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MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO
NEEDS FOR AND ALTERNATIVES TO
REVIEW OF MANITOBA HYDRO'S
PREFERRED DEVELOPMENT PLAN

Regis Gosselin - Chairperson
Marilyn Kapitany - Board Member
Larry Soldier - Board Member
Richard Bel - Board Member
Hugh Grant - Board Member

HELD AT:

Public Utilities Board
400, 330 Portage Avenue
Winnipeg, Manitoba
April 17, 2014
Pages 7366 to 7619

1 APPEARANCES

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1 TABLE OF CONTENTS

2 Page No.

3 List Exhibits 7369

4

5 IEC MORRISON PARK ADVISORS PANEL CONTINUED:

6 PELINO COLAIACOVO, Previously Affirmed (Qual.)

7 BENJAMIN KINDER, Previously Affirmed (Qual.)

8 Continued Cross-examination

9 by Mr. Byron Williams 7370

10 Cross-examination by Mr. Antoine Hacault 7414

11 Cross-examination by Ms. Marla Boyd 7534

12 Cross-examination by Mr. Bob Peters 7572

13

14 Certificate of Transcript 7619

15

16

17

18

19

20

21

22

23

24

25

LIST OF EXHIBITS

EXHIBIT NO.	DESCRIPTION	PAGE NO.
MH-104-14	Run performed on the incremental NPV relative to All Gas with the LCA load reduction compared to the LCA No New Generation Plan	7493
MH-104-15	Update with table which shows the incremental NPV relative to All Gas at the specified level of DSM	7494
MH-104-16	Document entitled, "DSM Total Resource Cost View Economic Summary Relative to All Gas with Base DSM"	7494
MIPUG 20-9	Volume IX book of documents	7506
MH-179	Manitoba Hydro book of documents	7535
MH-104-1-1	DSM Analysis Listing of New Resources by Development Plan and In-service Date, Plans 2 and 6	7571
MH-104-3-1	Additional supply and demand tables for the Plan 2 DSM analysis	7618
MH-150-REVISED	Response to Undertaking 54	7618

1 --- Upon commencing at 8:59 a.m.

2

3 THE CHAIRPERSON: Good morning. I

4 believe that everyone's in position so we can start

5 today's proceedings. I hope that you had a good

6 evening last night in Winnipeg, and some of that money

7 that's flowing into Ontario is going to stay in

8 Winnipeg.

9 With that, I'll turn the micro -- unless

10 we have some business to attend to this morning, I'll

11 turn the microphone over to Mr. Williams.

12

13 IEC MORRISON PARK ADVISORS PANEL CONTINUED:

14 PELINO COLAIACOVO, Previously affirmed, (Qual.)

15 BENJAMIN KINDER, Previously affirmed, (Qual.)

16

17 CONTINUED CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

18 MR. BYRON WILLIAMS: Good morning, Mr.

19 Chair and members of the panel, and to Morrison Park,

20 good morning. If we could just pull up from Morrison

21 Park Exhibit 4, slide 9? And essentially, I'm not

22 going to be referring to the slide in my initial

23 question. But from the ratepayer's perspective in

24 terms of cost, risk, and -- and benefits, in your

25 evidence you've made the point that there are two (2)

1 main differentiators between -- between the plans.
2 Do you recall that?
3 MR. PELINO COLAIACOVO: I believe when
4 we were talking about the plans, the biggest difference
5 is the amount of capital that is used in -- in the
6 different plans, which makes some plans much more
7 sensitive to interest rates than others. And the
8 second difference is the degree of reliance on
9 hydroelectric energy, which makes different plans more
10 or less sensitive to hydrology. I think that's what
11 your reference likely is.
12 MR. BYRON WILLIAMS: Yeah. And I think
13 a central point, you can turn -- I don't think you need
14 to turn to it.
15 But at page 74 of your evidence you
16 suggest that risk is the principle differentiate --
17 differentiator between the resource plans.
18 MR. PELINO COLAIACOVO: Yes.
19 MR. BYRON WILLIAMS: And what you've
20 just told me and -- and the room is that obviously one
21 of those areas of vulnerability relates to interest
22 rates where those -- those plans that are more capital
23 intensive face somewhat higher risk.
24 Is that right?
25 MR. PELINO COLAIACOVO: That's correct.

1 MR. BYRON WILLIAMS: And then also
2 those plans which are more hydrology intensive may face
3 difference risks, as well.
4 MR. PELINO COLAIACOVO: That's correct.
5 MR. BYRON WILLIAMS: And when we look
6 at the overall analysis of the plan, you made the point
7 yesterday that there's uncertainty associated with the
8 time horizon. Would that be fair?
9 MR. PELINO COLAIACOVO: That's correct.
10 MR. BYRON WILLIAMS: And the longer the
11 time horizon of the forecast, you'd agree with me, the
12 more likely that we get to a stage where instead of
13 having incremental change, we're moving -- we're
14 getting into the realm of unpredictability?
15 MR. PELINO COLAIACOVO: Particularly
16 with respect to the underlying technology environment.
17 So both demand and supply, broadly speaking, not just
18 in Manitoba but across North America, are going to be
19 fundamentally affected by technology change over time,
20 which is not predicable.
21 Nobody predicted shale gas ten (10)
22 years ago. You know, the development of LEDs is
23 changing the amount of power that's drawn by lighting.
24 Heating/cooling technology changes over time. The use
25 of electricity in electronic devices and, you know, the

1 -- the portion of our total electronic demand --
2 electricity demand today that's used in electricity
3 devices is fundamentally different from thirty (30)
4 years ago.
5 So when you're looking forward over a
6 fifty (50) or a seventy-five (75) year time span, it
7 becomes harder and harder to predict what demand will
8 be and what supply options will actually exist at -- at
9 that time.
10 MR. BYRON WILLIAMS: Okay. And I don't
11 want to belabour the discussion you had both with the
12 panel and myself yesterday about grid parity, but you -
13 - you recall that -- that discussion?
14 MR. PELINO COLAIACOVO: Yes.
15 MR. BYRON WILLIAMS: And in your
16 evidence, we can turn there if you want at -- at page
17 34, but you do have a discussion about stranded assets.
18 Do you recall that?
19 MR. PELINO COLAIACOVO: Correct.
20 MR. BYRON WILLIAMS: And in terms of
21 the two (2) major hydro plants, the one in terms of the
22 risk of being a stranded asset, in your view it's --
23 Conawapa is -- is the one (1) that's more at risk.
24 Would that be fair?
25 MR. PELINO COLAIACOVO: It's a larger

1 plant with higher cost. And when it's projected to be
2 built as part of the Preferred Development Plan, more
3 of it will be for export than domestic consumption,
4 which exposes Manitoba Hydro to export risks both in
5 volume and price, and a much longer time horizon when
6 it's not required domestically and, therefore, can be
7 affected by all of these potential changes and
8 technology.
9 MR. BYRON WILLIAMS: And so the risk is
10 -- is both disproportionate on the export side, you --
11 you've -- for Conawapa?
12 MR. PELINO COLAIACOVO: I'm not sure
13 I'd use the word 'disproportionate', but it's higher at
14 any rate.
15 MR. BYRON WILLIAMS: And it's also on
16 the domestic side as -- as well, given the timing and
17 the sheer size of the -- the projects?
18 MR. PELINO COLAIACOVO: The way the --
19 the Preferred Development Plan was presented last
20 August, I would say, yes. Since then, of course,
21 Manitoba Hydro has suggested even as part of the
22 Preferred Development Plan they might delay Conawapa
23 for various reasons. So there's some new information.
24 But when we were looking at the data as presented, yes.
25 MR. BYRON WILLIAMS: Yes.

1 MR. PELINO COLAIACOVO: Do you recall
2 using the word 'merchant risk' in your discussion with
3 the -- the panel yesterday?
4 MR. PELINO COLAIACOVO: Yes.
5 MR. BYRON WILLIAMS: And if we could
6 flip to pages 68 -- page -- page 68 of MPA Exhibit 3.
7 And scroll down to the bottom. And -- and to Morrison
8 Park, I'm just going to give you a second to read this,
9 my two (2) favourite -- or my favourite paragraph or
10 two (2) from your evidence. The bottom of this page
11 and then we'll scroll over to the -- the top of the
12 next page just for a second.
13 You'll -- we have to scroll to the --
14 MR. PELINO COLAIACOVO: Sure.
15 MR. BYRON WILLIAMS: -- next page,
16 please. Scroll down a bit more. Keep scrolling,
17 please. That's perfect. Thanks.
18
19 (BRIEF PAUSE)
20
21 MR. BYRON WILLIAMS: So you also
22 employed the -- the term, sir, 'merchant investor' in
23 your pre-filed evidence.
24 Is that right?
25 MR. PELINO COLAIACOVO: That's correct.

1 MR. BYRON WILLIAMS: Without going to
2 the reality of Manitoba Hydro for a minute and staying
3 at the conceptual level, I want to explore the -- the
4 conceptual difference between a -- a traditional rate-
5 based retailer as compared to a merchant plant.
6 Is that okay with you, sir?
7 MR. PELINO COLAIACOVO: Certainly.
8 MR. BYRON WILLIAMS: At a generic or
9 conceptual level, can we conceive of a traditional
10 rate-based power plant as being one where a regulated
11 utility builds a plant for its retail customers, who
12 are in turn obliged to pay for the plant's
13 construction, operation, and maintenance through their
14 rates?
15 MR. PELINO COLAIACOVO: And a return on
16 the investment that's in the plant.
17 MR. BYRON WILLIAMS: So I had it right
18 except for that I -- I nected -- neglected to mention a
19 -- a just and reasonable rate of return?
20 MR. PELINO COLAIACOVO: That's
21 typically in the formulation for a regulated utility,
22 yes.
23 MR. BYRON WILLIAMS: Okay. So that's
24 the traditional plant. And -- and leaving aside the
25 specific of -- of Manitoba Hydro for right now, staying

1 at the conceptual level, would I be correct in
2 suggesting that the focus of a merchant power plant is
3 not on selling to its regulated retail customers, but
4 rather at the conceptual level it -- it is selling into
5 the wholesale power market?
6 MR. PELINO COLAIACOVO: That's correct.
7 MR. BYRON WILLIAMS: And in the
8 wholesale power market, rates are not regulated based
9 upon that concept of just and reasonable rates of
10 return?
11 MR. PELINO COLAIACOVO: That's correct.
12 MR. BYRON WILLIAMS: There's no
13 guarantee of the -- of a just and reasonable rate?
14 MR. PELINO COLAIACOVO: Yes, you -- in
15 -- you're selling into a power market and you receive
16 the market price of power when you sell.
17 MR. BYRON WILLIAMS: And depending on
18 your prudence and your business brilliance and -- and
19 pure luck and the -- the vicissitudes of fortune, you
20 either reap -- reap the reward or suffer the adverse
21 consequences?
22 MR. PELINO COLAIACOVO: That's correct.
23 MR. BYRON WILLIAMS: Now, scrolling
24 back down -- or turning to page 68, that last paragraph
25 for a minute. You talk about Manitoba Hydro being

1 simply a price taker in the MISO market.
2 Do you recall that?
3 MR. PELINO COLAIACOVO: That's correct.
4 MR. BYRON WILLIAMS: And then further
5 to your discussion with the Chairman yesterday, you
6 have a bit of a discussion here about the long-term
7 firm contracts. And you make the statement that:
8 "The longer-term firm contracts are
9 not mitigating market risk or
10 exposure for Manitoba Hydro, but
11 merely apportioning
12 scroll down a bit more] the market
13 risk."
14 Is that right?
15 MR. PELINO COLAIACOVO: So the context
16 for my description and discussion around the exports is
17 twofold. One, the prices that are available for firm
18 power contracts in the MISO market are set by the MISO
19 market. They're not -- and they're related to
20 alternatives that are available in the MISO market
21 which are not hydro electric alternatives. The MISO
22 market is principally powered by coal and natural gas
23 and to a much lesser, but growing, extent wind.
24 So the -- in any market, the price is
25 set by the marginal available unit. And so -- and

1 you're -- you're seeking to get a firm power contract
2 in that kind of a market. The next available unit,
3 other than the one being offered by Manitoba Hydro,
4 would be either a coal or a gas or potentially a wind
5 unit. And so the prices would actually be set by those
6 alternatives, not by the costs that are borne in
7 Manitoba to develop, construct, and operate its
8 hydroelectric plants.
9 So the -- the prices for these so-called
10 firm long-term contracts, which are ten (10) to fifteen
11 (15) years typically, are not related in any way to the
12 costs that Manitoba Hydro is bearing in producing its
13 power.
14 If -- if we were talking about a
15 developer of gas plants in the MISO market, that
16 developer of gas plants would be competing
17 fundamentally against other developers of gas plants,
18 and one may be a slightly better manager than another.
19 One may be a slightly more efficient construction
20 developer than another, but they would fundamentally be
21 competing with each other on the same terms.
22 Manitoba Hydro is not competing with
23 them on the same terms. It has fundamentally different
24 cost drivers and different risks. And it's simply
25 accepting the kinds of contracts that would be

1 applicable to a gas fired developer and -- and using
2 those contracts to try and smooth out the volatility of
3 its revenues over ten (10) or fifteen (15) years.
4 So it's -- it's not setting prices in
5 the MISO market on the basis of its kind of generation,
6 its -- its kind of capacity that's being offered,
7 because if you look at the costs that would be
8 applicable to Manitoba Hydro in the first ten (10) or
9 fifteen (15) years of its operation, they're actually
10 quite high, right, because developing a very large
11 hydroelectric plant takes a lot of capital and has a
12 high cost of -- of interest in the early years until
13 some of the principal is paid off.
14 None of that is reflected in the
15 contracts that it's getting with the MISO market, with
16 MISO market participants. MISO market participants are
17 providing contracts that would be acceptable to a gas
18 fired developer or a coal fired developer.
19 So that's -- the discussion that I have
20 in here is about how Manitoba Hydro is fundamentally
21 producing a different product, right, but getting
22 prices that are essentially structured to compensate a
23 gas fired developer for the kinds of risks that they
24 take. Manitoba Hydro is simply taking those contracts
25 because those are the contracts that are available.

1 Those are the only ones that available in the MISO
2 market, so those are the contracts that it is -- it is
3 agreeing to.
4 MR. BYRON WILLIAMS: If we can scroll
5 to this next paragraph on page 69. This is your
6 merchant investor paragraph, you'll agree with me?
7 MR. PELINO COLAIACOVO: Yes.
8 MR. BYRON WILLIAMS: And you -- you
9 talk about on the upside prices may turn out to be high
10 and ratepayers will benefit. On the downside, they may
11 turn out to be low and ratepayers will have to shoulder
12 more of the burden of Hydro's costs.
13 Is that right?
14 MR. PELINO COLAIACOVO: That's correct.
15 MR. BYRON WILLIAMS: And then you make
16 the statement that:
17 "Either way, ratepayers can have no
18 certainty in advance and no choice in
19 the matter."
20 Correct?
21 MR. PELINO COLAIACOVO: That's right.
22 MR. BYRON WILLIAMS: And -- and why
23 does -- "no choice in the matter," what's the
24 significance of that statement, sir?
25 MR. PELINO COLAIACOVO: So ratepayers

1 have no way of opting out of Manitoba Hydro. Well,
2 that's not entirely true. There are a select few
3 ratepayers in Manitoba that can opt out simply by
4 moving. But given the construction of the electricity
5 market in Manitoba, it's a monopoly market. Manitoba
6 Hydro provides power at its prices to all ratepayers in
7 Manitoba.
8 There are legislative and regulatory
9 restrictions that say, you know, you are not allowed to
10 produce your own power as an alternative without
11 approval of Manitoba Hydro and so on and so forth. So
12 there is no opt-out clause. There is no market in
13 Manitoba that allows ratepayers to choose a different
14 provider if they're unhappy with the prices or the
15 options that are presented to them from Manitoba Hydro.
16 MR. BYRON WILLIAMS: And staying with
17 your merchant investor theme, if one was speaking of a
18 -- a merchant power plant, it would be the owners of
19 the merchant power plant who would be reaping the
20 rewards or suffering the adverse consequences.
21 MR. PELINO COLAIACOVO: That's correct.
22 MR. BYRON WILLIAMS: And so the
23 distinction, as -- as I understand it, that you're
24 making is -- well, you're -- you're suggesting that
25 Manitoba ratepayers are, in a way, analogous to those

1 investors.

2 MR. PELINO COLAIACOVO: They absolutely

3 are, because all of the retained earnings of Manitoba

4 Hydro, which are in a sense its equity. That's the

5 only equity in Manitoba Hydro is its retained earnings.

6 The retained earnings are generated from its customers,

7 right. There are -- there are no equity infusions. No

8 one is adding capital to Manitoba Hydro in order for it

9 to build new facilities.

10 It's retaining its earnings and

11 investing those retained earnings in new facilities.

12 So ratepayers are ultimately responsible for the costs

13 of Manitoba Hydro by legislation. They are a residual

14 economic actor, just like a shareholder is in a -- you

15 know, in -- in a -- privately owned facility.

16 MR. BYRON WILLIAMS: And just to finish

17 this paragraph:

18 "The distinction between the

19 ratepayer and the shareholder is the

20 issue of choice."

21 MR. PELINO COLAIACOVO: That's right.

22 And the shareholder in a -- in a private company can

23 choose to sell their shares.

24 MR. BYRON WILLIAMS: Now, just to be

25 confident, when -- when you describe Manitoba Hydro as

1 a merchant investor, what's the basis for that
2 description?
3 MR. PELINO COLAIACOVO: In this
4 context, if you consider a traditional rate-based,
5 regulated utility in many markets and jurisdictions
6 around the world, the -- the utility would go to the
7 regulator and request permission to build a new
8 facility on the basis that that facility is required to
9 serve its jurisdiction, to serve its ratepayers.
10 Demand is growing; we need new capacity. Or an old
11 facility is going to have to be mothballed; we need new
12 capacity.
13 The regulator would determine whether
14 it's prudent or not to build the facility at that time
15 at a certain cost. Assuming that permission was given,
16 the facility would be built and the ratepayers would be
17 responsible for the full cost of that facility. It's a
18 closed loop.
19 In Manitoba Hydro's case, not only is
20 the new facility going to produce, in some years,
21 opportunity exports because of the variability in
22 hydrology -- excuse me -- but when it's first built it
23 will, in all years, produce excess dependable energy.
24 And so Manitoba Hydro is seeking contracts to sell as
25 much of that depen -- excess dependable energy as

1 possible.

2 But the time horizon in which there's

3 going to be excess dependable energy is quite long.

4 And the contracts that are available on the MISO market

5 are in ten (10) year increments, for example; in some

6 cases, potentially a little bit longer, fifteen (15)

7 years. But Manitoba Hydro is not going to be able to

8 sell -- it's not going to be able to contract, at least

9 at this point as of today, when they're, you know,

10 suggesting that they would like permission to pursue

11 the Preferred Development Plan, all of the excess

12 dependable energy.

13 Moreover, in all cases, regardless of

14 the --the contracts for dependable energy, there's a

15 tremendous amount of expected opportunity energy that's

16 going to be sold. And the opportunity energy is

17 largely going to go to export markets over which

18 Manitoba Hydro has no control.

19 So when you look at the total output of

20 the facility, much of it is not destine for ratepayers.

21 Much of it is at prices which are today unknown. So

22 fundamentally, since ratepayers are responsible for

23 their residual costs of all of Manitoba Hydro's

24 facilities, ratepayers are exposed to the risk on all

25 of that portion of the expected output of the facility.

1 And there is no other way to really describe it, other
2 than saying that's a merchant risk. They're exposed to
3 those prices.
4 MR. BYRON WILLIAMS: Thank you. And at
5 the time you wrote this evidence, we were talking about
6 a need date from -- for domestic need around
7 2022/'23/'24.
8 Do you recall that?
9 MR. PELINO COLAIACOVO: I believe that
10 was for the Keeyask --
11 MR. BYRON WILLIAMS: Yeah.
12 MR. PELINO COLAIACOVO: -- facility,
13 not for the Conawapa facility.
14 MR. BYRON WILLIAMS: Conawapa. And
15 you're aware obviously -- maybe we can pull up Hydro
16 Exhibit 95, slide 4 for a minute.
17
18 (BRIEF PAUSE)
19
20 MR. BYRON WILLIAMS: And just while
21 we're going there, you're make -- the -- where you were
22 correcting me on my -- my last question was while I was
23 focussed on the domestic need for Keeyask, you were
24 saying, Hold on, Mr. Williams, there's also a great big
25 plan beyond that where the need date is even father

1 out.

