:5</p> <p>point [25] 1:12 4:9,16 6:15 21:7 22:4 24:13,16 24:20 36:21 45:17 48:15 58:22 69:20 74:24 76:1 77:17 94:6 104:20 105:3 122:25 125:15 126:14 141:15 156:24</p> <p>points [6] 34:11,14 38:13 40:3 162:12 172:2</p> <p>policy [1] 19:18</p> <p>pollution [2] 100:17 101:22</p> <p>port [1] 87:14</p> <p>portion [4] 40:9 45:7 59:12 77:1</p> <p>position [14] 1:15,18 10:20 38:8 51:22 62:5 72:22 115:3 123:8 128:6 140:25 142:2 154:18 164:7</p> <p>positive [1] 78:22</p> <p>possibility [1] 2:3</p> <p>possible [7] 2:24 3:9 88:7 92:19 135:20 144:11 161:15</p> <p>potential [2] 56:17 57:20</p> <p>power [28] 9:18 15:1 20:6 21:24 22:6 23:4 69:1 72:1 73:19 76:3,9 76:11,12,17,18 77:2 79:10,20 80:6 82:22,25 84:14 110:24 111:10,11 112:10 131:23 168:6</p> <p>Power's [1] 21:18</p> <p>PowerPoint [1] 162:17</p>	<p>PR-DD-12 [1] 69:14</p> <p>practically [1] 162:10</p> <p>practice [10] 49:4,9,14 49:19 63:18 79:13 138:12 138:19 140:13 143:24</p> <p>practices [9] 63:3 138:19 142:16 143:15 144:19 145:24 147:6 148:1 167:14</p> <p>pragmatic [3] 59:10 61:2,14</p> <p>pre-2013 [1] 167:10</p> <p>predecessor [1] 160:5</p> <p>predicting [1] 29:16</p> <p>preliminary [1] 1:4</p> <p>premise [1] 113:10</p> <p>preparation [1] 160:24</p> <p>prepared [3] 4:25 73:13 104:14</p> <p>present [2] 139:15 163:24</p> <p>presentation [3] 118:6 162:2,18</p> <p>presented [8] 7:2 11:18 118:8 119:4 140:10 161:25 163:24 174:7</p> <p>presenting [1] 105:9</p> <p>President [1] 128:7</p> <p>pressure [4] 8:13 134:24 168:2,8</p> <p>pressures [4] 132:19 168:9,11 174:13</p> <p>presume [3] 21:8 47:11 68:23</p> <p>pretty [3] 29:19 109:14 164:10</p> <p>prevent [1] 100:17</p> <p>preventative [28] 43:13 43:23 44:10,18 45:15,18 46:1,23 48:2,10 49:3,7 49:13,17,23 50:19,24 51:10,21,24 53:6,15 55:10 56:14 57:21 64:11 67:9 70:17</p> <p>prevention [1] 167:14</p> <p>previous [3] 12:14 81:22 159:3</p> <p>previously [4] 22:2 30:5 156:4 173:20</p> <p>price [16] 74:15 75:25 76:3,17 77:7,9 79:7 87:2 87:5 88:19 90:25 91:9 103:17,20,22 104:13</p> <p>pricing [5] 77:21 91:7 104:16 105:17 108:16</p> <p>primarily [5] 13:11 22:14 83:1 93:25 122:3</p> <p>primary [1] 13:3</p> <p>priorities [2] 46:13 64:23</p> <p>prioritize [2] 47:7 50:12</p> <p>priority [1] 50:5</p> <p>probability [1] 71:22</p> <p>problem [5] 10:14 90:24</p>	<p>94:14 96:22 145:24</p> <p>problems [8] 14:6,7,8 31:7 36:6 37:19 168:7 168:13</p> <p>proceed [3] 6:3,7 152:21</p> <p>proceeding [2] 19:15 21:3</p> <p>process [21] 7:19 9:11 44:9,12,22 58:18 93:6,8 131:10 132:8,8,13,16,21 133:9,21,22 139:20 149:25 161:15 172:25</p> <p>processes [1] 60:17</p> <p>produce [2] 84:7 90:23</p> <p>producing [1] 170:22</p> <p>product [5] 89:10,11,12 94:3,3</p> <p>production [18] 81:21 81:25 82:21,25,25 83:2 83:8,14,24 84:11,12,19 84:22 85:5,9 86:2 91:19 91:25</p> <p>productivities [1] 166:3</p> <p>productivity [15] 153:3 153:6,20,23 154:24 165:18 166:11,14 167:5 170:4,23 172:3,4,23 174:20</p> <p>professional [1] 121:5</p> <p>prognostic [1] 59:9</p> <p>program [29] 17:7 32:5 46:2 48:14 50:8,24 51:25 53:6,12,16 55:11 61:10 62:14 63:23 64:24 65:5 67:9 68:3 70:17 122:3,6 133:18 134:22 141:15 150:12,16,19 152:1 158:15</p> <p>programmatically [2] 61:1 61:18</p> <p>progress [1] 68:13</p> <p>progressing [1] 75:11</p> <p>project [3] 29:3 30:6 124:17</p> <p>projecting [1] 29:19</p> <p>projection [2] 3:20 4:3</p> <p>projects [2] 145:10,12</p> <p>proof [1] 156:21</p> <p>proper [1] 39:12</p> <p>properly [1] 116:22</p> <p>proposal [8] 18:20,24 23:11 102:5 107:20 110:8 116:10 133:14</p> <p>proposed [3] 103:2,5 164:15</p> <p>provide [26] 3:10 4:10 4:24,25 9:1 26:15 27:13 36:15 40:21 49:21 62:6 63:2 87:4 101:2 106:24 112:13 113:4 114:2,8 115:19 123:11 127:10 128:8 139:13 143:25 159:2</p> <p>provided [12] 5:10 24:4 26:2 90:5 106:8 116:11 120:9 127:16,24 147:4</p>