2 MR. PELINO COLAIACOVO: Correct.

3 MR. BYRON WILLIAMS: Okay. And, sir,

4 you'll accept that this is from Manitoba Hydro, their

5 Exhibit 95?

6 MR. PELINO COLAIACOVO: Yes.

7 MR. BYRON WILLIAMS: And so I guess my

8 question was: At the time that you wrote your

9 evidence, we were talking about a need date for Keeyask

10 for domestic purposes 2023/'24.

11 MR. PELINO COLAIACOVO: Correct.

12 MR. BYRON WILLIAMS: You'll see under

13 the various scenarios here, we're now talking about a

14 need date for Keeyask somewhere between 2027 and 2032,

15 agreed?

16 MR. PELINO COLAIACOVO: Yes.

17 MR. BYRON WILLIAMS: How, if at all,

18 would that adjusted need mate -- need date affect your

19 conclusions regarding merchant investors?

20 MR. PELINO COLAIACOVO: Well, assuming

21 that both facilities went ahead as originally suggested

22 in the Preferred Development Plan, i.e., 2019 and

23 2026/'7, then clearly the vast majority of the

24 dependable energy produced from those plans would not

25 be required by domestic ratepayers. It would be for

1 export. You know, based on -- on these newer
2 estimates, it would appear that domestic ratepayers'
3 needs can -- can be met from other sources.
4 MR. BYRON WILLIAMS: Thank you. If we
5 could turn to page 26 of the evidence of Morrison Park
6 pre-filed, MPA-3, lines 30 to 32. You suggest --
7 Morrison Park suggests that ratepayers are not
8 economically identical to taxpayers.
9 Is that correct?
10 MR. PELINO COLAIACOVO: Yes.
11 MR. BYRON WILLIAMS: And you argue that
12 there is a distributional impact of collecting
13 government revenues for water rentals and capital
14 taxes.
15 MR. PELINO COLAIACOVO: Correct.
16 MR. BYRON WILLIAMS: Okay.
17 MR. CHRISTIAN MONNIN: I just -- I
18 don't think he's arguing anything. He's just stating
19 that.
20 MR. BYRON WILLIAMS: Fair enough. I
21 wasn't meaning to argue anything either, Mr. Monnin.
22
23 CONTINUED BY MR. BYRON WILLIAMS:
24 MR. BYRON WILLIAMS: Focussing -- let's
25 start with focussing first on residential ratepayers.

1 How, if at all, would you draw a
2 distinction between residential rate -- ratepayers and
3 taxpayers?
4 MR. PELINO COLAIACOVO: The purpose of
5 the distinction that I was trying to draw was that if
6 the government imposes or increases or amends a tax on
7 Manitoba Hydro, that tax -- because Manitoba Hydro
8 passes its costs on to ratepayers, that tax is passed
9 on to ratepayers. And the government, in the end,
10 would be collecting its new tax or changed amended tax
11 on an allocational basis from different classes of
12 Manitoba Hydro's customers.
13 When the Government of Manitoba chooses
14 to tax its citizens in some other fashion, through a
15 sales tax, or through an income tax, or a wealth tax,
16 or whichever kind of tax it -- it chooses to use, the -
17 - the allocation -- the distribution of that tax will
18 be different.
19 And so if you look at the revenues of
20 Manitoba Hydro over an extended period of time, and we
21 included in our -- in our report a couple of -- of
22 charts to that effect, some portion of its revenues
23 come from exports, some portion come from residential
24 ratepayers, and some portion come from commercial
25 ratepayers and industrial ratepayers. That allocation

1 is different than the Government of Manitoba's own
2 general revenue account, which is much more highly
3 skewed, for example, to residential or to individuals
4 as to businesses.
5 And Manitoba's direct revenue from
6 exports is actually very, very small, from a government
7 perspective in -- in terms of tariffs or any other
8 types of costs that might be exposed -- imposed on
9 exports. So the allocation of the revenue opportunity
10 for government is very different if it chooses to raise
11 money through Manitoba Hydro as opposed to if it
12 chooses to raise money in some other way.
13 MR. BYRON WILLIAMS: Okay. Thanks.
14 I'm always reluctant to talk about discount rates too
15 much; they seem to be recurring.
16 But we'll turn to page 67 of your
17 evidence for a moment. And this -- scroll up just a
18 little bit, please. Just a bit more. That's perfect.
19 Before we focus your attention on this
20 quote, when you did your analysis in terms of the
21 variables affecting our analysis of the plan, you made
22 the -- the point that discount rate representing the
23 time value of money is extremely powerful and
24 overwhelms all other distinctions?
25 MR. PELINO COLAIACOVO: Yes.

1 MR. BYRON WILLIAMS: And I just want to
2 -- you're talking here in the two (2) bullets starting
3 at line 12 and finishing at line 20, first of all, that
4 weighted average cost of capital, or WACC, is
5 appropriate to consider the present value of cash
6 streams from the purposes of an investor considering an
7 investment decision, but you note that ratepayers are
8 not investors?
9 MR. PELINO COLAIACOVO: That's true.
10 MR. BYRON WILLIAMS: And in the second
11 bullet, starting about line 17, you suggest, not argue,
12 that:
13 "Ratepayers can in no sense be
14 understood to be making a voluntary
15 investment decision given the
16 monopoly nature of the service."
17 Correct?
18 MR. PELINO COLAIACOVO: Correct.
19 MR. BYRON WILLIAMS: Why does that
20 matter?
21 MR. PELINO COLAIACOVO: In a
22 traditional regulated rate environment where a utility
23 is providing -- is spending money and providing power
24 to its ratepayers and all of its costs are being
25 imposed on the ratepayer, the justification for those

1 costs is that they're needed by the ratepayer, the
2 ratepayer's going to use them, and, therefore, you
3 know, those costs are allocated to the ratepayers over
4 time. And while it's not voluntary, in the sense --
5 you know, the ratepayers are not choosing and the
6 decisions are made by a public utilities board or
7 regulator of some other kind, it is a requirement for
8 those ratepayers. It's a public need.
9 In the case of the Preferred Development
10 Plan where a substantial portion of the output of the
11 new facilities is for export and exposed to export
12 price risks, and export market risks, it's not a need.
13 It's not a public need for the domestic ratepayers of
14 Manitoba.
15 The public need of the domestic
16 ratepayers in Manitoba is power for them, right?
17 Structuring the Preferred Development Plan to be
18 exposed to export price risks and export volume risks
19 is not a traditional or typical way of constructing the
20 economic relationship of a ratepayer to a monopoly
21 utility provider.
22 I think a contrast can be made to a
23 recent and -- and ongoing development in Newfoundland
24 and Labrador of Muskrat Falls --
25 MR. BYRON WILLIAMS: I was going to

1 come to that, sir.

2 MR. PELINO COLAIACOVO: -- which is a

3 large hydro development plant that's also going to

4 produce a substantial amount of power for export.

5 However, in the case of Muskrat Falls, the price of the

6 power that goes to ratepayers is being calculated, more

7 or less, on a typical traditional utility ratepayer

8 economic relationship.

9 The -- the ratepayers are going to get

10 power from that facility at a regulated rate over a

11 long term. So they will be paying an appropriate

12 return to the owner of the facility, which happens to

13 be the Government of Newfoundland and Manitoba (sic).

14 But it's the government on behalf of the taxpayer which

15 owns the facility, which will be exposed to the price

16 of the export risk.

17 So if the facility makes lots of

18 revenues on exports the government benefits. If the

19 facility doesn't make lots of money on exports it's the

20 government that directly takes the consequences, not

21 the ratepayer. So the -- the ratepayer is insulated in

22 Newfoundland's case from export risks.

23 In the proposed development of the

24 Preferred Development Plan, the economic relationship

25 is different from what's been proposed in -- in

1 Newfoundland. In -- in Manitoba's case, the ratepayer
2 is exposed to those export risks, and -- and that's the
3 point that I'm trying to get to here.
4 MR. BYRON WILLIAMS: Okay. And just a
5 very small point, I think you referenced the Government
6 of Labrador (sic) and Manitoba. And I'm assuming you
7 meant to say the Government of Labrador and --
8 MR. PELINO COLAIACOVO: Sorry.
9 MR. BYRON WILLIAMS: -- Newfoundland?
10 MR. PELINO COLAIACOVO: And
11 Newfoundland, yes.
12 MR. BYRON WILLIAMS: Okay. Mr. Chair,
13 about ten (10) minutes, or so.
14 If we can turn to page 43 of Morrison
15 Park Exhibit 3, their pre-filed evidence.
16
17 (BRIEF PAUSE)
18
19 MR. BYRON WILLIAMS: And actually to
20 page 42, excuse me, lines 33 through 38.
21
22 (BRIEF PAUSE)
23
24 MR. BYRON WILLIAMS: And, sir, before
25 we go to the specifics of these lines, you'll -- you'll

1 recall your discussion with Board member Kapitany
2 yesterday, and her suggestion that economists had
3 hearts?
4 MR. PELINO COLAIACOVO: Yes.
5 MR. BYRON WILLIAMS: Do you wish to
6 offer any comment on -- on that assertion?
7 MR. PELINO COLAIACOVO: No, I would
8 not.
9 MR. BYRON WILLIAMS: Prudent man. And
10 -- and certainly in your commercial evaluation of Part
11 1 of the Preferred Development Plan, as your defined
12 it, you made the point -- you raise the concern about
13 the significant con -- cost consequences of cancelling
14 Keeyask, because that would result in a write-off of
15 around a billion dollars in cost?
16 MR. PELINO COLAIACOVO: That's correct.
17 MR. BYRON WILLIAMS: And based upon
18 your extensive review of the evidence, you would be
19 aware of the suggestion by La Capra that the All Gas
20 Plan was not optimized in -- in the portfolio analysis?
21 MR. PELINO COLAIACOVO: I've read their
22 material and so, yes, I agree that they said that.
23 MR. BYRON WILLIAMS: And I'm not asking
24 you to comment. I just want -- now, the point you make
25 here not as way of criticism but as way of realpolitik,

1 is -- is that when we're looking at the comparison
2 between All Gas and the Preferred Plan, one (1) of the
3 reasons that there's less of a distinction than we
4 might expect is because in the analysis of All Gas
5 you're looking -- you're including quite a -- quite a
6 bit of sunk costs?
7 MR. PELINO COLAIACOVO: That's correct.
8 MR. BYRON WILLIAMS: And -- and without
9 meaning in any way to be pejorative, would it be fair
10 to say that every single dollar of that billion dollars
11 that was -- that we've sunk into Keeyask already by
12 Manitoba Hydro, in a way that was in essence biassing
13 the decision towards Keeyask?
14 OBJ MR. CHRISTIAN MONNIN: I'm going to
15 object to that question.
16
17 CONTINUED BY MR. BYRON WILLIAMS:
18 MR. BYRON WILLIAMS: Without using the
19 word 'bias', sir, the mathematical reality is by
20 spending more on Keeyask there was a mathematical
21 disadvantage to All Gas?
22 MR. PELINO COLAIACOVO: My partner
23 Brent Walker, who participated with us in preparing
24 this report, has -- makes -- often makes a point that
25 when you're doing a commercial evaluation the only

1 thing that matters is positional thinking. You have to
2 look at what your options are from the position that
3 you're in now.
4 The position that Manitoba in -- is in
5 currently is one in which there are over a billion
6 dollars of sunk costs that have to be addressed. Had
7 this review, the NFAT, occurred three (3) years ago and
8 substantial funds had not yet been spent on Keeyask,
9 the calculation of the relative attractiveness between
10 different plans would have been different, because
11 money would not have been spent.
12 So in an idealized world and
13 theoretically, if you ignored sunk costs and current
14 reality you would come to different conclusions about
15 which plans may or may not be attractive. But that's
16 not appropriate to commercial evaluation. Commercial
17 evaluation is only a decision based on where we are
18 today, and it's not an issue of bias, or favouritism,
19 or pressure; it's simply a recognition of the reality
20 of where things are, which is the billion dollars was
21 spent and ultimately has to go to ratepayers.
22 MR. BYRON WILLIAMS: And -- and we'll -
23 - we'll come back to -- to the significance of that
24 statement, as it may relate to Conawapa, in a second.
25 Just in paragraph -- or the paragraph

1 starting at line 23 and ending at line 32 of this page,
2 being page 42 of MPA Exhibit 3, you -- you note as well
3 that All Gas is paying -- or bearing a heavy burden
4 when it comes to the substantial amount of debt
5 incurred as a result of system investments, including
6 Bipole III.
7 Would that be fair?
8 MR. PELINO COLAIACOVO: That's correct.
9
10 (BRIEF PAUSE)
11
12 MR. BYRON WILLIAMS: And the
13 disadvantage are -- it bears in the analysis, is it's -
14 - because it's the least export orientated, it's --
15 it's got the less opportunities to recoup the costs
16 associated with that -- that debt?
17 MR. PELINO COLAIACOVO: To -- to use La
18 Capra's language, given that Manitoba is building
19 Bipole III, and Bipole III has reliability benefits for
20 the province, but it also creates additional transfer
21 capacity from north to south, which would not otherwise
22 be there: trans -- electricity transfer capacity.
23 If you are going to optimize the
24 Province's system and you had this additional transfer
25 capacity, it's entirely appropriate and legitimate to

1 consider whether you can opt -- whether -- whether you
2 can optimize the output of the system by building
3 additional northern Manitoba hydroelectric facilities.
4 Gas -- or the All Gas option doesn't actually make use
5 of that transfer ability.
6 So in -- in that sense, you know, it's -
7 - it's not optimal considering the entire investment of
8 Manitoba Hydro which comes out in all of the analysis,
9 which is why building Keeyask and taking advantage of
10 the additional transfer capacity of Bipole appears to
11 be at least equally as attractive as All Gas, if not
12 more. It's a consequence of the decision that was made
13 previously and it makes sense in that context.
14 Again, it's positional thinking. We are
15 where we are. Bipole -- the Bipole III decision was
16 made, the investment is going ahead, therefore, when
17 you do the numbers it appears that building Keeyask
18 makes sense. Had we had this discussion three (3)
19 years ago before the Bipole decision was made, maybe
20 there would have been a different conclusion. But it's
21 not three (3) years ago; it's -- it's today.
22 MR. BYRON WILLIAMS: And for the
23 purposes of my next question I just want you to
24 understand that our client at this point in time is not
25 picking Keeyask or -- over Conawapa, or -- for

1 environmental reasons maybe not picking any of them.
2 But the importance of the discussion we're having here
3 in terms of the present day view relating, you know,
4 where we are situationally today, that does have some
5 implications for your analysis of Part 2 of the
6 Preferred Development Plan, and -- and consideration of
7 whether additional costs should go towards Part 2 of
8 that plan, including Conawapa.
9 Would that be fair?
10 MR. PELINO COLAIACOVO: That's correct.
11 Yes.
12 MR. BYRON WILLIAMS: And that doesn't
13 mean Conawapa is good or bad, but we should understand
14 mathematically that every additional dollar spent on
15 Conawapa has math -- mathematical consequences for the
16 alternatives?
17 MR. PELINO COLAIACOVO: Very much so.
18 MR. BYRON WILLIAMS: The last thing I
19 just want to go to is Manitoba Hydro Exhibit 129-7.
20 And I don't know if I should go there or not, sir, but
21 it's a peculiar little analysis that I'm -- I'm
22 struggling with at panel -- slide 4.
23 And, sir, at the bottom you're familiar
24 with this -- this slide?
25 MR. PELINO COLAIACOVO: Yes.

1 MR. BYRON WILLIAMS: And you'll see at
2 the bottom of this page a reference to a term called
3 'embedded return on equity'?
4 MR. PELINO COLAIACOVO: Yes.
5 MR. BYRON WILLIAMS: And, sir, is that
6 a specific term that you're familiar with within your
7 commercial banking context?
8 MR. PELINO COLAIACOVO: It's not a
9 common term. I think if you were looking at economics
10 texts or -- or looking in -- in corporate finance
11 texts, you wouldn't -- you wouldn't find a -- a -- an
12 exp -- a specific reference to embedded equity, but I
13 think I understand what Manitoba is describing in this
14 slide.
15 MR. BYRON WILLIAMS: Well, why don't --
16 why don't I get you to -- to explain that and then I'll
17 ask a few -- see if I can help you -- get you to help
18 me explain the math.
19 MR. PELINO COLAIACOVO: So Manitoba
20 Hydro's equity is its retained earnings. And one (1)
21 of the targets that Manitoba Hydro has is to maintain
22 over time a target equity ratio of 75 percent debt 25
23 percent equity. And as such, it designs its rate
24 requests to the Manitoba PO -- PUB with an eye to
25 achieving that equity ratio over time.

1 In all of the different development
2 plans the same equity ratio is the target. However,
3 the -- the reality is that some of the plans require
4 more capital to develop the facilities that are
5 included in that particular plan. So Manitoba Hydro's
6 balance sheet is different sizes in different plans.
7 If you -- for example, if you look at
8 the -- the size of Manitoba Hydro's balance sheet in
9 2040 after you pursue the All Gas Plan, the balance
10 sheet will be substantially smaller than the -- the
11 balance sheet if you pursued the Preferred Plan,
12 because a lot less capital would be expended in the
13 Preferred Plan than in the All Gas Plan. The -- but
14 because in both plans Manitoba Hydro achieves a debt-
15 equity ratio of 75:25, the retained earnings, the
16 amount of equity that's in Manitoba Hydro in the
17 Preferred Planned case, is going to be much larger.
18 The -- I think what's happening in this
19 -- in -- in this plan -- sorry, in this slide, is
20 essentially a net present value of the size of actual
21 retained earnings in each of the different plans. I'm
22 not a hundred percent certain about that, because I
23 think this requires some more investigation and study.
24 I only had a cursory glance at it when this particular
25 undertaking came out, but that -- that was my

1 impression of it when I first read it.
2 MR. BYRON WILLIAMS: Okay. And we'll
3 just ask a couple more questions. So let's focus on --
4 at the top on Plan 14, the third bar down.
5 And you'll understand that this is based
6 on a 2014 DSM Level 2, 2013 reference scenario
7 assumptions, 2014 capital costs, and a net present
8 value relative to All Gas?
9 You'll understand that's the premise?
10 MR. PELINO COLAIACOVO: M-hm.
11 MR. BYRON WILLIAMS: And...
12 MR. PELINO COLAIACOVO: Sorry, yes.
13 MR. BYRON WILLIAMS: And so that little
14 dark blue bar of $45 million is the net present value
15 of the Preferred Plan relative to All Gas based upon
16 these assumptions?
17 MR. PELINO COLAIACOVO: As I understand
18 it, yes.
19 MR. BYRON WILLIAMS: And that's at a
20 5.4 percent discount rate?
21 MR. PELINO COLAIACOVO: Correct.
22 MR. BYRON WILLIAMS: And, by contrast,
23 just going above for comparison purposes, we'll see the
24 NPV of Plan 6 compared to All Gas is 386 million,
25 right? Correct?

1 MR. PELINO COLAIACOVO: Correct.
2 MR. BYRON WILLIAMS: And, likewise,
3 we'll see the results for Plan 5 being four hundred and
4 ten (410)?
5 MR. PELINO COLAIACOVO: Yes.
6 MR. BYRON WILLIAMS: Okay. Now, when
7 we try and figure out the light blue bar, or embedded
8 equity, that's the -- presumably, the return on equity
9 is, as Hydro describes it, embedded in its weighted
10 average cost of capital?
11 MR. PELINO COLAIACOVO: That's my
12 understanding from the description.
13 MR. BYRON WILLIAMS: And if we could
14 quickly turn to Manitoba Hydro Exhibit 175.
15 And you'll recall the figure there, sir,
16 was one billion three hundred and nineteen million
17 dollars ($1,319,000,000).
18 Do you recall that?
19 MR. PELINO COLAIACOVO: Yes.
20 MR. BYRON WILLIAMS: If we just go to
21 the second page of this exhibit.
22 Is this your understanding of how
23 Manitoba Hydro calculated this embedded equity figure?
24 MR. PELINO COLAIACOVO: What this
25 exhibit suggests is that they have constructed two (2)

1 different discount rates, or weighted average cost of
2 capital, one (1) which included a 3 percent equity
3 premium, and one (1) which did not include a 3 percent
4 equity premium, and the result is discount rates of 5.4
5 versus 4.65 percent.
6 MR. BYRON WILLIAMS: Okay. Can --
7 let's stop you there just so I can break it into pieces
8 that even this humble lawyer can understand.
9 So if we take Plan 14, using the two (2)
10 discount rates, there is a -- the -- the net present
11 value, there's roughly a $390 million difference, in
12 that it's minus twenty-three seventy-four (2374) using
13 the 4.65 percent, as compared to the results from the
14 5.4 percent discount rate?
15 MR. PELINO COLAIACOVO: Correct.
16 MR. BYRON WILLIAMS: So there's be a --
17 a -- some improvement of that using the -- the lower
18 discount rate?
19 MR. PELINO COLAIACOVO: Yes.
20 MR. BYRON WILLIAMS: And then we look
21 at Plan 1, the All Gas. You'll agree with me that
22 under the 5.4 percent discount rate, it was minus $2.8
23 billion?
24 MR. PELINO COLAIACOVO: Correct.
25 MR. BYRON WILLIAMS: Under the 4.65

1 percent discount rate, it is $3.7 billion?
2 MR. PELINO COLAIACOVO: Yes.
3 MR. BYRON WILLIAMS: So almost -- well,
4 somewhere between a -- a 900 and a billion dollar
5 difference using that -- that lower discount rate, in
6 terms of net present value?
7 MR. PELINO COLAIACOVO: That's correct.
8 MR. BYRON WILLIAMS: And in essence,
9 they took the difference between the NPV of 45 million
10 versus the NPV at -- at 4.65 percent, and that's how
11 they came at -- came up -- came up with the figure of
12 1319 billion -- 1.319 billion?
13 MR. PELINO COLAIACOVO: That's what it
14 would appear, yes.
15 MR. BYRON WILLIAMS: Sir, how heavily
16 do you rely upon this analysis for your commercial
17 valuation?
18 MR. PELINO COLAIACOVO: We looked at
19 the alternative plans from the perspective of either
20 the ratepayer or the government. This kind of a
21 calculation, which is a project economics assessment of
22 the different options, is not directly relevant to
23 either the ratepayer or the government. It is, as
24 Manitoba Hydro has -- has referred to it in many cases,
25 it's the Manitoba Hydro view of the options.

1 We did not spend time trying to assess
2 or calculate things from Manitoba Hydro's point of
3 view. We tried to understand them and assess them from
4 ratepayer points of view or government points of view.
5 The only relevance of the size of the balance sheet of
6 Manitoba Hydro is to government, because it is one of
7 the factors in determining the financial health or
8 expected financial robustness of Manitoba Hydro.
9 So to say that in pursuing the Preferred
10 Development Plan Manitoba Hydro will have relatively
11 larger retained earnings 'X' years hence is not
12 particularly relevant to the ratepayers. It doesn't
13 matter whether they have more retained earnings or not
14 to ratepayers. So I'm not sure what the significance
15 is for -- for ratepayers.
16 For government, if, all other things
17 being equal, Manitoba Hydro is a bigger company and
18 more financially robust, then I suppose for government
19 that would be a good thing. But before all other --
20 the other things being equal is the important part of
21 it. If ratepayers have to pay higher rates in order to
22 make Manitoba Hydro more robust, then the government
23 would want to understand both sides of that equation.
24 So I struggled to understand -- when I
25 saw this, I struggled to understand its real

1 significance.

2 MR. BYRON WILLIAMS: Thank you. I have

3 no further questions.

4 THE CHAIRPERSON: Before I turn the

5 microphone over to -- to Me. Hacault, I want to make

6 sure that panel doesn't have any questions.

7 In effect, what we just saw with respect

8 to the weighted average cost of capital is -- is the

9 return that they're getting -- that Manitoba Hydro gets

10 on a theoretical basis from money that's not borrowed?

11 MR. PELINO COLAIACOVO: Correct.

12 THE CHAIRPERSON: It's just money that

13 they would otherwise have to borrow to sustain the

14 capital that they -- capital infrastructure that they

15 have.

16 MR. PELINO COLAIACOVO: Mr. Chair, as I

17 understood the analysis that they did, they compared a

18 discount rate or a weighted average cost of capital

19 based on 100 percent debt versus a discount rate based

20 on a 75:25 debt-equity share, with a 3 percent equity

21 risk premium added to the debt. That's how you get 5.4

22 percent and 4.65 percent.

23 Mathematically, I understand how it was

24 done; but as I said, I struggle to understand the

25 significance of -- of the calculation. I'm not sure

1 what the calculation actually means to stakeholders.
2 THE CHAIRPERSON: I just want to go
3 back over your testimony from yesterday, and this is in
4 relation to the alternatives that you consider to be
5 the ones that would be the ones that, from your
6 perspective, the most favourable. And you indicated
7 that you felt that Plan 2 was one of the ones that had
8 some interest, from your perspective.
9 And -- and I want to make sure I align
10 my thinking with yours in that the advantage of Plan 2
11 is that Keeyask gets done, and so the sink -- the sunk
12 costs are --are addressed, as -- as you -- perhaps
13 we'll call it that way, it's addressed.
14 But given that your interest in
15 transmission, I'm not sure why you would be interested
16 in Plan 2 given the fact it does not encompass
17 transmission, and it involves gas.
18 Now, is it because it gives Manitoba
19 Hydro another decision point before they invest? Is
20 that...
21 MR. PELINO COLAIACOVO: I think that's
22 part of it. The -- as I stated, our -- our own view is
23 that transmission has lots of value. And without
24 looking at numbers, our inclination would be to support
25 alternatives that include additional transmission.

1 However, as analysts and as investment
2 bankers that look at financial cashflows, there appears
3 to be some evidence to suggest that not investing in
4 transmission in -- at this particular time for Manitoba
5 Hydro, particularly given the DSM opportunities that
6 have come to light, might actually prove to
7 economically advantageous. And, so it's worth looking
8 at that alternative. And Manitoba Hydro would have the
9 option and opportunity of building additional
10 transmission interties in the future, if necessary.
11 But in the original application, Plan 2
12 was more advantageous than All Gas was. It's not clear
13 with the updated numbers whether Plan 2 is still a
14 better option than All Gas. If it is a better option
15 than All Gas and other options are only marginally
16 better than All Gas, then it would appear prudent to
17 have a look at the impact of the updated numbers on
18 Plan 2.
19 As I said, this is -- it's contrary to
20 our gut instincts, to put it in colloquial terms. But
21 based on the data that was in front of us, it's
22 something that appears to suggest that it would be
23 legitimate to have a look at it.
24 THE CHAIRPERSON: I want to explore the
25 issue of the structure -- the structure that exists in

1 Manitoba with the Manitoba government being a
2 shareholder for Manitoba Hydro versus the structure in
3 -- in Newfoundland which is largely the same, but you
4 indicated that Newfoundland is taking on the risk for
5 transactions that do not involve domestic ratepayers.
6 In other words, the domestic ratepayer
7 is protected through -- through a rate-based formula --
8 cost-based formula, rather, and the Man -- Newfoundland
9 government absorbs the risk on exports.
10 MR. PELINO COLAIACOVO: My under -- I'm
11 sorry.
12 THE CHAIRPERSON: Go ahead. And,
13 sorry, if New -- if something goes wrong in
14 Newfoundland, the Government of Newfoundland is
15 responsible for picking up -- picking up the issue.
16 In Manitoba though, Manitoba Hydro is
17 solely responsible and -- so a Newfoundland ratepayer
18 is protected, but the taxpayer isn't?
19 MR. PELINO COLAIACOVO: That's correct.
20 THE CHAIRPERSON: Does it matter? I
21 mean, ultimately does it matter? I mean, we're talking
22 of relatively the same subset.
23 I -- I -- leaving aside the issue on
24 distribution, we're talking largely the same
25 population, aren't we? Are we...?

1 MR. PELINO COLAIACOVO: The -- that's
2 correct, leaving aside the issue of allocation. But
3 the issue of allocation is not irrelevant. So in
4 Newfoundland's case, the electricity ratepayer, as in
5 Manitoba, is much more heavily skewed to businesses.
6 So in -- in Manitoba, electricity revenues -- domestic
7 electricity revenues are split between commercial and
8 industrial ratepayers and residential ratepayers on
9 certain percentages.
10 When you compare it to the Government of
11 Manitoba's general revenues, there's a very different
12 relationship between the general revenues received from
13 individuals versus businesses. So the -- the
14 allocation of the burden for electricity is very
15 different from the allocation of the burden for general
16 government revenues.
17 That difference is the same in
18 Newfoundland. The allocation of electricity burdens is
19 different from the allocation of general revenue
20 burdens. In Newfoundland, they're making a decision to
21 invest in a new facility, and a large part of the
22 output of that facility is going to be for export. In
23 that case in Newfoundland, the government's made the
24 decision that electricity ratepayers are going to be
25 responsible for a fixed amount of cost, relatively

1 speaking, over time, and the taxpayer will absorb the
2 highs and lows that result from exports.
3 What that means is that the businesses
4 that invest in Manitoba -- invest in Newfoundland have
5 a -- have much greater certainty about what the price
6 of electricity in Newfoundland is going to be over
7 time, because they're not being exposed to the export
8 highs and lows. And the -- the allocation of those
9 export highs and lows is being done on the basis of
10 government's general revenue. It -- it affects the
11 government's budget, as opposed to the -- the rate base
12 and the costs that are -- the cost that the rate base
13 is exposed to.
14 So it's -- it is an allocation question,
15 fundamentally, as to whether it's going to be
16 individual -- as whether the tax base is accepting
17 those risks or the electricity rate base is accepting
18 those risks.
19 THE CHAIRPERSON: Thank you. Me.
20 Hacault, are you prepared to ask questions of this
21 witness?
22 MR. ANTOINE HACAULT: Merci, M. -- oh.
23 THE CHAIRPERSON: Well, before you
24 start, Me. Hacault, we'd like to take a quick break,
25 please.

MR. ANTOINE HACAULT: Okay.

--- Upon recessing at 10:01 a.m.

--- Upon resuming at 10:09 a.m.

THE CHAIRPERSON: I believe that everyone is in position to -- to continue with the proceedings, so I will turn the microphone over to Me. Hacault, s'il vous plait.

MR. ANTOINE HACAULT: Merci, Mr. President. Good afternoon, members of the panel. Good afternoon; I wish. That's like -- that's 'cause I got up at a quarter after 4:00 this morning. That's my problem.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: Yeah, that's about it. Pleasant dreams, hey, Hydro.

CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: I have a couple little follow-up questions as a result of the panel questions just before we took a break. The one (1) issue that was being discussed between the Chairperson

1 and yourself was firstly that taxpayers and ratepayers
2 might not be the same. And you had discussed that as a
3 group residential consumers might be different than
4 industrials as far as ratepayers and taxpayers,
5 correct?
6 MR. PELINO COLAIACOVO: That's correct.
7 MR. ANTOINE HACAULT: But even within
8 the group, might I suggest to you, sir, taking a low
9 income person, for example, that person would be paying
10 perhaps no tax, or very little tax at all from an
11 income tax perspective, correct?
12 MR. PELINO COLAIACOVO: That's correct.
13 MR. ANTOINE HACAULT: But if that
14 person was hooked up to hydro, which in all cases in
15 Manitoba is probably the case, that person is going to
16 have to pay the increased rates irrespective of his
17 ability to pay those rates?
18 MR. PELINO COLAIACOVO: I'm not
19 familiar with any special low income programs Manitoba
20 may or may not have, so I'd have to take your word for
21 that, but --
22 MR. ANTOINE HACAULT: Understood.
23 Okay. All things being equal, if it comes out of the
24 person's personal income as opposed to a social
25 program, the higher rates is indifferent to the level

1 of income that person earns, correct?
2 MR. PELINO COLAIACOVO: That's correct,
3 yeah. There -- broadly speaking, there are important
4 allocational issues as between taxpayers and
5 ratepayers. And depending on how finely you parse the
6 classes, those allocational differences could be
7 greater or smaller.
8 MR. ANTOINE HACAULT: And if I move
9 from lower income personal taxpayers to different
10 corporate -- corporations, some corporations might be
11 in a lower tax bracket than others.
12 And the increase in rates wouldn't take
13 that into account at all. It just depends on the level
14 of energy used by that business, correct?
15 MR. PELINO COLAIACOVO: That's correct.
16 And -- and so therefore it would have a different
17 impact depending on the kind of business that a
18 commercial or industrial customer was in. Some kinds
19 of business are more electricity intensive than other
20 kinds of business.
21 MR. ANTOINE HACAULT: I thank you, sir.
22 And there was another subject that was dealt with the
23 panel before we broke; it was the whole issue of why
24 would you look at Plan 2. The one (1) thing that
25 hasn't been discussed much is that there is already

1 some interconnections and some ability to import and
2 export through existing lines between Manitoba Hydro
3 and the United States, correct?
4 MR. PELINO COLAIACOVO: That's correct.
5 MR. ANTOINE HACAULT: So what you're
6 hoping to see is whether adding to that already
7 existing transmission makes sense from a provincial and
8 ratepayer perspective?
9 MR. PELINO COLAIACOVO: I think that's
10 what a comparative analysis would -- would seek to
11 show.
12 MR. ANTOINE HACAULT: The last thing
13 was with respect to a discussion, before I get into the
14 other themes that I have, sir, on the 75:25 and the
15 return on embedded equity, am I correct in
16 understanding that that calculation assumes that
17 Manitoba Hydro would in every year have 25 percent
18 equity, because that's how the formula and the
19 difference in the formulas is applied?
20 MR. PELINO COLAIACOVO: I think -- as I
21 said, I only had a cursory review of -- of the material
22 that was presented in the undertaking, but I think
23 that's what it amounts to. I think that would be
24 correct.
25 MR. ANTOINE HACAULT: Hydro will be

1 able to answer it, but that's my understanding of the
2 formula, without giving evidence. So thank you, sir,
3 for doing your best to try and answer that.
4 The -- I'll try and let you know, sir,
5 when I'm getting into various themes. I try to break
6 it down in certain themes to give you an idea of -- of
7 what I'm trying to get at and -- and deal with.
8 And the first, what I would call
9 'theme', is the limitations and cautions that you set
10 out in your report, sir.
11 And if we could, Diana, please go to
12 page 15 of the report, and lines 17 to 20. And I'll
13 give people a chance to read it rather than reading it
14 into the record.
15
16 (BRIEF PAUSE)
17
18 MR. ANTOINE HACAULT: So you've
19 assumed, sir, that various projections and assumptions
20 given to you by Manitoba Hydro in its base case were
21 prepared with all due care, and I'm sure they did.
22 And you based your report on that
23 information, correct?
24 MR. PELINO COLAIACOVO: All of that
25 information was included amongst the data that we

1 looked at. Our report's not exclusively based on
2 information provided by Manitoba Hydro, but to the
3 extent that it was based on some of that information
4 then, yes, we assume that it was fairly and properly
5 prepared.
6 MR. ANTOINE HACAULT: Okay. And then
7 if we go to page 16, the next page, at lines 8 to 11,
8 you repeat the caution that you repeated in your oral
9 testimony that what may appear to be reasonable today
10 may at some point in the future, with the benefit of
11 hindsight, look like a terrible mistake, or a massive
12 stroke of luck. And you refer to different issues like
13 price change, and tec -- technology changes.
14 So do I take it that this is a caution
15 that you're setting out in your report to this Board?
16 MR. PELINO COLAIACOVO: Absolutely.
17 The -- the purpose of modelling, and of indicative
18 financial modelling as one (1) kind of modelling, is to
19 provide insight into matters that a decision maker has
20 to make judgments about.
21 Models are never conclusion. Models are
22 not reality. And, you know, the best you can do with a
23 well-designed model is to bring issues to light, which
24 is what we were trying to do with the comparative
25 modelling and analysis that we did for the report.

1 But in every model you make assumptions,
2 you make projections. You rely on forecasts that other
3 people have provided to you, and they may or may not be
4 right. There is a range of possibility that everyone
5 assumes and -- when they're doing their own work, and
6 all of those ranges accumulate as you put them together
7 to make a model. It -- it's the difference between
8 accuracy and precision.
9 You know, indicative financial models --
10 the good ones, strive to be accurate, but the -- the
11 most accurate prediction of the future is the one that
12 has a range from zero percent to a hundred percent,
13 because you know the future will fall somewhere between
14 zero and a hundred. The more precise you become -- you
15 know, if you say that the future is going to be 52
16 percent, the more likely it is that you're inaccurate.
17 So there's a balance that's required
18 when you're using models to make the models precise
19 enough to give you useful information in making your
20 judgments, but not fool yourself into thinking that
21 it's anything more than that. They're just analytical
22 tools.
23 MR. ANTOINE HACAULT: So I -- I think
24 you've had some other good lines, at line 22 and then
25 28 to 35, warning about the significant danger in

1 assuming a view in the future, as you've talked about.
2 I'm going to get into this a little bit later, but
3 you've raised it.
4 It's important to try and determine
5 where we're going, but do I take your answer that it's
6 also important to take a band that's wide enough of
7 what we think is reasonably probable to test the
8 robustness of our analysis?
9 MR. PELINO COLAIACOVO: That's --
10 that's a good way of characterizing it, yes.
11 MR. ANTOINE HACAULT: The next area
12 that I'll be getting into is a theme that you've
13 touched on with my colleague Mr. Williams, but I won't
14 be getting into the same type of discussion, but it
15 relates to need and opportunity.
16 And if we could go to page 16 of your
17 report at lines 8 to 12. I'm sorry, I must have the
18 wrong reference. Can you bring up slide 3 of Exhibit
19 4? That's the slide show.
20 And I'll have some discussion about this
21 slide. It was very useful. It's somewhat similar to
22 MIPUG's analysis, but I want to explore some of the
23 differences and perspectives that you bring, sir. And,
24 in particular, with respect to Conawapa, one (1) of the
25 questions that was asked by the Chair of a previous

1 witness, La Capra, was with respect to Conawapa and
2 what options do we really have with respect to dealing
3 with the Conawapa issue, I'll call it.
4 And you had mentioned in your testimony
5 yesterday that one of the things that you thought might
6 have been useful in this exercise was an independent
7 review of the impact of increases in rates on different
8 sectors.
9 MR. PELINO COLAIACOVO: I believe I
10 said that, yes.
11 MR. ANTOINE HACAULT: How does that
12 figure into helping us make a decision in Conawapa? Is
13 that something that you recommend, sir, as it relates
14 to this part?
15 MR. PELINO COLAIACOVO: So Manitoba
16 Hydro's principle method of analysis of the various
17 plans and alternatives is a seventy-eight (78) year
18 NPV. And one of the attractive -- a couple of the --
19 the attractive features of a seventy-eight (78) year
20 NPV calculation is that it averages the impact of
21 hydrology over time. It averages a lot of cashflows
22 that may go up and down over time and -- and provides a
23 sense of the full life impact of investments. All of
24 those are good features.
25 However, the problem or the downside of

1 a seventy-eight (78) year NPV calculation is that it
2 may ignore a lot of transitory effects. And some of
3 those transitory effects can have significant impacts.
4 One transitory effect that it can ignore is whether at
5 different times during that seventy-eight (78) year
6 life there is a greater risk of financial fragility or
7 -- or financial distress, which is something that we
8 looked at. Another transitory effect is over seventy-
9 eight (78) years, rate impacts, which are different at
10 different times during that seventy-eight (78) year
11 model life, could have impacts on different ratepayer
12 classes.
13 And I think it's fair to argue that
14 large industrial users of power are particularly
15 sensitive to rate impacts. Yesterday there was a
16 presentation from some industrial users talking about
17 the competitiveness of Manitoba versus other
18 jurisdictions from an electricity rate perspective and
19 how they make their investment decisions on a periodic
20 cycle.
21 And so for them, it's not the seventy-
22 eight (78) year rate future that they're interested in,
23 but perhaps the five (5) or ten (10) year rate future
24 that they're interested in because that's the life
25 cycle of their investments. So a seventy-eight (78)

1 year analysis doesn't give you insight into those kinds
2 of issues.
3 And I think it's important, in our view,
4 if a decision were to be made on Conawapa at some point
5 in the future, that that kind of analysis actually be
6 done.
7 MR. ANTOINE HACAULT: Thank you. Now,
8 we've seen, and maybe I'm characterizing it
9 incorrectly, but fairly significant changes in the
10 financial results, both economical and in a financial
11 analysis, since the August filing and the discussions
12 we're having today.
13 Does that tell us anything about whether
14 there's any value in doing a further review before the
15 decision point is required in Conawapa?
16 MR. PELINO COLAIACOVO: I believe that
17 yesterday in my comments I characterized Conawapa as a
18 development opportunity, and I stick by that
19 characterization. Unlike Keeyask and the 750 megawatt
20 intertie and the export contracts that have been
21 negotiated, Conawapa is still, as of today, a very
22 speculative project. Its timing is not clear. Its
23 financial value, its -- its ratepayer impact over time
24 is not particularly clear. It doesn't have
25 environmental approvals in the same -- to the same