---	---	---	--	--

<p>164:17,19 provides [1] 107:2 providing [4] 92:3 113:13 120:6 137:11 province [1] 160:10 provincial [2] 150:14 150:19 prudence [3] 43:15 48:20,25 prudent [1] 108:14 PUB [2] 9:21 23:22 PUB-229 [2] 113:24 136:16 Public [4] 11:19 105:10 106:24 176:7 pull [5] 9:20 81:10 94:18 99:8 135:16 pulled [1] 141:7 purchase [9] 8:3 76:3 77:2 82:25 87:13 107:21 108:7,13 173:15 purchased [2] 73:19 76:16 purchases [6] 76:9,11 76:13,17,18 82:22 purpose [2] 62:3 120:5 purposes [5] 43:16 85:8 96:12 118:21 119:4 pursued [1] 139:23 push [3] 163:18 167:13 175:3 put [46] 11:25 13:13 15:21 16:12,15,18 19:2 19:13,17 20:11 22:4 24:1 24:11 29:8 33:18 36:7 38:11 41:7,13 44:23 53:13 60:7 74:17 76:24 94:19 98:7,15 101:24 102:6,18 110:3 118:5 133:2 140:2 144:22 147:15 148:5 152:7 156:2 157:7,22 161:22 162:24 165:22 166:2,18 puts [4] 1:19 3:1,9,24 putting [23] 22:7,18 23:5 23:12 27:2,25 47:8 59:10 74:16 78:4 109:1,15 111:11 113:14 123:24 134:24 148:4,23 168:8 168:11 171:7,10 173:23</p>	<p>154:15,22 155:12,25 156:15,19 157:14 158:3 158:21 159:8,21 160:8 160:16,22 161:6 162:9 162:20 163:14 164:13 165:5,16 166:5 168:21 169:4,11,18 170:2,13 172:1,10,17 174:4,18,23 quality [1] 89:5 quantifiable [1] 139:15 quantify [1] 144:25 quarterly [2] 125:22 127:11 questioned [1] 167:7 questions [11] 5:21 24:1 49:1,5 58:6 80:25 103:14 107:15 112:16,25 113:3 quickly [1] 168:7 quite [2] 34:9,16 quote [3] 72:10 156:2,12</p>	<p>recollection [1] 19:24 recollections [1] 6:19 recommendations [1] 68:25 reconcile [1] 110:18 reconciliation [3] 2:19 2:25 4:6 reconciliations [1] 3:16 record [3] 5:2 123:21 169:14 recovered [1] 113:16 recruit [1] 117:2 recruitment [2] 170:19 170:21 redeployment [3] 170:18,20 171:3 redirecting [2] 59:5,16 reduce [5] 13:8 15:23 16:1 17:21 152:23 reduced [1] 16:8 reduces [1] 101:22 reducing [4] 13:7 151:3 167:17 170:11 reduction [2] 166:25 170:16 refer [4] 118:20 119:18 128:6 138:3 reference [5] 62:16 137:25 140:14 144:8 159:6 referenced [1] 157:10 referred [2] 80:5 162:11 referring [4] 124:9 126:19 153:16 170:21 refers [1] 138:2 refineries [1] 89:10 refinery [2] 89:11,13 reflect [10] 15:19,22 26:20 30:3,22 31:22,24 33:18,22 34:3 reflected [2] 137:22 138:8 reflecting [1] 115:12 reflective [12] 24:3,10 26:12 34:22 67:4 88:21 115:5,25 116:25 122:2,4 145:5 reflects [1] 107:19 regard [13] 24:17 96:4 109:2 113:25 117:17 123:12 139:14 148:17 154:2 156:12 157:21 159:2 173:22 regarding [3] 80:13 129:22 166:20 regards [2] 124:4 129:11 regional [5] 16:23 39:16 46:10 54:25 55:7 regression [1] 92:3 regular [8] 13:22 25:3 38:20 40:22 68:14 99:11 141:7 146:22 regularly [2] 25:2 39:2 regulated [1] 65:23</p>	<p>regulation [1] 21:11 regulations [1] 23:17 regulatory [2] 7:1,18 related [26] 2:8 8:18,18 13:12 21:1 24:24 31:17 50:6 52:1 53:12 72:17 75:3 76:7,11,17 78:25 84:6 107:7 110:25 111:6 111:17 114:6 119:12 121:13 128:11 134:20 relation [1] 149:7 relations [1] 115:1 relationship [5] 26:23 49:6 66:21 91:15,21 relative [7] 20:15 107:6 137:13 158:5 169:5,12 173:23 reliability [61] 27:6,20 28:1,10 31:1 35:16 36:18 37:3 38:4 39:13 40:15 40:17 41:3,16,19,25 42:9 42:22 43:5,17 46:16 47:9 48:24 53:8,11,25 54:3 54:13,18 65:21 66:2 68:2 68:6,15,20 71:20,23 85:8 95:23 96:2,12,19,25 97:17,20,24 107:5,10 110:17,19 111:20,22,24 112:4,6,8,13,14 115:14 141:11 157:5 reliable [13] 26:15 27:14 70:22 71:12 97:4,10 101:10,14 113:17 115:15 115:19 131:23 142:11 reliably [1] 111:12 relying [2] 57:25 156:25 remains [1] 58:25 remark [1] 115:25 remember [2] 90:17 159:6 remote [2] 14:5 18:2 removed [1] 122:5 rental [1] 121:4 rentals [1] 121:6 reorganization [1] 62:24 repair [1] 94:25 repairs [4] 95:1,13 119:1 