1 level and degree as Keeyask. It doesn't -- you know,
2 there -- there's a whole bunch of -- of development
3 steps that have already been completed for Keeyask that
4 have not yet been completed for Conawapa.
5 And so a very legitimate question to ask
6 about any development opportunity is: How attractive
7 is that development opportunity compared to other
8 development opportunities? And should we be spending -
9 - should Manitoba Hydro or the Province of Manitoba and
10 the -- the ratepayers of Manitoba be spending
11 additional dollars on this particular development
12 opportunity? Is there justification for that as
13 compared to different development opportunities?
14 And so I think very much so there are
15 decision points in -- in the future. If there is some
16 additional spending on Conawapa, at each increment of
17 significant spending there should be a decision point.
18 MR. ANTOINE HACAULT: That's useful.
19 Thank you.
20 So you provide your answer on the
21 decision points more in respect of the decision to make
22 incrementally significant amounts of investment in
23 proceeding -- pursuing that option?
24 MR. PELINO COLAIACOVO: I think that
25 would be fair. As I understand the legislation that

1 per -- like Manitoba Hydro's governing legislation, it
2 is the Government of Manitoba, through the Minister of
3 Energy, that approves their capital planning. And I
4 can only assume that significant expenditures on -- on
5 Conawapa would be part of that capital planning and
6 require approval on whatever normal basis the Minister
7 of Energy provides that approval.
8 MR. ANTOINE HACAULT: Thank you, sir.
9 Continuing on the, I'm going to say, merchant type of
10 view of Conawapa, you had, in response to MIPUG
11 Interrogatory 15 -- sorry, three (3). There should be
12 a fifteen (15) there. It should be -- oh, it's not in?
13 Okay. Sorry, I couldn't bring it up. I -- I thought
14 it was going to be on the system. It was a response;
15 sir, I can give you a copy.
16 MR. PELINO COLAIACOVO: I actually have
17 it, but I don't have the attach -- the attachment to my
18 computer.
19 MR. ANTOINE HACAULT: I have the -- I
20 have the paper copy here so that everybody can see it.
21 I've got some chicken scratch on mine, so maybe I
22 should take that off.
23
24 (BRIEF PAUSE)
25

1 MR. ANTOINE HACAULT: Okay. She found
2 it. So I was at lines 15 to 20. This was a discussion
3 with respect to the discount rates. I'll have a
4 further discussion about that, but it relates to an
5 issue when it's a merchant rate.
6 Do we look at that -- a merchant plant -
7 - do we look at that as an investment? And what kind
8 of investment criteria would you do for -- from a
9 commercial perspective as opposed to a plant that's
10 based for needs domestically?
11 MR. PELINO COLAIACOVO: So the question
12 that you referred to, the question -- the IR-15 from
13 MIPUG to MPA, is about returns that are expected for
14 wind farms, or have been expected for wind par -- farms
15 over the last number of years. The -- which is not
16 directly applicable.
17 I mean, the comments that we make in --
18 in the IR are generally that wind farms, over the last
19 five (5) or ten (10) years across Canada, have been
20 attracting equity rates of return in the 12 to 15
21 percent range. And given the cost of debt that --
22 that's been common over the past five (5) years or so
23 and the kinds of capital structures typically that have
24 been relied upon for wind farm construction, it amounts
25 to a weighted average cost of capital in the 7 to 9

1 percent range. And that's nominal, not real.
2 The -- but those wind farms have almost
3 exclusively, almost without exception in Canada, been
4 constructed on a fully contracted long-term basis,
5 either a twenty (20) to twenty-five (25) -- twenty (20)
6 or twenty-five (25) year contract, with 100 percent of
7 the output being purchased by an off-taker, typically a
8 province or a utility, and no market risk, and no price
9 risk to the developers of the wind farm. And
10 therefore, that weighted average cost of capital of 7
11 to 9 percent applies to that sort of arrangement.
12 Another all -- another kind of
13 arrangement is a utility arrangement where, you know, a
14 regulated utility builds a facility and gets a return
15 on equity for that facility. The weighted average cost
16 of capital would be lower. It wouldn't be as high as 9
17 percent, because the return on equity would be more
18 along the 9 percent or 10 percent range. But again,
19 that's a regulated utility where the owner of the
20 facility is not taking any risk because it's regulated,
21 and all costs are recovered from the rate base.
22 Applying either of those metrics to
23 Manitoba Hydro is challenging, because as we've already
24 discussed, as we stated in our report, Manitoba Hydro
25 is taking considerable export risk. Just looking at

1 that issue of export risk suggests that there should be
2 a higher weighted average cost of capital applied to
3 the investment.
4 On the other side, however, is the fact
5 that Manitoba Hydro is a government owned and
6 government debt guaranteed entity. So from the capital
7 market's perspective, you know, the -- providing debt
8 to Manitoba Hydro is not the same as providing debt to
9 a merchant -- a privately owned merchant company.
10 But there is a question about whether
11 Manitoba Hydro is including a proper equity risk
12 premium in its weighted average cost of capital.
13 Looking at the project itself in isolation and saying,
14 This project is partly going to receive its -- its
15 costs over time from the ratepayer, and partly the
16 project is going to receive its -- repay its costs
17 based on merchant export risk, would suggest a higher
18 equity risk premium.
19 But the complicating factor is you're --
20 we're not looking at the project. We're looking at
21 Manitoba Hydro as a whole. And, you know, it -- it
22 operates under cost-of-service legislation. So the --
23 the question of weighted average cost of capital and
24 what's appropriate is always a challenging one, in --
25 in this case, as it is and most others.

1 MR. ANTOINE HACAULT: And I guess
2 what's more challenging is what was discussed between
3 you and Mr. Williams about an hour ago, is that
4 Manitoba ratepayers cannot opt out. They can't make a
5 decision, Am I going to invest in this merchant plant
6 of Conawapa at a expected rate of return of 'X'. They
7 have to either lose money or make money, and have no
8 choice in that?
9 MR. PELINO COLAIACOVO: I -- I would
10 hesitate to say lose money or make money. But as
11 ratepayers -- in essence, in Manitoba ratepayers are
12 accepting all the risks of the project if it goes
13 ahead.
14 MR. ANTOINE HACAULT: Okay. Now, when
15 we started the discussion with -- referencing the --
16 the three (3) parts that you had mentioned as far as
17 the options, that was on slide 3 of Exhibit 4, in part
18 1 the third bullet there's a set of export contracts.
19 And Mr. Williams referred you to a newly announced
20 export contract with Wisconsin Power, which was
21 basically the Friday before the hearing started.
22 Are you including that contract in this
23 descriptive, sir, set of export contracts?
24 MR. PELINO COLAIACOVO: As I
25 understand, since the -- the NFAT process started last

1 summer that arrangement has been announced, but also I
2 believe one (1) or two (2) others have -- have been
3 announced. The reality, I believe, is that there may
4 in fact be more yet to be announced. And, you know, to
5 the extent that -- that those contracts provide
6 additional support for Manitoba Hydro, then that's
7 great.
8 I think the point that we're making in
9 this -- on this page is that considerable resources and
10 effort have been spent in securing contracts, all of
11 the contracts that have been made to date, and that
12 should be a consideration in the decision making.
13 MR. ANTOINE HACAULT: Thank you. And
14 the one thing that you discussed with Mr. Williams was
15 the issue of commercial reputation. I'd like to
16 explore that a bit more with respect to the Wisconsin
17 Power. Because we started this process where Wisconsin
18 -- or somebody from Manitoba Hydro appeared to think
19 that Wisconsin Power was going to invest in the
20 transmission line. And it appeared that there was
21 enough certainty that it was put in a public filing to
22 be distributed to everybody, and calculations were done
23 on that basis.
24 Are you with me so far, sir?
25 MR. PELINO COLAIACOVO: I am.

1 MR. ANTOINE HACAULT: And if Wisconsin
2 Power, as we've seen, backing out its investment has
3 made the Preferred Development Plan worse according to
4 the numbers, has reduced the net present value, is your
5 view that Manitoba Hydro should take the blame for
6 that, and that its commercial reputation would be
7 effected?
8 MR. CHRISTIAN MONNIN: I -- I'd have to
9 object to -- to that question. He's not here to lay
10 blame on anyone.
11 MR. ANTOINE HACAULT: Okay.
12
13 CONTINUED BY MR. ANTOINE HACAULT:
14 MR. ANTOINE HACAULT: Does -- does it
15 continue to be your view -- I'll rephrase the question
16 -- that the commercial reputation of Manitoba Hydro is
17 affected if the -- the economics change as a result of
18 WPS's decision not to invest in the tie-line?
19 MR. PELINO COLAIACOVO: I think that
20 changes over -- in the time that's required to develop
21 and construct these kinds of infrastructure resources
22 changes are inevitable. And sometimes they'll be in
23 people's control and sometimes they won't, and that's a
24 commercial reality.
25 Whether -- whether the presumed WPS

1 investment in transmission should have been included or
2 not in the calculations, I have no comment to be
3 honest. But I think all of the proposals in -- in the
4 analysis of different plans are, to some measure,
5 speculative and -- and have to be treated that way.
6 And as a result -- you know, I'm not sure that -- that
7 you can fault anyone for including potential future
8 agreements in some lines of analysis but not in others.
9 MR. ANTOINE HACAULT: Thank you, sir.
10 I wasn't looking to fault anybody. I was looking at
11 the commercial reputation issue, and whether to not
12 that contract had to be in the Part 1.
13 The second part of that is, as I
14 understood the evidence and the record will correct me
15 if I'm wrong, to a large extent that 308 megawatt power
16 sale is tied into Conawapa -- decision in Conawapa
17 construction.
18 Is that consistent with your
19 understanding, sir?
20 MR. PELINO COLAIACOVO: I only had a
21 brief look at -- at the document at the time that it --
22 it came out, so I -- I don't want to -- to comment on
23 the details --
24 MR. ANTOINE HACAULT: But if you can
25 make the assumption for purposes of our discussion that

1 that sale is, to a large extent, tied to the decision
2 of Conawapa, I'd like to take you now to whether or not
3 that contract really goes into Part 2 of this slide as
4 opposed to Part 1, if my understanding is correct.
5 MR. PELINO COLAIACOVO: And to the
6 extent that the contract depends on construction of
7 Conawapa for execution of a contract, then, yes, I
8 would say it's -- it's a factor in -- it should be
9 considered when determining whether it's a good idea to
10 continue to spend development dollars on Conawapa.
11 MR. ANTOINE HACAULT: Okay. And
12 something that might assist us in doing that is looking
13 at economic analysis.
14 That might be one (1) metric, correct?
15 MR. PELINO COLAIACOVO: I think that's
16 fair.
17 MR. ANTOINE HACAULT: So, Diana, could
18 we go to Manitoba Hydro Exhibit 104-8, please.
19 And I believe it's in the third page;
20 there's a quilt. I think it's the fourth, yeah.
21 At the very bottom of that quilt, and I
22 went through this, and I'm not going to go through all
23 of it again, but there's a comparison between Plan 6
24 that we've been discussing, which is Keeyask and Gas
25 and the 750 line, as compared with -- proceeding with

1 the WPS sale that gets added onto that option and the
2 gas changes a bit.
3 Do you see that, sir?
4 MR. PELINO COLAIACOVO: So you're --
5 you're comparing Plan 6 --
6 MR. ANTOINE HACAULT: With Plan 5.
7 MR. PELINO COLAIACOVO: With Plan 5. I
8 see. Okay.
9 MR. ANTOINE HACAULT: The idea being
10 trying to isolate the impact of the WPS sale. Is it
11 clearly showing benefits or not is the question I'm
12 asking, and whether or not this metric might give us
13 some guidance? I understand it's not the only metric.
14 So if we look at, firstly, the expected
15 value under Plan 6, we wee that the expected value that
16 Manitoba Hydro calculates on this particular metric,
17 and I know it's not been fully updated, is a value of
18 $386 million.
19 Do you see that, sir?
20 MR. PELINO COLAIACOVO: Yes.
21 MR. ANTOINE HACAULT: And then if we go
22 to the -- the addition of the 308-megawatt contract,
23 Manitoba Hydro's calculations of adding that sale in, I
24 guess, box 1, without tying it into Conawapa, actually
25 goes down to 268 million.

1 Do you see that?

2 MR. PELINO COLAIACOVO: Yes. But I

3 would note that the difference between Plan 6 and Plan

4 5 is not only the WPS sale, it's also the change in the

5 timing of the development of a gas plant. And I'm also

6 not clear, because I don't remember off the top of my

7 head, whether the gas plant in Plan 5 in 2025 is a

8 single cycle or combined cycle versus in Plan 6 in

9 2031, if it's single cycle or combined cycle. I'm --

10 MR. ANTOINE HACAULT: Okay.

11 MR. PELINO COLAIACOVO: -- I'm not

12 sure.

13 MR. ANTOINE HACAULT: Let me suggest to

14 you, sir, and I could take you to the graphs, the

15 reason why gas is moved to '25 is because with the

16 addition of the additional capacity requirement of the

17 308-megawatt contract you actually have to move gas

18 earlier to be able to satisfy the contract so that

19 having the contract requires Manitoba Hydro, as I

20 understand it, to deal with that extra capacity

21 requirement to bring up gas at an early date.

22 Would that -- are you prepared to go

23 with me on that?

24 MR. PELINO COLAIACOVO: As I said, I'm

25 not certain, but I'll take your word for it.

1 MR. ANTOINE HACAULT: Yeah.
2 MR. PELINO COLAIACOVO: My counsel
3 advises the -- the term is I'll accept it, subject to
4 check.
5 MR. ANTOINE HACAULT: Okay. And
6 there's another metric that Manitoba Hydro uses in
7 comparing the plans. It's what we've been referring to
8 in this hearing as a ref/ref/ref. It's at the very
9 bottom. It's nearly like a dog is barking a lot.
10 But on that one we go from -- for Plan 6
11 at 662 million, and adding the WPS sale to Plan 5 with
12 advancing the gas reduces those economics to 484
13 million.
14 Do you see that, sir?
15 MR. PELINO COLAIACOVO: I do.
16 MR. ANTOINE HACAULT: And with respect
17 to the metrics, I haven't only been looking at expected
18 value and ref/ref/ref values when I have been referring
19 to these tables. The one (1) thing that appears to be
20 favourable to -- to the plan in part is if we look at
21 the 10th percentile risk we see that locking in part of
22 the export sales appears to reduce the downside risk
23 from 1 billion to about $900 million, correct?
24 MR. PELINO COLAIACOVO: That's what the
25 table shows, yes.

1 MR. ANTOINE HACAULT: And, conversely,
2 on the upside risk which is the Reward, if we follow
3 that line for Plan 6 we're at one billion seven hundred
4 and forty-nine million (1,749,000,000) of upside for
5 Plan 6.
6 And because we're locking in part of the
7 sales it appears that that upside is reduced to $1.475
8 billion, correct?
9 MR. PELINO COLAIACOVO: Yes.
10 MR. ANTOINE HACAULT: So does this
11 metric help Morrison Park at all in having some kind of
12 direction as to whether WPS needs to be further
13 investigated?
14 MR. PELINO COLAIACOVO: As we discussed
15 in our report, a -- and I think we had a couple of IRs
16 which dealt with this in -- in greater detail -- but a
17 classic commercial decision making problem is when one
18 (1) alternative investment option has a higher average
19 expected outcome, but greater variability, a higher and
20 a lower low, versus an alternative investment option,
21 which may have a lower average expected outcome, but
22 reduced variation: a lower high, but a -- a preferable
23 low.
24 And it would appear on this evidence in
25 -- in these particular calculations that the choice

1 between Plan 6 and Plan 5 is exactly that kind of
2 challenging commercial decision where Plan 6 has a
3 higher expected average and higher highs, but also
4 lower lows and greater variation.
5 Those are challenging decisions to make,
6 and I don't think that solely on the basis of examining
7 the -- the percentiles, or the curves, or the
8 mathematical modelling that comes out of this kind of
9 indicative exercise -- I don't think that's sufficient
10 basis in reality to make those kinds of decisions.
11 It's a piece of evidence, but I think it -- it also
12 depends -- there's an enormous academic literature
13 around making these kinds of choices and whether the --
14 conceptually, the investor is risk averse, or risk
15 neutral, or risk seeking. A risk seeking investor will
16 always choose the option with higher highs. A risk
17 averse investor will typically choose the option that
18 has more restricted variation. A risk neutral investor
19 will look at -- at the averages, at the average
20 expected outcomes, and -- and take a more balanced
21 view.
22 In -- in the problem that's -- that
23 you're presenting between Plan 6 and Plan 5, the risk
24 averseness of the investor in question is a very
25 important element of the decision making process. But

1 that -- that kind of language around who the investor
2 is in this case and the risk averseness of that
3 investor is something that hasn't really been explored
4 very well through the information provided to us by
5 Manitoba Hydro, because of the particular nature of
6 Manitoba Hydro itself, as a cost-of-service entity
7 owned by the Manitoba government, receiving most of its
8 revenue over time from ratepayers.
9 So it's -- it's a challenging problem to
10 chose between Option 6 and Option 5 as presented on
11 this slide.
12 MR. ANTOINE HACAULT: All right. Thank
13 you, sir. While I was chatting, Mr. Bowman from
14 InterGroup pulled up the reference so we can have it
15 for the record. Mr. Cormie, on March 14, 2014, at page
16 2,580, responded at line 11 that the 308 megawatt sale
17 is tied to Conawapa.
18
19 (BRIEF PAUSE)
20
21 THE CHAIRPERSON: I just wanted to
22 follow through though in -- in respect of the
23 commercial reputation because, you know, reconcile your
24 earlier testimony about the impact on Manitoba Hydro's
25 commercial reputation if -- if Keeyask doesn't proceed.

1 And -- and here now we're discussing Conawapa not
2 proceeding and there's a contract that's been signed,
3 and -- and it doesn't seem to be impacting your view.
4 You know, there is a commercial
5 reputation attached to a contract that's been signed
6 with WPS, isn't there?
7 MR. PELINO COLAIACOVO: I would
8 consider Conawapa today as -- as -- not to belabour the
9 point, but to be a development opportunity. And in
10 pursuing any development opportunity, a project
11 developer seeks to arrange as many supportive
12 commercial deals as possible. But construction of
13 Conawapa is at least ten (10) years away. Even in the
14 -- in the best-case scenario, I believe it's twelve
15 (12) years away. It could be longer. And I believe
16 that WPS would have a full understanding of that, that
17 it is the subject of debate and discussion, and its
18 timing is not clear, and the ultimate disposition of it
19 is not clear.
20 I think that's very different from the
21 arrangements that have been made with parties on
22 Keeyask, where the environmental permitting and
23 approval process is basically done, where over a
24 billion dollars have already been spent on the project,
25 where construction contracts have been signed, where,

1 you know, the project is imminent to -- to be
2 constructed. And so the -- the issue of the impact of
3 a choice being made is very different, I think. And --
4 and commercially it would be well understood by all the
5 parties.
6 The burden on -- on Keeyask is much
7 higher because of all of the investment that's been
8 made in it, so a choice not to proceed with Keeyask
9 should be done only for very strong reasons. Whereas
10 on Conawapa, because of the speculative nature of
11 Conawapa as of today, and I think everyone -- every
12 reasonable and rational outside observer would believe
13 that there is lots of questions around Conawapa, would
14 have a very, very different impact.
15
16 CONTINUED BY MR. ANTOINE HACAULT:
17 MR. ANTOINE HACAULT: Thank you. I'd
18 just like to explore just for a moment the whole thing
19 about the interconnection. At one point in time it
20 appeared on this record, and everybody spent a lot of
21 time looking at it, that the 250 megawatt line to the
22 States which served the Minnesota Power contract was an
23 option.
24 Do you follow me so far?
25 MR. PELINO COLAIACOVO: I do.

1 MR. ANTOINE HACAULT: And that morphed
2 into a 750 megawatt line with two (2) investors;
3 Minnesota Power being one, Wisconsin Power being the
4 other.
5 Still with me, sir?
6 MR. PELINO COLAIACOVO: Yes.
7 MR. ANTOINE HACAULT: Now, if the 750
8 line no longer makes sense because WPS has decided not
9 to participate in this investment as was originally
10 anticipated and the 250 line makes more sense, does it
11 continue to be your view, because of the decision of
12 WPS to back out, that the commercial reputation of
13 Manitoba Hydro is affected as a result of WPS's
14 decision?
15 MR. PELINO COLAIACOVO: The question of
16 a 250 versus a 750 megawatt line, it depe --
17 fundamentally depends on two (2) parties. The choice
18 of a line requires there to be somebody on the other
19 side of the border that wants to participate in that
20 line and wants to support the construction of that line
21 with regulators in the United States.
22 I think what has been presented on the
23 record is that the party on the other side of the
24 border wants the 750 megawatt line and -- and that the
25 250 megawatt line is not considered at the moment to be

1 a serious option. That's the determinative issue. If
2 there's any evidence to the contrary that the party on
3 the other side of the border would agree to a 250
4 megawatt line, well, then that would be an option again
5 and -- and worthy of analysis and consideration.
6 MR. ANTOINE HACAULT: But I think the
7 record's pretty clear, based on the examinations that
8 we had, is Minnesota Power still wants it, the 750
9 line, as long as Manitoba Hydro is going to pay the
10 full bill, including the WPS portion. Minnesota Power,
11 if it was asked to pay for all the 750 line and all the
12 maintenance and stuff, might have a different answer.
13 We don't know that answer.
14 Is that fair?
15 MR. PELINO COLAIACOVO: I haven't seen
16 anything on the record on -- on that issue.
17 MR. ANTOINE HACAULT: I'll move on to
18 another subject area. And here I'm trying to isolate
19 some of the findings that may no longer be valid in
20 your report. So if I could move to your report,
21 Exhibit 3, at pages 8 and 9. There are findings that
22 start at line 18. And if you could quickly go through
23 them and say -- or inform us which ones may be subject
24 to change, because you have made that qualification in
25 your presentation yesterday, sir.

1 MR. PELINO COLAIACOVO: Sure. So the
2 first bullet point relates to the average probability
3 weighted -- or the calculation of aver -- average
4 probability weights. We used the probability weighting
5 provided by Manitoba Hydro in their application. Since
6 then, they've adjusted their probability weighting on
7 capital costs.
8 We have also questioned the probability
9 weighting of the economic set of variables, but we did
10 not make any change to them in the report. The --
11 however, we do feel that is -- that is still an open
12 question. On the next bullet point --
13 MR. ANTOINE HACAULT: Sorry, before you
14 move to the next bullet point, was it interest rates
15 that you were talking about?
16 MR. PELINO COLAIACOVO: Yes, interest
17 rates.
18 MR. ANTOINE HACAULT: Okay.
19 MR. PELINO COLAIACOVO: On the second
20 bullet point, we're simply summarizing the fact that
21 Plans 4 and 6, which include Keeyask and either a 250
22 megawatt or a 750 megawatt transmission interconnection
23 appear to fare consistently better than all -- than the
24 other options we examined. Apparently Plan 4 is no
25 longer on the table, because a 250 megawatt intertie

1 has -- has -- we've been told is -- is no longer an
2 option. So that would obviously be a change.
3 Given the new information that's come to
4 light in the last period of time, it's unlikely that
5 the rank ordering between Plan 6 and Plan 14, for
6 example, would change. However, I mean, we can run the
7 model to confirm that. The more interesting question
8 is whether the rank ordering between Plan 1 and Plan 6
9 changes, given the new information. And again, we
10 won't know until we actually test the information that
11 we've been, you know, now, just recently provided.
12 The third bullet point suggests that the
13 plans which include Conawapa are more costly to
14 ratepayers than Plans 4 and 6. But under some
15 circumstances, which we go on to say in the next bullet
16 point, that the Preferred Plan can be superior to the
17 All Gas Plan, or Plan 1, in certain cases.
18 The 1, 2, 3, 4, the fifth bullet point
19 starting at line 128, the All Gas Plan ranks relatively
20 poorly, at a lower discount rate, or lower time value
21 of money, but better when the discount rate is higher.
22 I don't believe that's going to change with the new
23 information. I think that -- that relative finding
24 will be the same; it's just going to be at different
25 levels given the new information.

1 And then the sixth bullet point, Plan 4
2 with the 250 megawatt interconnection, ranks better
3 than Plan 6 with a 750 megawatt interconnection.
4 Again, since the new information is that Plan 4 is not
5 available, if -- that becomes irrelevant.
6 MR. ANTOINE HACAULT: Okay. Maybe we
7 can just temporarily switch back to Exhibit 104-8 at
8 page 4 and just remind ourselves what you mean when you
9 say Plan 4 fairs better than Plan 6.
10 So that's -- Plan 4 is Keeyask/Gas with
11 the 250 megawatt line, correct?
12 MR. PELINO COLAIACOVO: Yes.
13 MR. ANTOINE HACAULT: And if we look at
14 the expected value of that plan we see that it's at 651
15 million?
16 MR. PELINO COLAIACOVO: Yes.
17 MR. ANTOINE HACAULT: And we compare
18 that to the expected value of Keeyask/Gas, but with the
19 750 megawatt line we see it goes down to 386 million,
20 correct?
21 MR. PELINO COLAIACOVO: That's correct.
22 MR. ANTOINE HACAULT: Is that the type
23 of metric that you're referring to, sir, when you say -
24 - or one (1) of the metrics that you're referring to
25 when you say Plan 4 consistently does better than Plan

1 6?

2 MR. PELINO COLAIACOVO: The analysis

3 that we did was on the basis of cost to ratepayers as

4 opposed to this analysis from Manitoba Hydro, which is

5 cashflows to Manitoba Hydro specifically. But that is

6 the type of -- of difference we're referring to. We

7 didn't find the difference to be quite as large as

8 what's depicted here between those two (2) options, but

9 it's -- it's a distinction of that sort, yes.

10 MR. ANTOINE HACAULT: Were the option

11 still available, and experts can assume things, is that

12 difference which you calculated and which is shown on

13 this table significant enough to actually push us

14 towards one (1) plan from an economic and financial

15 perspective as opposed to the other?

16 MR. PELINO COLAIACOVO: I think that

17 where the model shows a consistent difference between

18 one (1) plan and another it means that the options

19 should be carefully considered. And that information

20 has to be taken in account in decision making.

21 So, you know, other factors could

22 intervene. Yesterday, I pointed out in the testimony

23 that we have no comment on environmental issues, on

24 social issues, et cetera, et cetera, et cetera. There

25 are a whole bunch of decision-making factors. But

1 solely on the basis of cashflows, then, yes.
2 MR. ANTOINE HACAULT: Okay. And the
3 one (1) thing that is an issue is what you've talked
4 about this morning, is the view that we start from
5 where we're at and we have a bird in hand in the sense
6 that Minnesota Power is actually advocating the 750
7 megawatt line on behalf of Manitoba Hydro, is quite
8 glad to take Manitoba Hydro's money instead of the WPS
9 money, and -- but we don't have that assurance with the
10 250 megawatt line.
11 If we restarted the American proceedings
12 again would Minnesota Power actually still be willing
13 to advocate the 250 megawatt line from Manitoba Hydro?
14 MR. PELINO COLAIACOVO: I think that is
15 a real commercial issue, yes.
16 MR. ANTOINE HACAULT: Would there be
17 any harm in exploring whether they're willing to do it?
18 MR. PELINO COLAIACOVO: The -- the
19 parties to that proceeding are Manitoba Hydro and --
20 and Minnesota Power, and it's Manitoba Hydro that would
21 have to make that determination about whether there's
22 harm in -- in that risk.
23 MR. ANTOINE HACAULT: Okay. Thank you.
24 The next short issue still under the need versus
25 opportunity is the whole issue of export revenues. And

page 11, lines 26 to 29 of the report. So page 11, lines 26 to 29.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: This particular -- oh, sorry, I didn't -- no, I interrupted your last -- going through all the bullets. So we'll go back to that after I've done this bullet.

I didn't understand this bullet, sir, in the context of your previous statements that there were some winners in the plans. And here you make the comment that:

> "The total probability adjusted present value of ratepayer costs over forty-eight (48) years across all five (5) resource plans is likely too narrowly distributed to allow for a def -- definitive selection of the lowest cost choice."

Is that to be taken in the context that we're looking at a forty-eight (48) year metric as opposed to a metric that's shorter in time frame, for example, twenty (20) years?

MR. PELINO COLAIACOVO: I -- I think

1 that this is -- this is a comment that relates back to
2 the cautions that we had around precision versus
3 accuracy. So when you are talking about a forty-eight
4 (48) year time horizon, and you're using a discount
5 rate to come to a net present value conclusion
6 summation, but underneath those calculations are four
7 (4) tasks for MISO market prices that have a big
8 variation on them, forecasts for gas prices that have a
9 big variation on them, forecasts for capital costs that
10 have variation on them, forecasts for interest rates
11 that have a variation on them. And then you -- you
12 layer those uncertainties, one (1) on top of the other,
13 on top of the other, and all of those uncertainties are
14 captured in a single figure called a 'net present
15 value'.
16 The -- in order to make a conclusive
17 judgment solely on the basis of the difference in net
18 present value between different options is something
19 that we think the spread between those options does not
20 appear to be big enough to make a decision solely on
21 that basis.
22 Are the differences important? Should
23 the differences be taken into account in making a -- a
24 judgment? Absolutely. But, you know, if -- if there
25 were stark differences, large differences in -- in

1 those numbers, then they should be given more weight.
2 But given all of the uncertainty that's included in
3 coming up with those numbers we're -- we're presenting
4 a caution here about how to make these things that --
5 how to make these judgments, and not to -- not to say
6 simply because one (1) number is 1 percent lower than
7 the next number, well, it must be better. That's --
8 that's the caution that we're providing there.
9 MR. ANTOINE HACAULT: Thank you. And
10 now, Diana, if we could move back to -- I think it was
11 the bottom of page 8 we were at on the bullets, and
12 having comments as to whether or not they need to be
13 modified at all as a result of new information, or they
14 may be modified. So that brings us to the top of page
15 9, the first bullet.
16 MR. PELINO COLAIACOVO: So the top of
17 page 9, the -- the statement there is that Plan 14,
18 which includes Conawapa and is the Preferred
19 Development Plan, appears to be better than Plan 12
20 which includes Conawapa, but at a later date and
21 without export contracts associated with it. Plan 14
22 is -- proves to be better than Plan 12 on a cashflow
23 basis. I don't think that will change given the new
24 information. The new information is likely to have an
25 impact of pushing both plans in time backwards.

1 So in the Preferred Development Plan, as
2 I understand it, Conawapa is now estimated to be built
3 a few years later. Presumably in Plan 12 the same
4 would be true, it would be delayed. And, therefore,
5 the -- the differences between them would likely be
6 proportional. That's an assumption that I'm making,
7 but based on the information I've seen so far that --
8 that would be my inclination.
9 And then the -- the last bullet that you
10 referred to is, I know, a controversial point. But the
11 conclusion we came to is that changes in Manitoba
12 demand do not affect the total cost to ratepayers over
13 forty-eight (48) years very much, if all other
14 variables are kept constant. And -- and we underline
15 that, because it's -- the relationship between the
16 price of power in Manitoba and the price of export
17 determines whether changes in Manitoba demand are more
18 or less important. So if the price remains static and
19 Manitoba demand grows or -- or diminishes, it's going -
20 - there's going to be relatively limited impact on the
21 total cost to ratepayers taken as a group.
22 I don't think that the new information
23 will change that conclusion very much, but again that's
24 -- that's an impression based on the data I've seen so
25 far.

1 MR. ANTOINE HACAULT: The -- thank you,
2 sir. The next area, and we had a very short reference
3 to it when I was discussing this earlier, is the
4 parameters of testing. Let's say -- as you said --
5 well, the middle number is what it is, and we have to
6 see whether we've got the right parameters to give us a
7 better sense of how robust the plans are.
8 Are is that a fair summary?
9 MR. PELINO COLAIACOVO: I think so.
10 MR. ANTOINE HACAULT: Okay. There's
11 been some discussion with respect to the choice of 6
12 percent and 10 percent. And it's in the context of
13 parameters of testing that I'd like to have that
14 discussion with you, sir. And the first place I'd
15 direct your attention to is your report at page 68.
16 And it's lines 3 to 7, and then I'll go back to the
17 previous discussion. So I'll -- I'll give you time to
18 reread that portion of your report, sir.
19
20 (BRIEF PAUSE)
21
22 MR. ANTOINE HACAULT: Having read that
23 paragraph, and we'll get to the previous bullet, can
24 you explain from a commercial analysis perspective why
25 you believe it was appropriate to bracket rates of 6

1 percent and 10 percent? And -- I'll start with that.
2 MR. PELINO COLAIACOVO: There was an IR
3 on this exact issue that we did, but I -- I mean, we
4 don't have to refer to it. The --
5 MR. ANTOINE HACAULT: We can actually
6 bring it up. I think it maybe CAC Round 1 7b.
7
8 (BRIEF PAUSE)
9
10 MR. ANTOINE HACAULT: Was this what you
11 were thinking of, sir?
12 MR. PELINO COLAIACOVO: Yes,
13 absolutely.
14 MR. ANTOINE HACAULT: Okay.
15 MR. PELINO COLAIACOVO: And, so the --
16 the point that we made in this -- in response to this
17 particular IR is that we are not particularly wedded to
18 the -- the individual figures of 6 and 10 percent.
19 They are -- they roughly bracket the range of weighted
20 average cost of capital that Manitoba Hydro used in --
21 in its different -- three (3) different economic
22 variables.
23 The weighted average cost of capital in
24 the low economic scenario versus the high economic
25 scenario, we used round figures of 6 and 10 percent.

1 But if you look at the nominal weighted average cost of
2 capital in those three (3) scenarios, they are close to
3 that -- to that range. And so we chose to test the
4 numbers at 6 percent and 10 percent.
5 We also, in a -- in a different IR,
6 recalculated all of the numbers at 8 percent. And
7 frankly, with our model we can calculate at any
8 discount rate. So these are just two (2) points on --
9 on a curve, and I would stress that.
10 Having said that, we believe it's
11 appropriate to do these tests at different costs of
12 capital because -- sorry, at different discount rates
13 because the stakeholders that are interested in
14 Manitoba Hydro's decision making are themselves very
15 different and have different characteristics.
16 We made the point elsewhere that for
17 investors the discount -- the appropriate discount rate
18 to use in the net present value analysis is the
19 investor's cost of capital, the cost of capital that
20 investors are facing when they are making an investment
21 decision in a project.
22 But in Manitoba Hydro's case, there is
23 no investor that's putting equity into a new project.
24 Manitoba Hydro gets its revenue -- gets its capital
25 either from retained earnings from ratepayers or from

1 government-guaranteed debt. And on that basis, it's
2 relevant, we believe, to look at the cashflows that
3 ratepayers are going to be responsible for and the
4 cashflows that the government is going to be interested
5 in, and consider those across a range of possible
6 discount rates, because some ratepayers will have a
7 high cost of money and some ratepayers will have a
8 lower cost of money.
9 And would those ratepayers react
10 differently to these different plans? One way to test
11 that is to use a range of different discount rates and
12 to understand, you know, if a ratepayer had a higher
13 cost of money, they would like plan A versus plan B, or
14 vice versa.
15 MR. ANTOINE HACAULT: Thank you. Now,
16 Diana, could you bring us to MMF Round 1 4? That's
17 another IR, which deal -- dealt with the cost of
18 capital. And I'll call it WACC, W-A-C-C, for the
19 reporter.
20 When you said it fell within the range
21 of runs performed by Manitoba Hydro, were you referring
22 to the rates of 7 -- or 9.7 percent, 7.05 percent, and
23 4.4 percent and --
24 MR. PELINO COLAIACOVO: That's correct.
25 MR. ANTOINE HACAULT: Correct? And is

it your recollection that those are nominal or real rates?

MR. PELINO COLAIACOVO: Those are nominals, yeah.

MR. ANTOINE HACAULT: Sir, based on a historical perspective, have we seen a nominal interest rate at 4.4 percent over a fifty (50) year time period?

MR. PELINO COLAIACOVO: Okay. So I'm not sure if you have access to this or not, but we provided additional data on historical interest rate issues in PUB/MPA IR-29, I believe it was. And it may be useful to bring that up.

(BRIEF PAUSE)

MR. PELINO COLAIACOVO: And you could actually -- I'm not sure if I included charts in this or not, but the -- oh, yeah, here we go.

So Manitoba Hydro makes the point that they typically have access to either ten (10) year bonds or thirty (30) year bonds. And so for the purposes of their analysis, they assumed an average between ten (10) year and thirty (30) year bonds for -- to have a -- a notional twenty (20) year bond. There -- there are no real twenty (20) year bonds on offer,

1 but -- so this is a constructed thing. And this is a -
2 - a chart of the actual Canada benchmarks. The data's
3 all from the Bank of Canada and Statistic Canada. And
4 it shows the historical experience since 1983 of those
5 benchmark bonds, the ten (10) year and thirty (30)
6 year.
7 We should note that on -- that the
8 actual cost of debt facing Manitoba Hydro is higher
9 than what's shown here, because this is the Canada
10 bond. Then on top of this, there is a spread for
11 Manitoba, and then there's the guarantee fee, the
12 impact of the 1 percent guarantee fee that raises the
13 net cost of debt to Manitoba Hydro.
14 So historically, the bonds have -- have
15 only been as low as the low economic scenario used by
16 Manitoba Hydro for a very short period of time. Since
17 -- if I remember correctly, since the -- 2008, the --
18 there have been -- I think if I remember correctly, it
19 was nine (9) months where the -- the price of the
20 Canada bond has been low enough to fall within the
21 range of the low economic scenario presented by
22 Manitoba Hydro.
23 And so considered on that basis of, you
24 know, nine (9) months out of all the months between
25 April of 2008, and recently it's about 13 percent of

1 the time. So when you look at the fact that Manitoba
2 Hydro has suggested there's a 15 percent probability of
3 low interest rates, that kind of makes sense. If
4 you're considering the last five (5) years, in 15
5 percent of the months in the last -- or 13 percent of
6 the months of the last five (5) years, interest rates
7 have been that low.
8 However, when you start to go backwards
9 in time, you see that in fact prior to April 2008 there
10 were no months that were -- that had interest rates
11 that low.
12 And if you scroll down further in this
13 IR, there's another chart. So there's a different
14 metric that is available from the Bank of Canada and --
15 and Statistics Canada for average bond yields --
16 average Canada bond yields above ten (10) years. That
17 can be used as a proxy for the average between ten (10)
18 and thirties (30s) because ten (10) year bonds and
19 thirty (30) year bonds have been available historically
20 for about a hundred years. And so this gives you the --
21 the information that's available on that particular
22 metric, Canada bond year -- Canada bond yields of over
23 ten (10) years. And it goes back, as I said, almost a
24 hundred years.
25 So considered on a hundred-year basis as

1 opposed to a shorter time, interest rates have been low
2 enough to be similar to those proposed by Manitoba
3 Hydro in its low economics scenario about 3 or 4
4 percent of the time. If you assumed, however, that the
5 low economic scenario was based on Canada bond yields
6 of 3 percent as opposed to 2.3 percent, then it would
7 be closer to 15 percent of the time.
8 So it's our view that if you want to put
9 a 15 percent probability on the low economic scenario,
10 then it should have been based on a Canada bond yield
11 of 3 percent as opposed to 2.3 percent. All it is, is
12 a technical issue and it is what it is. But, you know,
13 it's a -- it's a point that is within our realm of
14 competency, and so we commented on it.
15 MR. ANTOINE HACAULT: Thank you, sir.
16
17 (BRIEF PAUSE)
18
19 MR. ANTOINE HACAULT: This is a little
20 bit of the math background in me, but when I took
21 probabilities, there's -- and I'll take you this --
22 take you through this.
23 Is a 15 percent metric indicating that
24 there's a 15 percent chance that the rate will be that
25 low consistently for fifty (50) years because the

1 multiplication is applied in each and every year of the
2 fifty (50) years?
3 MR. PELINO COLAIACOVO: If I understood
4 Manitoba Hydro's methodology correctly, what it
5 suggests is that there is a 15 percent likelihood that
6 the average interest rates will be that low over the
7 course of fifty (50) years or seventy-eight (78) years
8 or -- or the -- the term. There is not a presumption
9 that interest rates are going to be identical in every
10 single year, but it's that the average will be that
11 low.
12 MR. ANTOINE HACAULT: So you're with me
13 then that it's not just whether you hit it in a couple
14 years. A 15 percent probability is that we'd have to
15 look -- okay, we'd have to have some years that are
16 below that, some years that are behi -- higher than
17 that, but that rate would have to be maintained
18 throughout the analysis period at that low rate.
19 That's what the probability criteria is
20 trying to tell us?
21 MR. PELINO COLAIACOVO: Yes, I think
22 that's correct.
23 MR. ANTOINE HACAULT: And I would
24 suggest to you, sir, that there is no historical
25 evidence that would support a 15 percent probability

1 that the rates stayed that amount over that long of a
2 period.
3 MR. PELINO COLAIACOVO: We looked at --
4 in -- in this IR there's a -- a bunch of text. And --
5 and so we looked at twenty (20) year periods, and we
6 looked at forty-eight (48) year periods to see what the
7 average over those spans of time was. And none of
8 those averages are as low as what is proposed in the --
9 in the low economics scenario, which is -- it goes to
10 the issue of why we suggested that the low economic
11 scenario should be slight -- somewhat higher than it is
12 as presented.
13 MR. ANTOINE HACAULT: Okay. Thank you
14 for that explanation. I don't know if it -- it helped
15 to understand it at all, but I -- I made a valiant
16 attempt anyways. The next subject that I wanted to
17 touch upon is whether rates matter to domestic
18 ratepayers.
19 THE CHAIRPERSON: I just want to exp --
20 I just want to ask one (1) question to follow-up on
21 what Me. Hacault has been addressing. And,
22 specifically, Manitoba Hydro has indicated that they
23 have been able to secure long-term debt that is
24 considerably longer than thirty (30) years in the
25 market -- current marketplace.