119:8 repeat [1] 129:5 repeating [1] 152:9 replace [1] 17:11 replaced [1] 122:5 replacement [1] 48:14 reply [6] 48:20 49:6 59:2 63:9 128:15 170:14 report [25] 10:3 11:2,8 11:11,17,20,25 12:1 43:19 44:5 55:16,17,21 55:24 106:10,23 119:19 119:21,23,24 124:13 136:19 146:8 157:7 172:19 reported [7] 11:19 93:10 123:14 124:4 125:1 127:15,23</p>	<p>reporting [3] 68:13 123:4 127:3 reports [9] 28:6 55:9 56:4,4 125:22 127:11 137:12 147:5,9 representative [2] 17:6 131:5 representatives [2] 14:20 15:24 represents [1] 115:9 reproduced [1] 28:5 request [1] 5:1 requested [1] 151:10 require [4] 9:8 14:5 32:2 36:23 required [11] 18:8 33:24 44:18 47:23 67:17 95:14 109:16 115:18,18 152:4 162:5 requirement [7] 8:25 73:18 145:6,7 151:24 168:18 174:7 requirements [11] 13:8 31:22 53:5 67:20 84:15 148:13,25 149:4 158:16 168:5 171:18 requires [7] 96:11 124:15 128:7 152:1 158:12 173:8,16 requiring [1] 8:25 reserves [1] 107:4 resolve [1] 75:10 resource [6] 114:8 138:20 148:25 150:9 151:6,15 resources [6] 147:4 148:8 152:1 170:11 171:4 171:11 respect [40] 3:19 5:22 7:5 9:18 12:18 21:25 26:25 33:23 34:7 37:5 40:24 43:22 45:4 55:10 56:24 64:23 65:11 67:13 68:7 70:25 74:10 81:8 101:3 102:4,24 103:10,13,16 104:1,15 112:11 127:2 130:15 140:5 143:24 146:15 157:25 164:1 174:12,14 respond [4] 4:15 80:25 82:19 129:9 responding [3] 14:23 14:24 35:21 response [8] 35:7 39:1 43:3 128:20,25 139:15 166:9,19 responsibility [6] 40:17 113:25 114:2 115:6 137:5 142:22 responsible [6] 39:24 45:25 51:8 60:2 63:22 139:5 rest [2] 51:2 105:19 rests [1] 125:17 result [10] 31:1 46:16 78:10 84:18,20 85:9</p>	
<p>-Q-</p>		<p>Q.C [93] 112:22,23 113:22 115:21 117:4,12 118:19 119:17,22 120:14 120:21 121:2,21 122:7 123:7,18,22 125:14 126:9 126:18 127:12 128:4 129:1,7,17 130:18 131:1 131:11,18 132:2,24 134:10 135:2 136:2,13 136:17 137:15 138:16 139:8,17 140:11 142:4 142:12 143:1,14 144:7 145:20 147:2,11,21 149:5 149:15 150:8,23 151:11 152:19 153:17 154:3,10</p>	<p>radar [2] 10:19,23 rainfall [1] 104:2 raised [2] 43:21 44:3 range [3] 53:20 72:4,14 rate [23] 5:25 6:3,6 9:4,6 9:16,19 78:16,20 83:18 86:22 94:22 95:6,10,16 95:19,22 96:5 97:1,7,11 97:24 176:5 rates [8] 7:1 9:8 19:2,7 20:2 21:11 23:16 106:5 rather [4] 15:1 108:15 109:3,3 reach [1] 48:15 read [3] 126:11 128:25 136:20 reading [1] 87:25 readings [1] 88:1 reads [1] 118:21 ready [7] 6:8 53:4,17 54:13,17 82:19 149:3 real [2] 90:22 148:7 realistic [2] 35:8,12 realizable [1] 151:15 realized [1] 150:14 really [8] 75:25 107:15 116:19 118:11,13 123:6 125:11,11 reason [1] 96:20 reasonable [2] 19:12 123:25 reasoning [1] 3:2 reasons [5] 6:19 19:25 20:2 95:10 108:6 received [2] 114:14 149:20 receiving [1] 88:2 recent [5] 48:19 63:9 90:7,9 110:17 recently [4] 24:12 88:11 154:14,16</p>	<p>recollection [1] 19:24 recollections [1] 6:19 recommendations [1] 68:25 reconcile [1] 110:18 reconciliation [3] 2:19 2:25 4:6 reconciliations [1] 3:16 record [3] 5:2 123:21 169:14 recovered [1] 113:16 recruit [1] 117:2 recruitment [2] 170:19 170:21 redeployment [3] 170:18,20 171:3 redirecting [2] 59:5,16 reduce [5] 13:8 15:23 16:1 17:21 152:23 reduced [1] 16:8 reduces [1] 101:22 reducing [4] 13:7 151:3 167:17 170:11 reduction [2] 166:25 170:16 refer [4] 118:20 119:18 128:6 138:3 reference [5] 62:16 137:25 140:14 144:8 159:6 referenced [1] 157:10 referred [2] 80:5 162:11 referring [4] 124:9 126:19 153:16 170:21 refers [1] 138:2 refineries [1] 89:10 refinery [2] 89:11,13 reflect [10] 15:19,22 26:20 30:3,22 31:22,24 33:18,22 34:3 reflected [2] 137:22 138:8 reflecting [1] 115:12 reflective [12] 24:3,10 26:12 34:22 67:4 88:21 115:5,25 116:25 122:2,4 145:5 reflects [1] 107:19 regard [13] 24:17 96:4 109:2 113:25 117:17 123:12 139:14 148:17 154:2 156:12 157:21 159:2 