1 Does that change your perspective at
2 all?
3 MR. PELINO COLAIACOVO: No. The --
4 first of all, the availability of debt in the terms
5 that Manitoba Hydro is referring to is relatively
6 recent. There have been some bond deals done for fifty
7 (50) years recently, and I think even one (1) for sixty
8 (60), but five (5) years ago those were not available.
9 And it's not clear that five (5) years from now they'll
10 be available either. It's quite possible that five (5)
11 years from now, you know, fifty (50) year bonds are
12 just not going to be offered in the market.
13 And the analysis, the way the
14 probability analysis is done, assumes that conditions
15 are going to pertain over a long period of time. In
16 particular for Manitoba Hydro, what's relevant is what
17 the interest rates will be when they actually go to
18 market to seek money. They're not going to market to
19 seek that money today; they're going to be going to
20 market to seek that money when they need it, you know,
21 during the construction period.
22 So if you're talking about Conawapa then
23 the -- their demand for money, their need to issue
24 bonds, is going to be after 2020, when they begin
25 construction of Conawapa assuming it was on that --

1 that schedule. So what's relevant is a prediction on
2 what the cost of money will be and the availability of
3 long-term bonds at that time.
4 And things can change pretty quickly in
5 the capital markets, so these are assumptions and
6 they're tests of possibilities, and they should be
7 understood to be that. I think the historical record
8 is an important indicator of which assumptions you
9 should be testing. We are at -- I -- we have been for
10 the last five (5) years at a very peculiar point in the
11 long-term capital markets life cycle where debt is very
12 cheap, and long-term bonds are available. And that's
13 great for investors that are seeking cash right now, or
14 have been seeking cash for the last five (5) years.
15 I'm not sure it's fair to assume that those conditions
16 are going to continue to pertain for the next ten (10)
17 or fifteen (15) years.
18 THE CHAIRPERSON: There was a recent
19 announcement, in fact this week, from the Gov -- the
20 Governor of the Bank of Canada to the effect that rates
21 will not be going up till 2016. Manitoba Hydro will be
22 borrowing money progressively as -- as the plan gets
23 closer and closer to completion. So, you know, the --
24 the prospects at this stage are -- are very positive
25 from a rate perspective, from an interest rate

1 perspective.

2 Can Manitoba Hydro lock in those rates

3 for -- going forward?

4 MR. PELINO COLAIACOVO: Locking in

5 rates is very expensive. Buying hedge con -- buying

6 forward hedge contracts is a fairly expensive

7 proposition, but sometimes it does make sense.

8 So Manitoba Hydro has a very

9 sophisticated treasury plan. This is -- this is not

10 casting any aspersions on Manitoba Hydro. I think they

11 do a credible job at what they do, as does the

12 Government of Manitoba.

13 All of the analysis that's done is

14 indicative only, right? If -- if there is a temporary

15 spike in prices as occurred in -- back in 2008, when

16 the capital markets froze up, then you don't go to

17 market. You know, you -- you use your flexibility to

18 avoid the spike and wait for things to calm down.

19 I think it's fair to assume that

20 Manitoba Hydro would proceed responsibly to try and

21 raise money in the increments, and under the terms and

22 conditions that would be most favourable to the

23 ratepayer. That's not really what the issue is here

24 though.

25 The issue is constructing different

1 scenarios that are useful for analysis on a long-term
2 basis, because in the Preferred Development Plan
3 Manitoba Hydro will be seeking money every year for the
4 next fifteen (15) years. And so it's not relevant to
5 the three (3) options on the table whether we have a
6 high degree of certainty about the capital markets for
7 the next couple of years.
8 And that high degree of certainty can be
9 shattered at any moment. I mean, if you go back
10 historically and look at the -- the mini crisis -- the
11 Asian market crisis that happened in 1998, no one
12 expected that to happen until it happened. There's --
13 you know, you cannot predict those kinds of changes in
14 the capital markets.
15 So, for the purposes of analysis -- an
16 indicative analysis, choosing a high, a reference, and
17 a low is a reasonable thing to do. The question is:
18 Which low and which high should be using it -- should
19 you be using in that analysis?
20
21 CONTINUED BY MR. ANTOINE HACAULT:
22 MR. ANTOINE HACAULT: With that I think
23 I'll finally get to the issue of rates, and the impact
24 on -- taxpayers are concerned. There's a couple IRs.
25 There's a lot of good stuff in those IRs. You spent a

1 lot of time, sir. Thank you.
2 There's -- in CAC Round 1 12D, at lines
3 10 to 12, you were responding with respect to the issue
4 -- sorry -- of large balance sheets, and:
5 "Whether or not the ability to absorb
6 situations like a drought should be
7 considered a ratepayer benefit."
8 In quotation marks. And your response,
9 in part, it started with:
10 "Impacts relative to ratepayers are
11 fundamentally concerned with domestic
12 rates."
13 Why do you make that statement, sir?
14 MR. PELINO COLAIACOVO: It goes to the
15 issue about which cashflows we should be paying
16 attention to in -- in the analysis that we did. We're
17 not concerned about the Manitoba Hydro view of the
18 project, because Manitoba Hydro's view includes
19 cashflows from exports.
20 Our focus was entirely on cashflows to -
21 - that related to domestic ratepayers, or to
22 government, because those are the stakeholders that we
23 consider to be relevant. So it's -- it's the domestic
24 revenue line item that we pay attention to, not the
25 total revenue to Manitoba Hydro.

1 MR. ANTOINE HACAULT: Okay. Thank you.
2 And perhaps we can illustrate what that appears to be
3 morphing into. If we go to Exhibit -- Manitoba Hydro
4 Exhibit 104-12-2. I think that one should come up on
5 the screen. It was a fairly lengthy spreadsheet that
6 we looked at the other day. We couldn't get the Excel
7 spreadsheet up, but that one I think we got up.
8
9 (BRIEF PAUSE)
10
11 MR. ANTOINE HACAULT: So it was
12 Manitoba Hydro Exhibit 104-12.2 -- or -2.
13 Yes. And if we can focus on the --
14 actually further to the right. I'll explain the sheet.
15 Further to the right. So just let me provide some
16 background, sir.
17 These were some of the additional
18 financial sheets that were provided last week to us.
19 You may not have had a chance to absorb them, or -- or
20 see them. They were prepared by Manitoba Hydro and
21 distributed to the parties. And -- and you may get
22 some direction from the PUB to -- to look at some of
23 this stuff.
24 If we go to the third last item, which
25 is the twenty (20) year present value of consumers

1 revenue, when you were talking about rates, is that a
2 metric that you would be interested in, sir, as to what
3 is payable over twenty (20) years, fifty (50) years,
4 and -- and various time periods?
5 MR. PELINO COLAIACOVO: Yes, that --
6 the metric that we were analyzing in our report was the
7 forty-eight (48) year present value of consumers -- of
8 domestic consumers revenue, which I believe that's what
9 this lin -- column is. This is -- the column is twenty
10 (20) year. We looked at -- in our report we focussed
11 on the forty-eight (48) year, and I believe in one (1)
12 of the IRs for the PUB we also did the twenty (20) year
13 and thirty (30) year, so a similar calculation.
14 MR. ANTOINE HACAULT: So that if we
15 look at the NPV of All Gas under a reference case; and
16 that, I believe, is line 11. If we look to the left,
17 we see All Gas. DSM 2 is what we've been chatting
18 about. And if we go all the way to the column N, as in
19 'Norman', we see that the NPV of consumers revenue, and
20 this was calculated, I think, at 1.86 percent real,
21 we'll be able to see that at the bottom left-hand
22 corner of the table. We don't need to go there right
23 now. That would be -- we could use that, for example,
24 as one (1) point which has been kind of a reference
25 case in these proceedings.

1 Is that fair?
2 MR. PELINO COLAIACOVO: I'm -- I'm not
3 sure if it's a reference case or not, but it is
4 definitely a point that can be considered.
5 MR. ANTOINE HACAULT: Yes. They start
6 will All Gas and then compare all the other plans --
7 MR. PELINO COLAIACOVO: Right.
8 MR. ANTOINE HACAULT: -- to All Gas.
9 Sorry, I didn't frame my question or phrase correctly.
10 And then if we wanted to see what ratepayers such as
11 industrials,, might be concerned about is how much they
12 would be asked to pay under, for example, Plan 14
13 reference values on DSM Level 2, that would be in
14 column 3.
15 Have you found column 3, sir?
16 MR. PELINO COLAIACOVO: Row 3?
17 MR. ANTOINE HACAULT: Row 3, yeah.
18 MR. PELINO COLAIACOVO: Yes.
19 MR. ANTOINE HACAULT: And if we go
20 across, it's -- we see it's Plan 14, DSM Level 2. And
21 we go right across to the column N, as in 'Norman', we
22 see that the NPV collected domestic consumers revenue
23 goes up to $29.3 billion?
24 MR. PELINO COLAIACOVO: Correct.
25 MR. ANTOINE HACAULT: So that if we

1 wanted to see, at least on this information, the impact
2 over twenty (20) years to industrials who would be
3 paying part of this, am I correct that the math I
4 should be doing is taking the twenty-nine point three
5 (29.3) and subtracting from that number the All Gas
6 number that we had, which was twenty-seven point four
7 (27.4), and we'd get a difference of $1.9 billion?
8 MR. PELINO COLAIACOVO: That's correct.
9 And -- and so industrial consumers presumably would be
10 responsible for a fraction of that difference, because
11 they're a fraction of the total domestic ratepayers.
12 MR. ANTOINE HACAULT: Yeah, we've been
13 looking at general service, large and medium, forming
14 about 20 percent of the revenue, somewhere between 17
15 and 20 percent. So if in a year they form 20 percent
16 of the -- because it depends on the exports, if they
17 for 20 percent they'd be looking at an NPV over twenty
18 (20) years of additional $400 million?
19 MR. PELINO COLAIACOVO: Accepting that
20 math, yes.
21 MR. ANTOINE HACAULT: Yeah. And to
22 them, would you accept, sir, that that might make a
23 difference?
24 MR. PELINO COLAIACOVO: I believe it
25 would be important to the ratepayers in question, sure.

1 MR. ANTOINE HACAULT: And if we had the
2 unfortunate circumstances of having high capital costs,
3 which is one of the other scenarios referenced here,
4 but at line 15.
5 We go across line 15 DSM Level 2 up to
6 the twenty (20) year present value in the column N, as
7 in 'Norman', we see that there's a total NPV of
8 consumers revenue is actually now $30.2 billion?
9 MR. PELINO COLAIACOVO: Yes.
10 MR. ANTOINE HACAULT: Do you see that?
11 And mathematically, am I correct that I should -- if I
12 wanted to compare and stress test what might happen to
13 Manitoba consumers, I would subtract from the $30.2
14 billion the twenty-seven point four (27.4), which is
15 the All Gas scenario?
16 MR. PELINO COLAIACOVO: You should be
17 comparing it to All Gas with high capital costs.
18 MR. ANTOINE HACAULT: With high capital
19 costs?
20 MR. PELINO COLAIACOVO: I'm not -- and
21 I don't see that on this chart, but I -- it may be
22 truncated, so.
23 MR. ANTOINE HACAULT: And do we have
24 any sense that the construction of the gas turbines
25 would be high?

1 MR. PELINO COLAIACOVO: Well, the high
2 capital cost variable that -- that Manitoba Hydro has
3 built into their analysis is a compendium of some
4 different elements which include higher labour costs
5 and so on and so forth. So there should be a
6 difference between the reference case at twenty-seven
7 point four (27.4) and the high capital cost case. I
8 can't predict how much that difference is going to be.
9 MR. ANTOINE HACAULT: The reason I was
10 asking that is we've had some testimony with respect to
11 the cost of gas turbines and some suggestion that with
12 increases in efficiency and technology, that the cost
13 per megawatt might be different, but...
14 MR. PELINO COLAIACOVO: I -- I think
15 for the purposes of the analysis that's provided here,
16 to be fair, you should be comparing cases that use
17 similar variables, that's all.
18 MR. ANTOINE HACAULT: Understood.
19 Thank you. The next IR I'd like to refer to is PUB IR
20 5b, as in 'Bob', lines 11 to 23. So lines 11 to 23.
21
22 (BRIEF PAUSE)
23
24 MR. PELINO COLAIACOVO: I'm not -- is
25 this the right question? It is. Okay.

1 MR. ANTOINE HACAULT: There's -- maybe
2 you can go down further. I may have -- just a minute
3 I'll just double check my notes here. It was, sorry,
4 on page 2 of that response that I was referring to,
5 lines 11 to 23.
6 This response, sir, you're discussing
7 the issue of rising domestic rates and Morrison Park's
8 view of sensitivity to electric prices. Can I test you
9 a bit?
10 Do you have -- what do you have to base
11 that conclusion on, sir, apart from just asserting it?
12 MR. PELINO COLAIACOVO: I think the
13 point that we are making here is that while most
14 customers in Manitoba do not have the option to opt out
15 of the -- of Manitoba Hydro rates, there is a
16 relatively small pool, but potentially very significant
17 customers, that are mobile in the medium to long term.
18 We had the opportunity to review
19 confidential information that Manitoba Hydro provided
20 to us which provided greater detail on the identity and
21 characteristics of some of the largest customers. And
22 we reviewed the investment patterns of -- of those
23 customers and the frequency with which they make
24 investments in their facilities, for example.
25 And -- and a certain number of those

1 customers make investment decisions on a ten (10) year
2 basis, for example. And so rates -- the rate horizon,
3 the rate forecast, on a ten (10) or a fifteen (15) year
4 basis would be very relevant to their business
5 decisions. And those customers that are high users of
6 power do occasionally -- well, let's put it this way.
7 Electricity -- expected electricity rates over the
8 medium term are -- is very relevant to their investment
9 decisions and they can choose to go elsewhere. There
10 are other jurisdictions that are competitive.
11 And that's the point that we were making
12 in -- in this paragraph, that it is relevant -- excuse
13 me -- to consider whether some customers can opt out of
14 the system by taking their business elsewhere, and that
15 if they were to chose to do that there would be an
16 impact on the customers remaining in the system.
17 MR. ANTOINE HACAULT: Thank you. And
18 the one (1) thing you didn't study is, I gather, from -
19 - or didn't comment on in your report, sir, if I can
20 refer back to the -- the geology example that one of
21 the presenters made, the one (1) thing you didn't study
22 is if rates go up, how many jobs are we affecting and
23 how much ore will -- rock will not be turned to ore?
24 MR. PELINO COLAIACOVO: And as we said
25 -- as I said in -- in my -- early in my presentation

1 yesterday, there is an economic impact to rising rates,
2 and -- and there's a multiplier impact, economically,
3 that should be taken into account. And we are not
4 competent to do that analysis. There are others who
5 can undertake that kind of analysis.
6 Given that different plans imply
7 different rate patterns over time, it might be useful
8 for an expert to look at those rate patterns and try
9 and calculate what the economic impact of the
10 difference in the rising rate patterns would be.
11 MR. ANTOINE HACAULT: Thank you, sir.
12 This is just kind of a small aside to the whole rates
13 matter. It's in MIPUG Interrogatory 3, I believe,
14 lines 15 to 17.
15 Let me start with some background of
16 what's already been discussed in this hearing. Earlier
17 in the hearing we had gone through an example of the
18 mathematical impact of DSM initiatives where adding
19 some DSM to specific customer groups may result in a
20 lower overall bill to that particular consumer --
21 consumer group, but increasing rates to other
22 consumers. High -- can I take you to the last sentence
23 of -- of this response:
24 "Higher rates per unit of energy
25 could be perceived as a burden for

1 individual ratepayers, particularly
2 if those ratepayers are not
3 responsible for the decline in
4 overall consumption."
5 Can I tie those in together in any way?
6 MR. PELINO COLAIACOVO: So DSM programs
7 on an aggregate basis are unambiguously good, I think
8 is -- is one (1) way to put it. The -- and an
9 economically justified DSM program entails the
10 investment of some capital in order to reduce
11 consumption over time, and that reduced consumption
12 benefits the system as a whole.
13 However, any DSM program will only be
14 taken up by a fraction of participants in the system,
15 and that fraction of the participants in the system
16 will reduce their consumption, and they will pay less
17 for electricity as a result. But other people in the
18 system may subsequently face higher rates as a result
19 of that overall adjustment in demand. And if their
20 consumption has not fallen, they'll still be facing
21 higher rates and they'll pay more.
22 The total -- the aggregate may have
23 fallen for the entire group, but some people are going
24 to be paying more than others, depending on their
25 participation in the program. That -- I -- I believe

1 this IR was -- was discussing that issue.
2 MR. ANTOINE HACAULT: And new customers
3 wouldn't be able t benefit from that if they come into
4 the market at the existing rates, and can't benefit
5 from say an initiative that had been funded at an
6 earlier date.
7 Would that be fair also? It depends?
8 MR. PELINO COLAIACOVO: I -- I assume
9 that would be fair. I can't really comment. It's...
10 MR. ANTOINE HACAULT: Okay. Thank you.
11 The next thing that we've talked about is the whole
12 issue of how to deal with sunk costs. And I'd like to
13 take you to MIPUG Interrogatory 11, lines 16 to 22.
14 The last -- or you start by putting a
15 qualifier, sir: You're not an accounting firm. But at
16 the end you indicate, at lines 20 to 22, that there may
17 be a review to determine whether there continues to be
18 value in them.
19 Sir, did you consider, when you did your
20 analysis, and I had some questions of Mr. Rainkie of
21 Hydro on this issue, as to whether or not the
22 theoretical models that were produced would be followed
23 in reality? You may not have seen that in the
24 transcripts.
25 MR. PELINO COLAIACOVO: I didn't read

1 that -- that portion of the transcript, no.
2 MR. ANTOINE HACAULT: Yeah, that's
3 included in some of our books of documents.
4 And Mr. Rainkie appeared to be of the
5 belief that Conawapa and Keeyask would always be
6 considered in their line of generation options. And in
7 the real world, as I interpreted his statements, you
8 might not necessarily be inclined to write them off
9 totally if they continue to have value.
10 Are you following me so far?
11 MR. PELINO COLAIACOVO: Yes.
12 MR. ANTOINE HACAULT: In that context,
13 when you're doing your commercial analysis of
14 reasonableness -- I'll back up a little bit -- when you
15 do it for a private company, would a private company do
16 things on a theoretical basis, or would they approach
17 things on a real and practical basis?
18 MR. PELINO COLAIACOVO: I -- I think,
19 as it relates to the issue of sunk costs, looking at an
20 option that does not include Keeyask, for example, and
21 saying, Well, that option is going to be burdened by
22 the full amount of the sunk costs of $1.4 billion, is
23 probably a limiting case. Because if Keeyask were not
24 to be built in 2019 and -- and were to be put off, then
25 some of those costs would -- I am presuming would

1 definitely have to be written off, but potentially not
2 all, not the entire $1.4 billion.
3 And I think it would be -- it would
4 depend very much on the details of the decision taken.
5 If there was a decision taken to delay the project for
6 three (3) or four (4) years then perhaps there would be
7 very little of the cost that would be written off. If
8 there were a very firm decision taken that there's no
9 interest in this project, we can't -- in the
10 foreseeable future we do not believe it will happen,
11 but possibly in a decade or two (2) decades we might
12 resuscitate it, then a much larger portion of the cost
13 spent to date would have to be written off.
14 Again, that's a detailed decision that
15 would be made between Manitoba Hydro and its auditors
16 on a case by case basis. From a -- an analysis
17 perspective looking at options, you know, it's
18 difficult to get into that level of detail.
19 And so in the All Gas option the
20 assumption, for example, was that the whole amount
21 would be written off. Is that necessarily fair in
22 reality? I don't know. And -- and additional
23 information could be provided by Manitoba Hydro or --
24 or others, but I -- it's -- it's certainly a limiting
25 case.

1 MR. ANTOINE HACAULT: So am I fair to
2 suggest, sir, that, mathematically, if we go on a
3 theoretical basis as opposed to what I'll call a more
4 probable basis, based on the responses by Mr. Rainkie,
5 on a numerical basis it would make the Preferred
6 Development Plans which include Keeyask and Conawapa
7 look better?
8 MR. PELINO COLAIACOVO: If I understand
9 your -- your point is that assuming the limiting case
10 of a $1.4 billion write-off results in the comparison
11 being favourable to Keeyask and Conawapa, yes, I think
12 that's true, because the assumption is the limiting
13 case. If you were to assume 50 percent write-offs
14 then, you know, there -- it would have an impact on --
15 on the calculations of difference between the options.
16 MR. ANTOINE HACAULT: And that
17 information was never provided to you, sir, as to
18 whether or not, if we were postponing Keeyask for now,
19 whether or not we would only have to write off say 500
20 million as opposed to 1.4 million?
21 MR. PELINO COLAIACOVO: There's nothing
22 that I saw in the record with those kinds of choices or
23 options presented. Some of the options, for example,
24 Plan 2 that was referred to with Keeyask22 for -- you
25 know, assumes that Conawapa sunk costs are written off.

1 But I honestly don't recall whether Plan 2 includes the
2 -- the writing off of any of the $1.4 billion and --
3 and further expenditures, or if the $1.4 billion in its
4 entirety is assumed to flow into rate base, which is, I
5 believe, what happens.
6 But, you know, those kinds of finer
7 gradations between options I don't think we're
8 presented.
9 MR. ANTOINE HACAULT: Is it your point,
10 sir, that if the option is still open and there appears
11 to continue to be value because it's not put off too
12 long -- so say, for example, the Conawapa option -- we
13 chose for now to go with Keeyask and Gas, but Conawapa
14 was still on our backburner -- from a analysis
15 perspective, what we should be doing is looking at
16 whether there continues to be in val -- some value in
17 that $400 million number that's been spent so far
18 instead of simply writing it totally off?
19 MR. PELINO COLAIACOVO: I suspect that
20 in reality that is what would likely happen between
21 Manitoba Hydro and its auditors. I believe one (1) of
22 the undertakings that we referred to yesterday said
23 that, as of December 31st, $290 million had been spent
24 on Conawapa, and by June it will be higher number.
25 But if Conawapa -- if no decision is

1 taken to support Conawapa and it remains an option for
2 the future, some of that will likely have to be written
3 off, and some may not. You know, we -- I don't think
4 we can comment on how much of that would be -- the
5 limiting case would be that all of it would be written
6 off.
7 MR. ANTOINE HACAULT: Mr. Chairman, I'd
8 need to have a discussion with my colleague, because
9 there's some -- there's three (3) other subject areas
10 that I could go into. One (1) is does debt matter, the
11 total amount of debt, and there's some comments with
12 respect to credit rating and stuff.
13 I see it's lunchtime. I certainly don't
14 want to take away time from other people who have
15 prepared extensively on questioning, so perhaps my
16 suggestion is that, given I've taken the time I have,
17 is that I stand down and have that discussion.
18 Ms. Saunders is not expecting to do any
19 cross-examination, as I understand it. But the one (1)
20 thing I didn't know, as of yesterday when I left, is
21 the estimates of the times of others for after -- the
22 afternoon, and also the time that the Board has today
23 in the afternoon, as far as quitting at 4:00 or 4:30,
24 or whatever time it was.
25 THE CHAIRPERSON: And what we don't

1 know is the time that's available to the witnesses, as
2 well. So I think that would be an appropriate topic
3 for counsel to discuss while we break for lunch.
4 But there is something we need to
5 address before we break for lunch. And I'll turn the
6 microphone over to Mr. Peters, please.
7 MR. BOB PETERS: Yes, thank you. Thank
8 you, Mr. Chairman. Monday April 21 and/or Tuesday
9 April 22 are scheduled to be available for Intervenors
10 to ask questions of Hydro witnesses on recently updated
11 and recently filed economic updates, as well a recently
12 filed econo -- financial analysis updates, including
13 those that Mr. Hacault referred to filed on April 11.
14 Yesterday, the transcript of April 16 at
15 pages 7,223 to 7,224, the panel heard from counsel for
16 CAC and counsel for MIPUG, who had specific concerns in
17 respect of the record and the state of the analysis
18 done or not done by Manitoba Hydro to date, as well as
19 what additional information should be obtained. And we
20 also see from comments from the chairman, that the
21 panel also has concerns as to the extent of the
22 analysis performed to date and what additional
23 information would bring value to the panel.
24 So against that brief background, Mr.
25 Chair, I'm suggesting that there may be merit for the

1 panel to hear from counsel for the Intervenors, as well
2 as counsel for Manitoba Hydro, as to the utility and
3 usefulness of sitting on Monday to review the recently
4 filed information if more information is going to be
5 required.
6 And to that end, I suggest perhaps you
7 could canvass counsel for the Intervenors, as well as
8 Ms. Boyd, for their immediate thoughts and perhaps
9 position on that.
10 THE CHAIRPERSON: Mr. Williams, would
11 you mind leading off?
12 MR. BYRON WILLIAMS: We -- we thank the
13 panel for the opportunity to comment. Just from a
14 perspective of efficiency and -- certainly our clients
15 would not object to not sitting on Monday and Tuesday
16 and waiting till we have a more complete record. We
17 think that would be more efficient in that we're --
18 we're not aiming at half the -- half or two-thirds
19 (2/3s) of the information now, and then another third
20 later.
21 So certainly from an efficiency
22 perspective, our clients would be supportive of not
23 sitting. From a human perspective, I'm not -- not sure
24 -- I'm not sure if -- I'm -- I'm going to accept that
25 economists have hearts, and I'm going to offer the

1 proposition that lawyers do, as well, for -- we -- we
2 have a lot on the go simply in terms of getting our
3 evidence ready next week and working with all our
4 witnesses. And so that -- that would also be
5 beneficial from a more human or, perhaps, selfish
6 perspective.
7 So we certainly have no problem in -- in
8 deferring that discussion to a later date, with the
9 primary reason being it'll be more efficient because
10 we'll have as much information as we're going to get
11 before us.
12 THE CHAIRPERSON: Thank you, Mr.
13 Williams. Me. Hacault, s'il vous plait?
14 MR. ANTOINE HACAULT: The unfortunate
15 challenge, I guess, which both the Board and counsel
16 and Manitoba Hydro are put in, is that this Board has
17 to give a report by a certain date. It would have been
18 very desirable if we would have had a week or two (2)
19 more to impose less burden on Hydro staff who have been
20 working extremely hard to try and provide us with
21 relevant information.
22 That having been said, we could do again
23 a limited review on Monday or Tuesday followed by, you
24 know, another opportunity to kind of wrap things up at
25 a later date. That, in my respectful view, is not as

1 efficient as doing everything at once, because then --
2 especially if we're comparing plans. You saw in some
3 of my cross-examination, and I don't know whether it
4 was of assistance, but we compared different plans, and
5 now we've got one (1), five (5), and fourteen (14), and
6 we'd be limited to that.
7 And there may be some other issues that
8 are worthwhile canvassing, but all at once instead of
9 just in two (2) -- and there might be some duplication
10 as a result of having new plans or new scenarios or new
11 information provided.
12 So for all those reasons, if we can fit
13 it into the schedule from an efficiency perspective,
14 and I think from getting a proper explanation of all
15 the issues at once, it would be preferable to find an
16 alternate date. The problem is your schedule, and I --
17 it's a tough thing because you have to do your report.
18 What's the report going to say?
19 THE CHAIRPERSON: Thank you, Me.
20 Hacault. Mr. Williams, please...?
21 MR. BYRON WILLIAMS: And I should have
22 noted, Mr. Hacault has been better at this than me. I
23 was speaking of the burden on our staff, and I -- I was
24 expressing some disappointment yesterday, and -- and
25 that disappointment remains. But we do acknowledge the

1 tremendous burden that Manitoba Hydro staff have been
2 under, not just for the weeks but probably for a couple
3 years, and I was remiss in not noting that yesterday.
4 THE CHAIRPERSON: Thank you, Mr.
5 Williams. Mr. Orle, would you like to comment,
6 please?
7 MR. GEORGE ORLE: Very brief, Mr.
8 Chairman. I -- I concur with Mr. Williams and -- and
9 his disposition of that -- of that question.
10 THE CHAIRPERSON: And, Ms. Saunders,
11 please...?
12 MS. JESSICA SAUNDERS: No other
13 comments, Mr. Chair. We -- we understand the position
14 that CAC and MIPUG is in, and so we don't have any
15 further comments to add. Thank you.
16 THE CHAIRPERSON: Thank you, Ms.
17 Saunders.
18 Ms. Boyd...?
19 MS. MARLA BOYD: Still here, but
20 hiding, sir. I was trying to consult very quickly with
21 Mr. Wojczynski, because I wasn't aware that this was an
22 issue of concern. From Manitoba Hydro's perspective,
23 there is not very much more information coming. So
24 while Mr. Williams suggests that there's another third
25 or half of information coming, that's simply not the

1 case. Manitoba Hydro does not think there's very much
2 outstanding that needs the matter to be deferred.
3 Now, that being said, we're all human,
4 too. So anybody saying that we could have Easter
5 Monday with our families, have time to get things
6 ready, would be fabulous. However, as I look at the
7 schedule and I look at the deadline that the Board is
8 facing, I don't see very many more days where this can
9 fit if it doesn't fit April 21st and 22nd.
10 The week that's available is the week of
11 May the 5th. I expect that that's not necessarily
12 desirable for all parties in the room, so that's
13 something that -- that I think needs to be looked at.
14 THE CHAIRPERSON: Well, I think that --
15 I suggest that it would be a very good time to take a
16 break right now. And perhaps the -- the counsels for
17 the various parties could caucus and see if there's
18 some way we could resolve this issue, both with respect
19 to whether we work on Monday and Tuesday of next week,
20 and whether or not there's some way of getting to the
21 information that we perceive is required to allow the
22 panel to make a -- a judgment about the appropriate
23 path forward.
24 I think that we all recognize that we
25 would never have perfect certainty in making a decision

as a panel to the government. And the question becomes whether or not the level of uncertainty is such that we can't make a recommendation to government. And that, really, is something that we all have to wrestle with, because we have to achieve a decision, and lack of information calls into question whether or not the decision that is made can be made.

And so let's reflect about that over lunch and see if there is some way in which we can arrive at a consensus as to the information that can be made available in the next few days.

Thank you. We'll take -- let's -- let's resume at one o'clock.

--- Upon recessing at 12:06 p.m.

--- Upon resuming at 1:06 p.m.

THE CHAIRPERSON: Good afternoon. Good afternoon. Are we ready to go? Sorry, we're a bit late. I'd like to turn the microphone over to Mr. Peters, please.

MR. BOB PETERS: Thank you. I think I have the happy announcement that I guess not only do economists have hearts, perhaps even accountants. The panel has determined the Easter Monday will not be a

1 sitting day of the Board. And likewise, on Tuesday,
2 which had also been set aside, those days will not be
3 required at this time, based on parties wanting to
4 consider more information, including some that we
5 understand will be filed in the next couple of minutes.
6 And the panel will consider what, if any, further
7 information it's going to be asking of Manitoba Hydro.
8 That does mean that there'll be some
9 scheduling issues to be addressed at a later point in
10 time, including possible weekends or evening sittings,
11 but we'll -- we'll set those as we -- as we see the
12 time needs arise.
13 So the good news is that April 21 and 22
14 are not hearing days even though they are, as we've
15 heard from Mr. Williams, working days on other issues,
16 but I'm sure for all of us the same.
17 THE CHAIRPERSON: Now let's talk about
18 today. Do you expect today, Mr. Peters, that we'll be
19 able adjourn at 4:30 or is it your expectation that we
20 will be working a little bit later than 4:30?
21 MR. BOB PETERS: I think we should plan
22 on just a bit later. I see Mr. Hacault taking another
23 half hour. I see Ms. Boyd being an hour. And I will
24 be an hour or less with the public session. And then
25 in terms of CSI, we've tried to protect one (1) hour

1 for a CSI session, and I don't believe it's CSI. If I
2 can indicate that the purpose of it will be primarily
3 to demonstrate to the Board the model that Morrison
4 Park advisors created and explain that to the panel.
5 And because it contains CSI, that's why it's going in
6 the CSI session.
7 But Ms. Boyd and I have no CSI
8 questions, other than those that may arise on the
9 presentation of the model. So we do think we can be
10 within that hour. I would suggest at this time you
11 maybe turn it over to Ms. Fernandes and Ms. Boyd,
12 because they do have some filings they'd like to put on
13 the record.
14 THE CHAIRPERSON: Ms. Boy -- oh, I'm
15 sorry. Ms. Fernandes, sorry, over to you.
16 MS. ODETTE FERNANDES: Thank you, Mr.
17 Chairman. Yes, as indicated by Mr. Peters, we do have
18 a few exhibits to file which are part of that 104
19 series. The first one is a run which was performed on
20 the incremental NPV relative to All Gas, and that is
21 Plan 14, with the LCA load reduction compared to LCA No
22 -- No New Generation Plan. And we propose that be
23 marked as Manitoba Hydro Exhibit 104-14.
24
25 --- EXHIBIT NO. MH-104-14: Run performed on the

1 incremental NPV relative to
2 All Gas with the LCA load
3 reduction compared to the
4 LCA No New Generation Plan
5
6 MS. ODETTE FERNANDES: Next I have an
7 update to Manitoba Hydro Exhibit 129-7, page 2, which
8 is Plan 2 with Level 2 DSM. And that is added to the
9 table which shows the incremental NPV relative to All
10 Gas at the specified level of DSM. And we propose that
11 be marked as Manitoba Hydro Exhibit 104-15.
12
13 --- EXHIBIT NO. MH-104-15: Update with table which
14 shows the incremental NPV
15 relative to All Gas at the
16 specified level of DSM
17
18 MS. ODETTE FERNANDES: And finally, I
19 have a document entitled, "DSM Total Resource Cost View
20 Economic Summary Relative to All Gas with Base DSM."
21 And we suggest that be marked as
22 Manitoba Hydro Exhibit 104-16.
23
24 --- EXHIBIT NO. MH-104-16: Document entitled, "DSM
25 Total Resource Cost View

1 Economic Summary Relative
2 to All Gas with Base DSM"
3
4 MS. ODETTE FERNANDES: And I believe
5 Mr. Wojczynski would like to speak to these documents.
6 THE CHAIRPERSON: Mr. Wojczynski,
7 please.
8 MR. ED WOJCZYNSKI: Yes. Thank you.
9 We -- Manitoba Hydro had been planning to say something
10 about these on Monday to make them more understandable
11 to people. But given the topic of wanting to -- to
12 judge how much information is still required or not,
13 and given we're not sitting on Monday, we thought maybe
14 a small explanation now. Then we could always give a
15 fuller one at a later date.
16 Exhibit 14 is just being handed out
17 right now, and I think it would be useful to have in
18 front of us. But I'll -- I'll just give you the
19 introduction while it's being handed out -- well,
20 actually I'll wait.
21
22 (BRIEF PAUSE)
23
24 MR. ED WOJCZYNSKI: What -- what
25 Exhibit 14 does, it deals with -- last week when we had

1 La Capra here, there was quite a bit of discussion of
2 what was called the No Gen Case. And as they
3 explained the No Gen Case actually still -- still did
4 have gen. It was a -- it was a gas generation case,
5 but with gas generation delayed a number of years. So
6 that is called the -- the LCA No New Generation Case.
7 And if you look on this table the first
8 three (3) plans on this, and the first three (3)
9 analyses, one (1), seventeen (17), and fourteen (14)
10 were in their report that they provided a week and a
11 half ago and discussed last week. And Plan 1 is the
12 All Gas Plan from the 2012 analysis. In the -- in the
13 Hydro submission, it's the same plan. And similar with
14 Plan 14. So those are out of the original Manitoba
15 Hydro submission.
16 LCA then developed -- and I'll -- I'll
17 use my description of it. It may not be exactly how
18 they described it. Essentially they took the All Gas
19 Plan and said, Well, let's add in a tie-line -- an
20 import tie-line with no exports. We'll relax the
21 import criteria. In other words, drop the 10 percent
22 planning limit, not the operating limit, and extend the
23 diversities, and -- and then have a load reduction
24 which would be a combination of fuel switching and
25 increased DSM.

1 And in that, they obtained an NPV of
2 $1,421 million, which is not -- is only about $270
3 million less than Plan 14 on this -- on using the same
4 export prices and discount rates. And as I think the -
5 - the general impression or messaging was that this was
6 an indicator that, amongst other things, that relaxing
7 the import criteria was such a huge issue and had such
8 huge economic consequences, we should pay a lot of
9 attention to it.
10 Whereas Manitoba Hydro would agree we
11 should pay attention to everything, we were -- had been
12 trying to cross, indicating, Well, actually a huge part
13 of what you're seeing of the benefit compared to the
14 All Gas was actually due to DSM. And we didn't have
15 the -- the evidence of it there, and we -- we tried to
16 cross on it but we -- we didn't have the evidence. So
17 this is provided below in the two (2) bottom plans.
18 If you go to the -- the very bottom plan
19 on this table, it's again Plan 14, and it is the same
20 as the other Plan 14s except what we've added in is the
21 -- the LCA load reduction. So -- so -- and in that you
22 will see that going from Plan -- the -- the first Plan
23 14, with Conawapa in '25, to this one at the bottom,
24 with Conawapa in '27 and with the load reduced, the NPV
25 goes from sixteen ninety-six (1,696) to twenty-five

1 ninety-four (2,594), which is essentially about $900
2 million, or close to a billion dollars.
3 And -- and that is consistent with the
4 other analysis you have seen, where this is appro --
5 the load reduction is approximately equal to DSM Level
6 2. And the earlier analysis we have provided indicated
7 that when you go from a base DSM to a Level 2 DSM, you
8 get around nine hundred (900) or a billion dollars of
9 benefit to the DSM plan, and that's what you're seeing
10 here. So what -- what this is indicating is that a
11 very large proportion of the benefits is due to the DSM
12 and not due to relaxation, for example, of the import
13 criteria.
14 The second-last plan on here has the
15 load reduction -- the same load reduction, and also the
16 diversities exchange from GRA diversity extension from
17 twenty-five (25) to thirty (30). And you see that
18 didn't make very much difference, but it was just an
19 additional little part to make them more comparable.
20 So the bottom line there is that while
21 there are benefits to having a new import line and
22 export line and there -- but a large part, the -- the
23 very large part of the benefits going for going to this
24 No New Gen Plan is actually from the DSM itself. And
25 we could always go through that in more detail, but I -

1 - I think that was probably more -- as -- as much as
2 you'd want to hear today.
3 By the way, I have to say, I wish I
4 could present as well as the presentations you've been
5 hearing this morning and yesterday.
6 THE CHAIRPERSON: Mr. Williams...? I'm
7 sorry.
8 MR. ED WOJCZYNSKI: A question? Or
9 should I go on?
10 MR. BYRON WILLIAMS: If I could,
11 because this will -- I just see the label and it might
12 cause some issues for analy -- analysts. So if I could
13 just ask Mr. Wojczynski to clarify on 104-14, it looks
14 like you've got the WPS investment in there. I'm
15 assuming you didn't and it's a labelling error.
16 But if you could just clarify that?
17 MR. ED WOJCZYNSKI: Yeah. No, what we
18 did here was -- that is not a labelling error. What we
19 did here is try and keep it identical to the Plan 14
20 that's there so we could separate out what the impact
21 of the elements that were put into the No New Gen Plan.
22 The No New Gen Plan had the -- the DSM, or load
23 reduction, and the tie-line and relaxed criteria. And
24 what was not available in the hearing last week was how
25 much of the benefits were due to each component.