173:22 regarding [3] 80:13 129:22 166:20 regards [2] 124:4 129:11 regional [5] 16:23 39:16 46:10 54:25 55:7 regression [1] 92:3 regular [8] 13:22 25:3 38:20 40:22 68:14 99:11 141:7 146:22 regularly [2] 25:2 39:2 regulated [1] 65:23</p>	<p>regulation [1] 21:11 regulations [1] 23:17 regulatory [2] 7:1,18 related [26] 2:8 8:18,18 13:12 21:1 24:24 31:17 50:6 52:1 53:12 72:17 75:3 76:7,11,17 78:25 84:6 107:7 110:25 111:6 111:17 114:6 119:12 121:13 128:11 134:20 relation [1] 149:7 relations [1] 115:1 relationship [5] 26:23 49:6 66:21 91:15,21 relative [7] 20:15 107:6 137:13 158:5 169:5,12 173:23 reliability [61] 27:6,20 28:1,10 31:1 35:16 36:18 37:3 38:4 39:13 40:15 40:17 41:3,16,19,25 42:9 42:22 43:5,17 46:16 47:9 48:24 53:8,11,25 54:3 54:13,18 65:21 66:2 68:2 68:6,15,20 71:20,23 85:8 95:23 96:2,12,19,25 97:17,20,24 107:5,10 110:17,19 111:20,22,24 112:4,6,8,13,14 115:14 141:11 157:5 reliable [13] 26:15 27:14 70:22 71:12 97:4,10 101:10,14 113:17 115:15 115:19 131:23 142:11 reliably [1] 111:12 relying [2] 57:25 156:25 remains [1] 58:25 remark [1] 115:25 remember [2] 90:17 159:6 remote [2] 14:5 18:2 removed [1] 122:5 rental [1] 121:4 rentals [1] 121:6 reorganization [1] 62:24 repair [1] 94:25 repairs [4] 95:1,13 119:1 119:8 repeat [1] 129:5 repeating [1] 152:9 replace [1] 17:11 replaced [1] 122:5 replacement [1] 48:14 reply [6] 48:20 49:6 59:2 63:9 128:15 170:14 report [25] 10:3 11:2,8 11:11,17,20,25 12:1 43:19 44:5 55:16,17,21 55:24 106:10,23 119:19 119:21,23,24 124:13 136:19 146:8 157:7 172:19 reported [7] 11:19 93:10 123:14 124:4 125:1 127:15,23</p>

<p>142:3 162:8 166:17 169:22 resultant [1] 31:19 resulted [2] 31:8 138:8 resulting [2] 140:16,18 results [11] 28:12,13 38:6 38:9 40:22,25 41:24 42:16 129:24 130:20 139:4 RESUME [1] 94:10 retires [1] 148:21 return [1] 12:16 revenue [3] 8:25 73:18 174:6 review [21] 28:22 36:5 36:21 37:7,16 48:12,20 55:2,2 69:6 89:3 107:2 108:10 140:22 141:2,18 142:3,5,15 143:5 161:15 reviewed [2] 140:16 159:19 reviews [4] 68:5 143:4 145:12 149:24 Revision [8] 9:20 81:12 81:16,18 99:15,17 137:18 150:11 rewards [2] 59:5,16 RFI [4] 139:16 152:20 170:14 172:2 RFIs [2] 74:4 99:8 right [60] 1:5 3:8 7:15,25 8:2 9:9,11 10:12 17:17 19:5 21:12 43:24 44:1 49:11 55:21 57:20 61:8 61:24 62:1 65:20 69:2 73:17,21 75:17,18 81:23 86:7,19 99:17 101:17 102:7 103:19 104:23 106:3,5,7 107:24,25 111:15 113:10 118:16 120:18 124:19 125:20 128:1,23 129:12 130:25 134:17 141:23 142:10,10 143:2 144:4 155:5,6 160:19 169:3,5 172:21 rigor [4] 33:17 34:4 161:18 162:24 risk [6] 57:22,24 60:22 78:16 96:25 102:24 risks [3] 56:13 59:4,15 River [1] 104:3 road [2] 48:4 144:13 Rob [1] 148:14 ROBERT [2] 1:9 112:21 Roberts [2] 116:12 163:22 role [13] 39:15 40:13 52:9 63:17 65:25 66:5,8,11 66:16,24,24 128:7 153:25 roles [1] 113:23 rolled [1] 41:8 room [1] 155:10 round [1] 85:8 route [1] 136:4 routine [2] 99:22,25</p>	<p>routines [1] 100:10 RSP [6] 79:8 86:22 91:1 91:10 104:9 105:15 run [12] 11:4 14:18 43:14 70:9 71:25 98:19,20 124:17 126:2 127:7 168:12,14 running [11] 14:25 86:9 86:10 96:14 99:3,5,6,12 100:1 124:15 155:17 rural [24] 9:16 10:1,3,16 10:20 11:3,5,9 12:13,25 13:5 15:13 19:1 20:13 21:25 22:5,8,19 23:6 64:5 121:13 138:5 146:16 171:6</p> <hr/> <p style="text-align: center;">-S-</p> <hr/> <p>safe [3] 26:16 27:13 113:17 safety [2] 25:2,4 SAIDI [5] 32:4 33:25 34:8,21 39:17 SAIFI [5] 32:4 34:1,8,22 39:17 salaries [9] 8:18 116:20 120:17,20 163:15,18,21 163:23,25 salary [8] 40:10 111:16 111:17 114:20 116:14,23 117:6 164:11 salt [1] 34:19 samples [2] 87:16,17 sampling [1] 87:13 satisfied [4] 9:3 21:10 51:2,5 save [2] 17:14,15 saving [2] 140:23 150:15 savings [26] 137:22 138:8,9,10,20,24 140:13 140:19,21 142:15 143:8 144:3,9,9,12,14,21 150:10,18 151:5,6,15,16 152:14,18 171:24 saw [5] 2:18 73:11 74:20 161:9,10 says [6] 53:14 107:17 117:23 137:25 138:6 153:14 scales [1] 164:6 scenario [1] 83:13 schedule [4] 55:22 70:15 134:7 153:9 scheduled [8] 46:5 59:6 69:17,24 70:11,14,20 83:9 scheduling [7] 60:6 134:1 135:21 145:14 153:7 171:1,9 school [1] 69:20 schools [1] 69:21 screen [3] 136:21 159:12 170:15 scroll [6] 81:19 99:21 100:23 117:20 129:4</p>	<p>159:15 scrutiny [1] 164:15 se [4] 43:7 128:22 131:8 143:2 sea [1] 87:24 season [1] 70:10 second [5] 31:13 121:22 129:18 151:1 158:23 section [5] 62:17 107:14 113:11 117:20 138:2 security [1] 95:10 see [55] 1:14 2:14 3:1 4:15 4:18 5:9 10:17 11:8 13:19 15:15 16:1,4,7 17:5 24:2 28:6,7,11,12 33:21 34:15,25 35:24 38:9 69:18 71:16 75:14 77:16 78:3 80:22 82:8 86:3,13 91:23 93:15 96:4 99:18 100:7 109:18 117:21 118:7,8 121:23 122:8,15 127:20 138:13 146:12,20 152:17 154:20 165:3,11 170:6 173:12 seeing [7] 7:7 65:10 89:4 110:19 114:17 130:22 174:13 seek [4] 68:10 78:12 134:25 147:24 seeking [3] 68:5 81:7 135:3 seem [2] 74:4 144:15 seize [1] 108:18 sense [5] 7:18 19:8 25:8 153:18 161:18 sent [2] 87:17 143:21 separate [1] 135:15 separated [1] 54:2 separately [1] 166:16 September [5] 1:1 48:22 106:9 176:6,12 service [13] 11:4 18:2 19:3 27:14 101:14 115:15 115:19 121:13 122:5 124:15,18 126:2 127:7 services [5] 114:6 121:5 128:11 137:20 143:23 set [16] 27:12 28:19 31:23 32:18 33:2 35:22 36:7 44:17 45:11 124:3 127:22 128:17 131:3,4 150:4 163:12 sets [2] 32:25 119:24 setting [8] 30:10 32:23 33:15,18 34:4 86:22 131:2 134:3 seven [1] 56:9 severe [4] 29:12 31:6,18 34:17 sharing [2] 19:14 137:19 shed [1] 149:10 shift [2] 21:23 141:13 shifts [1] 151:2 shipment [2] 86:25 87:14</p>	<p>shop [1] 39:16 short [2] 71:11 109:2 shorten [1] 17:14 show [6] 3:13 4:2,8 16:17 125:23 158:8 showing [3] 2:20 8:23 80:14 shown [3] 117:22 166:16 166:19 shows [6] 16:25 24:14 31:1 71:4 92:23 118:4 shut [2] 84:25 96:24 side [3] 111:8 167:23,24 sight [1] 41:9 significant [16] 8:2,7 20:13 31:5,9 32:7,10 36:14,15 42:10 59:3,15 76:22 93:19 110:16 171:9 significantly [1] 76:25 similar [16] 37:20 44:3 79:6,8,10 80:16 84:21 87:23 104:8 110:5,5,7 125:9 154:23 155:13 157:11 simple [3] 53:13 84:22 96:15 sit [3] 43:6 142:13 155:16 site [1] 143:25 situation [4] 50:14 80:17 158:11 168:24 size [1] 144:16 skills [2] 149:23,23 skillset [1] 148:21 skillsets [2] 148:10 149:18 small [3] 144:20,21 145:15 smaller [1] 71:16 smarter [1] 142:18 sold [1] 124:11 solutions [1] 133:12 someone [1] 162:24 sometime [1] 118:9 somewhat [1] 136:7 somewhere [1] 81:5 sorry [15] 28:18 48:4 49:9,11 62:20,22 94:12 99:15,17 102:11 107:23 126:6,25 129:5 136:16 sort [34] 3:17 4:12 6:14 15:10 16:5,14,23 24:12 26:1 28:2,17 38:12 39:9 43:17,18 54:16 58:5,24 64:21 65:7,15 74:7 75:13 75:25 76:3 77:10 82:10 86:12,12 91:21,23 102:6 109:9 117:13 sought [1] 133:14 sound [2] 38:24 176:9 source [5] 22:13,18 88:15 88:24 165:8 sources [1] 13:21 speak [5] 41:2 80:22 126:16,25 143:16</p>	<p>speaking [1] 105:25 speaks [1] 170:15 specific [11] 16:4,25 47:21 145:15,18 149:14 165:18,21 166:10,15 170:20 specifically [13] 16:7 25:15 42:2,8 128:16 136:21 144:25 146:15 147:25 153:13 156:24 161:14 165:7 specification [2] 88:14 90:6 specifications [1] 90:14 specifics [4] 113:4 140:7 142:2 161:4 speculate [1] 139:3 spending [1] 155:6 spent [1] 116:12 spoke [1] 65:22 spoken [2] 42:2 133:25 sponsoring [1] 113:11 spot [1] 146:2 spray [1] 34:19 spread [1] 148:8 St [3] 15:3 176:8,11 staff [5] 111:18 150:3 170:18,20 171:7 stand [1] 156:3 standard [4] 64:11 119:12 140:18 163:11 standardized [1] 62:6 standards [4] 62:12 63:4 63:18,21 standpoint [3] 17:1 135:23 171:23 Stantec [3] 89:24 90:1,1 start [7] 56:3 69:24 72:16 72:23 107:18,24 113:7 start-up [1] 71:2 starting [1] 99:21 starts [1] 121:24 state [1] 166:21 statement [3] 49:20 56:18 59:12 station [2] 31:8,9 stay [4] 132:19 136:11 164:11 166:3 steady [1] 110:15 steal [1] 10:10 steps [2] 65:12,24 stick [1] 43:17 still [5] 42:20 54:8 68:17 169:21 170:14 stop [1] 94:6 storage [1] 87:21 storm [3] 31:6,18,18 straight [1] 1:15 strategic [6] 132:9,12 133:21 140:6 149:23,25 strategy [1] 114:11 strictly [1] 122:14</p>
--	---	---	--	---

<p>strive [1] 36:17 striving [1] 51:7 strong [3] 49:20 58:3 63:2 structure [1] 59:14 structured [2] 59:3 60:9 structuring [1] 112:12 studies [6] 79:17,18 80:2 80:8 91:22,23 study [4] 80:5,6,7 92:8 Sturge [1] 6:25 subject [2] 18:14 109:5 submit [1] 107:20 subscribed [1] 133:17 subsidy [1] 22:1 substantial [1] 69:7 success [1] 52:10 successful [1] 15:11 such [9] 2:6 29:12 34:18 59:6 70:18 79:19 133:4 133:5 148:23 suffers [1] 91:2 sufficient [3] 9:4 24:14 163:11 suggest [3] 74:4 110:23 157:6 suggested [2] 38:12 63:10 suggesting [3] 64:15 140:8 147:17 suggests [1] 24:6 sum [1] 151:5 summarize [1] 49:5 summer [1] 84:25 supplied [1] 77:1 supplier [6] 86:16 87:4 88:5,10,15,18 supplies [1] 121:4 supply [12] 70:23 72:1 73:7 76:13,19,23 78:3,7 88:11,22 107:6,10 suppose [2] 61:17 105:5 supposed [1] 44:16 suspect [3] 139:9 142:1 142:3 switching [2] 15:25 17:10 system [54] 2:7 13:16 14:20 15:24 17:5 31:25 32:1,8,12,19 33:20,24 34:12,15,23 50:5 53:10 53:16 65:22 70:3,20 76:14 82:18 84:14 85:20 85:23 95:9,14 96:11 98:5 100:16,20 101:16,19 107:22 108:7,10 109:24 110:25 111:10,11 112:10 120:22 165:3 168:6,10 172:14,20,23 173:4,6,18 173:20 174:14 systems [2] 13:4 83:7</p>	<p>T1 [3] 59:8,11 60:8 table [6] 10:5 107:18 119:25,25 127:21 172:19 tactics [5] 48:11 141:5,9 141:10,23 takes [5] 1:19 3:2,9,24 56:12 taking [9] 42:5 70:11 75:9 91:6 97:18 103:9 118:11 143:9 170:4 talks [1] 172:19 tanker [1] 87:15 target [18] 30:10 33:8,10 33:12,15,18 35:18,19 40:11 52:16 124:24,24 125:10 127:8,17 131:2,6 131:8 targeted [4] 8:11 142:5 167:1 170:16 targeting [1] 52:11 targets [50] 28:11,12,18 28:21 29:9,25 30:11,22 31:2,23 32:12,18,24 33:1 33:2,4,6,20,21 34:5 35:5 35:6,8,12,15,22 36:25 38:8,10 41:25 42:17,23 124:3,8,9,14 125:19 126:13,22 127:4,5,21,22 128:1,16,20,22 129:10 129:14 157:9 tasked [1] 136:22 tasks [1] 14:25 tax [1] 121:12 team [17] 11:13,21 12:3 12:5 20:2 21:11 23:24 24:22 38:16,22 100:12 130:7,13,14 141:7 143:10 148:18 technical [2] 57:25 62:9 teleconferencing [1] 144:10 template [1] 162:16 ten [1] 56:9 ten-hour [1] 151:1 tend [1] 41:11 tender [5] 88:12 90:7,9 90:10,12 tendered [1] 88:11 tending [1] 89:12 term [6] 45:24 47:3 72:8 108:19 109:3 133:11 terminal [1] 31:7 terminated [1] 150:16 terms [106] 1:20 3:12 4:11,22 5:23 6:10 7:9 8:21 10:16 13:6,10 15:10 16:9 19:12 22:25 23:1 24:15,25 26:10,14 28:8 30:9 35:22 36:14 38:6,7 39:3 40:4,21 41:5,16 44:9 50:1 51:4,20 54:2 63:5 64:8,22 65:4,21 66:10,13 68:18 74:22 75:4 77:9,16 78:14 79:17 86:9,21 88:17 91:11,15 91:20 92:16 95:12 97:15</p>	<p>100:16 101:1 104:13 105:17,18 109:23 115:14 117:8 123:23 124:3,8 125:15,18 130:4,22 131:3 131:4 132:14 133:8 134:5 134:12 135:25 137:3 138:23 140:6 141:25 147:9,18 148:1 149:13 149:16,22,22,24 150:24 153:8,12 155:20 161:21 162:21,24 164:14,22 170:15 171:2 172:14 173:14 TERRY [2] 1:10 112:21 test [25] 1:17,20 2:4,19 2:25 3:8,15 4:5 7:6,12 7:16,21 9:1 24:5 81:20 82:14 87:20 137:22 148:5 148:24 149:3 166:7,11 166:23,23 testified [1] 27:23 testing [1] 86:13 thank [7] 1:7 5:16,18 94:14 106:15 107:14 123:19 that'll [1] 110:7 themselves [1] 40:8 therefore [1] 156:20 thermal [8] 64:5 83:1,3 92:13,16,22 95:11 98:14 they've [1] 79:22 thinking [1] 66:7 third [1] 144:11 THOMAS [1] 112:22 Thornton [6] 119:19 120:5,10,16 122:16 172:19 Thornton's [2] 28:5 119:24 thorough [2] 37:6 163:12 thought [8] 7:19 76:9 102:12 126:13,20 145:21 170:5 172:25 three [11] 72:11 77:4 95:4 95:7 96:17 99:19,21 103:8,11 140:17,20 through [46] 2:12 7:18 23:24 32:11 34:7 36:24 41:11 43:6 44:9,22 45:16 69:22 76:17 77:2 91:10 97:4 101:23 111:1,4 114:14,15 122:6 124:17 127:6 128:8 131:9 132:7 132:8,12,15,21,21 133:9 133:10,15,15,21,22 135:18 136:10 139:20 143:19 148:6 162:25 164:2 167:1 throughout [8] 2:4 45:11 63:19 114:3,9 148:12 149:21 150:2 thunder [1] 10:10 tied [5] 27:6,7 111:7,9 150:25 tight [1] 168:15 timeframe [1] 73:25</p>	<p>timelines [1] 168:15 times [3] 69:16 113:2 142:25 timing [1] 6:10 tip [1] 5:5 to-day [1] 66:22 today [1] 142:13 together [6] 16:18 32:25 46:7 78:8 109:15 148:4 too [1] 27:4 took [1] 59:9 tools [1] 93:12 topic [1] 174:25 total [3] 76:23 103:7 151:6 touch [1] 114:7 towards [3] 75:17,22 113:1 track [5] 15:12,14 16:6 16:14 158:17 tracking [6] 15:10 55:24 118:9 122:21 130:20 131:14 training [7] 15:25 17:6 17:9,17 149:7,14,21 transcribed [1] 176:8 transcript [1] 176:4 transfer [6] 74:18 75:5 75:15,18 77:12 104:25 transferring [1] 74:22 transformers [1] 50:3 transition [1] 116:25 transmission [10] 32:1 33:25 34:8,9,12,15,21 146:15 171:5 173:20 transpired [2] 7:8 127:1 119:24 transportation [1] 121:3 travel [16] 16:1,2,2,3,5 16:9,9,12 17:15 18:1,10 87:24 121:5 143:23 144:8 151:3 trend [4] 17:5 84:13 86:3 86:5 trending [2] 67:8 125:7 trends [1] 125:2 TRO [3] 148:6,9,12 troubles [3] 14:23 42:11 50:6 true [2] 5:4 176:3 try [11] 15:5 43:15 92:19 99:12,23 100:1 101:5 132:19,22 133:2 153:21 trying [14] 12:24 29:4 53:20 89:1 100:17 131:4 132:18 142:6 145:23 150:7 153:18 162:25 168:14 170:3 turbine [15] 8:4 31:11 71:19 72:8 76:20 78:6 79:11 98:7,13,16,20,24 99:1 173:8,16 turbines [5] 67:14,17 71:23,24 72:5</p>	<p>turn [12] 7:14 23:21 56:8 73:4 94:24 107:13 108:16 128:5 137:16,18 143:15 172:18 Twin [1] 173:21 two [15] 2:19,21 17:7 22:13 30:16 49:10 85:20 107:13 110:18 118:1,3 140:18 147:22 154:19 164:9 tying [1] 115:5 type [27] 3:10 12:14 17:12 34:19 36:9 38:11 42:21 43:1 45:14 51:8 57:9 58:9 64:24 72:8,25 79:8,10 80:16 86:4 118:6 125:9 146:14 149:17 160:12 162:17 164:10,18 types [40] 3:9,12 4:8 8:14 13:13,21,24 15:5 17:13 18:14 25:10 34:22 37:1 40:22 45:20,22 47:12 58:8 63:13 64:15 66:3 68:10 70:19 79:6,13 82:11 89:6,13 99:24 126:8 133:23 135:13 140:7 143:4 146:13 149:21 150:5 152:5 168:12 171:22 typical [3] 71:4,7,19</p> <hr/> <p style="text-align: center;">-U-</p> <p>UFOP [2] 71:21 72:6 Uh-hm [1] 37:9 unavailable [2] 69:17 71:9 uncommon [1] 70:6 uncontrollable [1] 123:1 uncontrolled [3] 78:10 79:6,14 under [7] 72:9 83:13 107:14,24 113:25 120:16 140:13 understand [31] 1:4 22:25 27:11,19 53:23 56:16 59:23 61:12,12,17 69:20 83:22 102:5 104:21 107:23 109:7 115:2,23 116:3 118:12 124:1,7 127:4 153:22 159:13 161:18 162:3 163:7 165:17 169:5 170:3 understated [1] 174:8 undertake [2] 123:11 132:11 undertaken [1] 13:25 undertaking [5] 4:20 5:2,14 159:10,11 underway [1] 122:3 unit [34] 31:11,20 71:2,8 83:11,14 84:6,21 85:10 85:12,12,15,16,17,21 92:9 93:4,22,24 94:16 95:4,7,19,23 96:20 97:5 97:14,16,17 98:8,14 99:4 107:9 140:20</p>
<p style="text-align: center;">-T-</p>				

<p>units [13] 83:15 84:18 95:7,11 96:12,14,18,23 97:2,8,15 99:12 140:17</p> <p>unknown [2] 57:22,24</p> <p>unrealistic [1] 32:5</p> <p>unrealistically [1] 32:18</p> <p>unrelated [2] 110:24 111:8</p> <p>unscheduled [1] 69:25</p> <p>unusual [3] 29:14 31:15 71:1</p> <p>up [45] 1:12 4:11 9:20,23 10:18 15:14 17:8 21:24 23:16 34:18 37:14 38:1 48:21 67:18 69:14 72:2 72:17 80:19 81:10 83:2 86:14 88:16 93:10 94:19 97:1,2,8,15 99:8 111:15 111:21 112:4,4 113:24 114:23 122:10 126:2 127:13 153:12 155:14 159:9 163:17 168:6 170:14 173:23</p> <p>up-front [1] 143:19</p> <p>upcoming [1] 165:13</p> <p>update [2] 6:17 7:11</p> <p>updated [3] 7:3,23 137:23</p> <p>updating [1] 9:9</p> <p>upgrades [2] 32:9 33:24</p> <p>upped [1] 52:13</p> <p>Upper [2] 22:14,16</p> <p>upshot [1] 144:3</p> <p>upward [2] 8:13 134:24</p> <p>upwards [1] 35:9</p> <p>usage [1] 151:4</p> <p>used [5] 84:17 86:14 90:6 107:5 141:24</p> <p>useful [4] 5:9 125:2,7,8</p> <p>using [2] 144:10 171:20</p> <p>usual [1] 95:15</p> <p>utilities [11] 11:19 79:13 79:19,21 80:8 105:10 106:25 141:19 152:17 157:11 176:7</p> <p>utility [4] 49:14,19 65:23 80:7</p> <p>utilization [2] 71:21 153:11</p>	<p>81:8 88:21,22 90:25 103:10,17,19,22,25 104:1 104:9</p> <p>variables [3] 103:11 104:5 158:16</p> <p>variation [1] 105:15</p> <p>variations [1] 76:13</p> <p>varied [1] 125:24</p> <p>varies [1] 91:6</p> <p>various [1] 75:5</p> <p>vary [1] 54:9</p> <p>varying [1] 157:24</p> <p>vehicle [1] 151:4</p> <p>verbal [2] 55:17 56:4</p> <p>versus [12] 2:25 3:8,15 4:4 7:6 20:7 22:1 56:4 59:4,16 78:17 91:12</p> <p>vets [1] 114:1</p> <p>Vice [1] 128:6</p> <p>videoconferencing [1] 144:11</p> <p>view [6] 20:8 49:12,15 59:13,20 79:5</p> <p>visible [1] 56:24</p> <p>volatile [1] 77:24</p> <p>volume [2] 76:16 77:6</p>	<p>without [5] 56:15 57:12 58:3 152:21 166:1</p> <p>wonder [11] 48:21 49:20 56:8 69:14 81:9 82:9 94:18 107:13 108:4 123:10 165:6</p> <p>wondering [10] 10:16 18:22 21:7 23:2 36:24 99:19 101:1 103:20 112:2 167:15</p> <p>word [1] 159:18</p> <p>wording [1] 130:10</p> <p>worked [4] 139:23 146:19 153:15 169:21</p> <p>worker [1] 17:13</p> <p>workforce [2] 149:8 154:2</p> <p>works [1] 137:9</p> <p>worry [1] 146:1</p> <p>worthy [1] 19:14</p> <p>written [1] 47:21</p> <p>wrong [4] 35:4 49:11 61:20 162:22</p>		
<p style="text-align: center;">-V-</p> <p>vacancies [1] 169:20</p> <p>vacancy [4] 1:13,16,21 3:25</p> <p>Valley [2] 14:9 15:3</p> <p>value [4] 72:6 90:22 122:4 145:1</p> <p>values [1] 127:19</p> <p>valve [1] 72:21</p> <p>variability [30] 17:2 34:24 76:2,21,22 77:6,7 77:9,11,17,20,21 78:8 78:25 79:1,7,12,14</p>	<p style="text-align: center;">-W-</p> <p>wait [1] 57:9</p> <p>waiting [1] 15:2</p> <p>walk [1] 43:6</p> <p>warrant [1] 20:25</p> <p>watch [1] 93:21</p> <p>water [2] 79:7 104:4</p> <p>ways [6] 93:8 142:17,18 142:23 146:12 147:16</p> <p>weakness [1] 64:20</p> <p>weather [2] 29:13 34:17</p> <p>week [4] 46:6 55:9 67:9 153:9</p> <p>weekly [5] 55:6,8,16,23 56:3</p> <p>weighted [4] 29:20,21 31:14 39:8</p> <p>West [1] 173:19</p> <p>whatsoever [1] 74:15</p> <p>whole [4] 97:5,6 150:2 164:21</p> <p>wide [1] 53:20</p> <p>widespread [4] 49:16 49:22,23 50:20</p> <p>wind [5] 34:19 77:5,16 77:17,20</p> <p>winter [7] 31:6 53:4,17 54:13,17 96:16 97:5</p> <p>within [27] 12:20 27:13 45:23 72:4 73:10 95:20 123:10 131:22 132:4,18 132:19 133:4 134:20 136:12,24 145:22 146:8 147:19 159:23 161:8 164:11 165:15 166:3 168:15,17 173:25 175:1</p>	<p style="text-align: center;">-Y-</p> <p>year [81] 1:20 2:4 3:1,8 3:13,15 4:3,5 6:15 7:3,6 7:12,16,21 9:1 11:2,7,8 11:9 16:17 17:3,3 24:5 27:7 30:17 31:14 33:14 34:25,25 39:18 41:14 44:16,21 45:2,11,12 46:6 46:19,22,25 55:25 68:1 69:15 70:5 71:2 81:20 83:9 84:17,22 85:8 88:25 101:24 106:25 123:2 125:25 131:4,4,9,12,13 131:15 132:9 137:22 146:23,25 148:5,16,24 149:3 150:4 151:5 155:11 155:11 160:17 161:9,10 165:13 166:7,11,23,23</p> <p>years [28] 1:17 2:19 5:23 14:18 17:5,8 33:12 50:9 50:15 51:20 52:8 67:3 68:1 81:22 82:14 84:19 88:6 100:25 127:17 128:18 129:12,16 135:13 140:20 154:19 164:9 173:9,24</p> <p>years' [1] 159:3</p> <p>yesterday [10] 1:13 5:20 9:23 36:20 161:1,2,17 162:11 167:7 174:24</p> <p>yet [2] 75:10 91:19</p> <p>Young [2] 4:22 5:3</p> <p>yourself [1] 47:13</p> <p>yourselves [1] 128:21</p>		