1 And LCA -- neither LCA nor Manitoba
2 Hydro had evidence to try and say how much was from the
3 import criteria, how much was from the DSM, how much
4 was from diversities, and how much was from the tie-
5 lines. So what we did hear is to keep everything else
6 identical from the Plan 14, the only thing we changed
7 was the amount of DSM.
8 And -- and so this demonstrates that
9 changing the DSM -- because if you go from number --
10 from Plan 1 to Plan 17, there were those four (4)
11 changes made. The one (1) change of -- of the DSM
12 would contribute at least $900 million to that benefit.
13 So that's why we kept everything else identical.
14 Otherwise, you're mixing up a whole bunch of different
15 factors. There -- if you -- clearly, if you -- if we
16 made a whole bunch of other changes to Plan 14,
17 including WPS investment or whatever, that would change
18 the numbers too.
19 But that wasn't the point. The point
20 was in the LCA No Generation Plan, a very large part of
21 -- of going -- of getting from the zero All Gas to
22 fourteen twenty-one (1,421) was from the DSM; nine
23 hundred (900) at least out of the fourteen hundred
24 (1,400).
25 THE CHAIRPERSON: Does that answer your

1 question, Mr. Williams?

2 MR. ED WOJCZYNSKI: I'm sorry, I should

3 have said this is all ref/ref/ref. Should I move on to

4 the next one?

5 Exhibit 15 is something that in effect

6 has been asked for a number of times. And -- and we

7 thought it was sort of intuitively obvious, but we

8 realized that it wasn't. So we did -- have provided

9 here -- this is the same information that's already

10 been provided previously to this hearing. And what it

11 is, is the updated analysis of -- of these various

12 cases.

13 But in the past when we've presented

14 this we've presented it in two (2) different ways.

15 We've said, Keep the DSM level constant and then

16 compare the plans against each other. We've also, in

17 separate exhibits, taken the same information and said,

18 Keep the plans constant and change the levels of DSM.

19 And that told us which -- what is the economic level of

20 DSM or what is the economics of the plans.

21 One of the issues that has arisen a

22 number of times was, Well, by not allowing the DSM

23 options and the supply options to inter -- intermingle,

24 you're not doing integrated resource planning. So what

25 -- this is taking all the same information you've seen,

1 but not keeping anything constant, using the -- and --
2 and they're all absolutes now. And you can compare and
3 intermingle any way you want and -- and determine the
4 optimum mix of DSM and supply.
5 So this is -- this is what I would call
6 an integrated resource planning exercise. Of course,
7 as we all know, this does not have solar in it, for
8 example. But -- but it is an integrated resource
9 planning exercise when you're comparing hydro options,
10 gas options, and DSM levels. I -- I think that's
11 probably enough said about that one.
12 And the next one is -- I have to think
13 for a second. Oh, sorry. One second to look at this.
14 What this is, is adding -- this morning there was a
15 discussion about interest in Plan 2, and there have
16 been discussion about that we only had Plan 2 at the
17 base DSM. And as MPA had indicated, it would be of
18 interest to have a better indication of the economics
19 of Plan 2, particularly given that we've updated the
20 economics of DSM and -- and look like we're going to do
21 something less than Level 2 DSM.
22 So we have added Plan 2 with Keeyask/Gas
23 in it and in this case if you look at the fourth row
24 down, Level 2 DSM Plan 2, you can see there is
25 Keeyask/Gas in there with Keeyask in 2031.

1 You know what, folks? I just made a
2 mistake. The explanations I just gave you are actually
3 for the -- the reverse.
4 This is the one that does the IRP where
5 you compare against everything else, and it was Plan 15
6 that introduces Keeyask/Gas. My apologies. I was
7 explaining it without looking at the numbers. I -- I
8 had thought the order was the other way. But -- so it
9 is Plan 16 that does the IRP, and it is Exhibit 15.
10 They both have Plan 2 with DSM at Level 2, but it's in
11 Exhibit 15 that you can more readily see what happens
12 with Plan 2 Keeyask/Gas.
13 So if we go back to that one, you will
14 see that at base DSM in Plan 2, Plan 2 is $111 million
15 better than All Gas. And that was compared earlier to
16 around 370, $380 million for Plan 5 and 14. Now, if
17 you go to Level DSM, Plan 2 with Keeyask in '31 and Gas
18 is actually minus a hundred and ninety-seven (197),
19 which means actually at Level 2 DSM, if it -- if you do
20 all of Level 2 DSM and you do not do the pipeline load,
21 that it actually -- Keeyask/Gas is less economic than
22 All Gas at the WACC of 5.4 percent. So that finishes
23 the explanation for now.
24 THE CHAIRPERSON: Just a point of
25 clarification. I'm intrigued about -- perhaps it's not

1 the appropriate time to ask the question, but I'm
2 intrigued about -- I'm looking at the lower table, the
3 difference between Plan 5 and Plan 6 at Level 2 DSM.
4 The difference there is the WPS sale.
5 Is -- is that correct?
6 MR. ED WOJCZYNSKI: Yes.
7 THE CHAIRPERSON: So --
8 MR. ED WOJCZYNSKI: So Plan 5 has the
9 WPS sale and Plan 6 does not. And so at Level DSM --
10 Level 2 DSM, and with the -- all the updated capital
11 costs and other information, the WPS sale in Plan 5
12 with the advanced gas turbines is -- is somewhat more
13 economic than Plan 6. So let me see, that's $24
14 million more economic than not having WPS and not
15 advancing the gas turbines. So as discussed this
16 morning, with WPS you have to advance the gas turbines.
17 And you get the additional revenues, but it's -- it's a
18 -- it's a small positive, but still a positive of $24
19 million.
20 THE CHAIRPERSON: Mr. Peters, please?
21 MR. BOB PETERS: Just a -- just a quick
22 question, if I could, of Ms. Fernandes and Ms. Boyd.
23 Has Hydro filed the economic summary
24 tables for Plan 2 DSM Level 2, similar to what they did
25 in Manitoba Hydro Exhibit 104-4?

1 (BRIEF PAUSE)

2

3 MS. MARLA BOYD: I can indicate that
4 the -- they have not been filed. The information you
5 have before you is literally hot off the press. They
6 are still being run. I don't have an indication of
7 when they'll be available, but the intention is to file
8 them.
9 THE CHAIRPERSON: Mr. Peters, I missed
10 your question. Could you -- Mr. Peters, could you
11 repeat your question so -- I missed it.
12 MR. BOB PETERS: I was just wondering,
13 Mr. Chairman, if Manitoba Hydro had the economic
14 summary tables for Plan 2 Level 2 DSM available, which
15 would be similar to what Manitoba Hydro filed in
16 Exhibit 104-4. And as I understand the answer, they're
17 coming and we'll get them as soon as they're available.
18 THE CHAIRPERSON: I think that is all
19 the questions we have for the time being, so I will
20 turn the microphone back to you, Me. Hacault.
21 MR. ANTOINE HACAULT: Merci, M.
22 President. This morning I neglected to enter a book of
23 documents which was distributed to all parties. It's
24 Volume IX. And Mr. Simonsen can confirm the exhibit
25 number attributed to that document would be MIPUG 20-9.

1 MR. KURT SIMONSEN: That's correct.
2 Thank you.
3
4 --- EXHIBIT NO. MIPUG 20-9: Volume IX book of documents
5
6 MR. ANTOINE HACAULT: I'd like to first
7 off thank all parties who have allowed me an extra half
8 hour of questioning.
9
10 CONTINUED BY MR. ANTOINE HACAULT:
11 MR. ANTOINE HACAULT: And the area I
12 want to explore with you, Mr. Colaiacovo, is debt and
13 does it matter. So to start that discussion I'd like
14 take you to your Exhibit 3 at page 70, 7-0; and in
15 particular, lines 7 and 8, where you discuss that
16 credit rating agencies show Manitoba net tax supported
17 debt is calculated between 15 and $20 billion.
18 Which reporting agencies did you take
19 that from, sir?
20 MR. PELINO COLAIACOVO: We read the
21 reports on Manitoba's credit rating from Dominion Bond
22 Rating Service, S&P, and Moody's --
23 MR. ANTOINE HACAULT: Thank you.
24 MR. PELINO COLAIACOVO: -- the three
25 (3) that actually do provide ratings.

1 MR. ANTOINE HACAULT: Now, you note in
2 lines 16 to 19 that your projections is that Manitoba's
3 economy would grow at -- or based on that assumption,
4 of 2 percent of growth per year, GDP would reach about
5 $70 billion in ten (10) years, correct?
6 MR. PELINO COLAIACOVO: Yes, that's
7 correct.
8 MR. ANTOINE HACAULT: And then you give
9 another scenario. If it grew by 3 percent average
10 growth, that it might grow to $77 billion, correct?
11 MR. PELINO COLAIACOVO: Correct.
12 MR. ANTOINE HACAULT: Now, sir, I'd
13 like you to keep those numbers in mind. And I'll refer
14 you to Manitoba Hydro Exhibit number 150, 1-5-0, 1-5-0,
15 to initiate the discussion, and the second page. This
16 is a document that was prepared to Manitoba Hydro,
17 indicating the peak net debt balance under different
18 plans.
19 So you've got the different pathways on
20 the left, the different plans in the next column, and
21 then the different assumptions that were used by
22 Manitoba Hydro in creating this table.
23 Do you see that so far?
24 MR. PELINO COLAIACOVO: Yes, I do.
25 MR. ANTOINE HACAULT: And the thing I'd

1 like to draw your attention to, sir, and we had a
2 discussion this morning, if we were going to be
3 referring to high values as far as capital costs, it
4 would be appropriate to do the same thing for Gas and
5 for the Preferred Development Plan, correct?
6 MR. PELINO COLAIACOVO: Correct.
7 MR. ANTOINE HACAULT: So that,
8 unfortunately, for the IFF, the 2013 assumptions in
9 which some of the capital costs are a bit higher than
10 the 2012 high ref assumptions, we don't have the All
11 Gas number.
12 But can we, at least for purposes of
13 this exercise, use the All Gas peak net debt of $15.8
14 billion?
15 MR. PELINO COLAIACOVO: Or thereabouts.
16 I mean, there -- there appears to be a proportional
17 increase that's happening on the Preferred Plan from
18 twenty-seven (27) to twenty-eight four (28.4) to
19 twenty-nine six (29.6). And if you inferred a similar
20 proportional increase on All Gas it would be about 16
21 billion, but we'll call it that.
22 MR. ANTOINE HACAULT: So if we used 16
23 billion for illustration purposes, not knowing whether
24 the gas turbines would in fact increase as much as the
25 generating stations, we would at least have a general

1 idea of what we're going to discuss as far as does debt
2 make a difference, and the difference between the All
3 Gas scenario and the Preferred Development Plan.
4 Is that fair?
5 MR. PELINO COLAIACOVO: That's fair.
6 MR. ANTOINE HACAULT: Okay. So the
7 difference between the two (2) would be in the range of
8 13 to $14 billion? Say --
9 MR. PELINO COLAIACOVO: Yes.
10 MR. ANTOINE HACAULT: -- to go -- we
11 would subtract from the $29.6 billion about $16 billion
12 or so.
13 So the peak net debt under the Preferred
14 Development Plan would be occurring around 2028,
15 according to this graph, which is some fourteen (14)
16 years henceforth, correct?
17 MR. PELINO COLAIACOVO: Correct.
18 MR. ANTOINE HACAULT: It's a little bit
19 further than the ten (10) year scenario that we've just
20 looked at. The previous one is around 2026.
21 That's a little bit closer, correct?
22 MR. PELINO COLAIACOVO: Yes.
23 MR. ANTOINE HACAULT: And, sir, what I
24 want to get your reaction on, if we flip back to page
25 70 of your Exhibit 3, firstly is do you have any views

1 as to whether or not we should, for discussing --
2 discussing this, assume that the province is not going
3 to incur any deficits?
4 MR. PELINO COLAIACOVO: I -- I don't
5 know if that would be a fair assumption or not.
6 According to public reports, they're going to incur
7 deficits for the next few years before achieving
8 balance. And beyond that, I -- you know, we can
9 assume, I guess, afterwards that -- that there might
10 not -- not be further deficits.
11 MR. ANTOINE HACAULT: But even though
12 we don't -- we would assume there would be no defects -
13 - deficits, we would start from a range of between 15
14 and 20 billion, depending on how the bond raging --
15 rating agencies look at the tax-supported debt?
16 MR. PELINO COLAIACOVO: I think that's
17 fair, yeah.
18 MR. ANTOINE HACAULT: Okay. So adding
19 some deficits, as are projected over the next years,
20 would just make the ratios that we're going to talk
21 about higher?
22 MR. PELINO COLAIACOVO: A little bit
23 higher, yes.
24 MR. ANTOINE HACAULT: So if we add the
25 $29.6 billion that we looked at to the $20 billion for

1 calculation purposes, we wouldn't be too far from $50
2 billion.
3 Is that fair?
4 MR. PELINO COLAIACOVO: In that
5 example, yes.
6 MR. ANTOINE HACAULT: And if your
7 projections are right, that the GDP is going to be
8 around 70 to 77 billion, where does that put Manitoba
9 at that point, compared to where it is today, and is
10 that significant?
11 MR. PELINO COLAIACOVO: Well, I think
12 the -- the reference to the credit rating agencies
13 analysis is that they -- they do make a distinction
14 between tax-supported debt and other debt for which the
15 province is contingently liable. And Manitoba Hydro's
16 debt is just such a contingent liability for the
17 province.
18 However, credit rating agencies
19 recognize Manitoba Hydro as being financially self-
20 supporting. And so whereas on technical grounds
21 Manitoba Hydro's debt is a debt of the province, it's
22 netted out for the purposes of credit rating agency
23 analysis.
24 And the -- the purpose of this whole
25 discussion in our report was to look at the issue of

1 whether -- whether in fact it mattered how much capital
2 was used in -- by Manitoba Hydro over time, depending
3 on their choice, and whether it presents a risk that
4 should be of concern to government or not.
5 The size of Manitoba Hydro's debt
6 borrowings, as long as they are supported by Manitoba
7 Hydro's revenues, should not in fact affect the
8 province. I think you could make an argument that if
9 Manitoba Hydro went on a construction binge that led
10 its debt to be significantly larger than the -- what
11 Manitoba as a province could support, there would be
12 some concern amongst credit rating agencies. But we're
13 talking about gradations here.
14 The -- the discussion was one (1) of
15 risks. And if -- if bad things were to happen and the
16 debt was no longer considered to be self-supporting,
17 what would -- what kind of a challenge would that
18 present to the province?
19 So, you know, the -- the question is
20 more if you presumed that things went very, very poorly
21 in the future with respect to export prices and
22 droughts and a whole bunch of other things, and some
23 fraction of Manitoba Hydro's debt were to become the
24 responsibility of the province, would it be manageable?
25 And I tried to include in this part of the report some

1 points of reference.

2 So, for example, Ontario today has a tax

3 supported debt of 42 percent of GDP -- or recently,

4 it's not quite today because it's gone up -- which is

5 higher than Manitoba's tax supported debt is today. So

6 can it be reasonably expected that Manitoba could

7 support 42 percent debt-to-GDP ratio? Possibly. It

8 may have an impact on the credit rating of the

9 province, but is it going to -- would it be a, you

10 know, a calamity for the province? Likely not. But

11 it's still a consideration that -- that should be taken

12 into account.

13 So -- I mean, your basic question that -

14 - that you opened with was, Does debt matter? And I

15 think at the margin debt does matter. But, you know,

16 the -- the analysis that we went through to try and put

17 it into context does -- do any of the levels of

18 projected debt present an unacceptable risk to the

19 province? It doesn't appear so when you go through

20 this analysis.

21 Does one (1) plan offer more of a risk,

22 relatively speaking, compared to other plans? Yes, you

23 can make those kinds of judgments that one (1) presents

24 slightly more risk than another plan. But the risks

25 are all relatively remote, because a whole -- there has

1 to be a confluence of negative factors happening for
2 any of those risks to become real, to be actualized.
3 But it's -- it's not a black or white
4 question.
5 MR. ANTOINE HACAULT: Thank you very
6 much. Does it make a difference that under these
7 assumptions that we've just made that Manitoba's at 20
8 billion and Hydro's about -- is -- is over half, it's
9 close to 30 billion? It's -- it's all Manitoba debt,
10 but 30 billion relates to Hydro and 20 billion is tax
11 supported.
12 MR. PELINO COLAIACOVO: Well, I -- I
13 think the other thing to recall is that even in a very
14 negative scenario Manitoba Hydro will still be
15 producing revenue. It may produce less revenue than
16 ideally you'd want it to, but it will still be
17 producing revenue.
18 So it would never be fair to assume that
19 the entire debt of Manitoba Hydro would land on the
20 books of the province. The risk is only that in an
21 extreme situation a fraction of Manitoba Hydro's debt
22 would land on the books of the province.
23 So, you know, the total debt is very
24 much a limiting and calamitous case. It's -- it's not
25 anything that you -- that -- that would reasonably,

1 under almost any circumstances, be expected to occur.
2 So, you know, if -- if, for whatever
3 reason, a fraction of Manitoba Hydro's debt were to be
4 considered stranded by credit rating agencies or
5 capital market analysts, it would be a portion of the
6 debt, never the whole amount.
7 MR. ANTOINE HACAULT: Okay. And I'm
8 going to go to two (2) other references in the evidence
9 to maybe help us better understand what you're talking
10 about at a conceptual level.
11 And in MIPUG-1, at line 19, the self-
12 supporting issue is discussed.
13 And at lines 21 and 22 you give an
14 example of where you say Manitoba Hydro might not be
15 perceived to be financially self-supporting in the
16 scenario of a prolonged drought. When you talk about
17 scenarios where there could be a risk of perception,
18 because markets are perception, not necessarily
19 anything else, is that -- does that continue to be your
20 view, that a prolonged drought might be something that
21 could cause a perception in the markets which might
22 change the province's credit ratings?
23 MR. PELINO COLAIACOVO: Oh, I think
24 that's -- that's right. And if that were to occur in
25 some future scenario where there is a very severe and

1 prolonged drought and Manitoba Hydro found itself in
2 financial distress, then capital markets would come to
3 a conclusion that the government is supporting a part
4 of their business and, therefore, some fraction of
5 Manitoba Hydro's debt would be ascribed to be tax
6 supported. I think that is how it would actually play
7 out if such a disastrous event were to occur.
8 MR. ANTOINE HACAULT: But -- but can't
9 Manitoba Hydro just raise rates, or is that tied in
10 somehow to the elasticity of what happens to industry,
11 and et cetera?
12 MR. PELINO COLAIACOVO: I think --
13 MR. ANTOINE HACAULT: Is that why
14 you're coming to this conclusion?
15 MR. PELINO COLAIACOVO: I think that's
16 very much the case. You know, the ability to raise
17 rates can't be considered in -- in isolation. There
18 may be a legislative ability or a regulatory ability to
19 raise rates, but that has consequences. And if the
20 consequence of dramatically raising rates is to drive
21 business out of Manitoba, is that realistically going
22 to be done? Or would it, from a public policy
23 perspective, make sense for the province to support
24 Manitoba Hydro for a period of time during drought
25 conditions?

1 I mean, it -- it would be a reasonable
2 public policy response gauged against the cost of doing
3 so. And -- and that's all we're really talking about
4 in -- in this discussion of risks, that -- that in a
5 prolonged drought environment the government would make
6 choices, as governments do; it's -- it's entirely
7 within the bounds of expectation.
8 MR. ANTOINE HACAULT: Okay. Thank you.
9 Now, you've given one (1) example in some of the
10 answers to interrogatories and talked about it off the
11 -- the record, sir, the Ontario example of Darlington
12 Nuclear. That's in CAC IR-6, at page 2, lines 1 to 5.
13 This was a facility in Ontario that ran
14 into cost overruns, correct?
15 MR. PELINO COLAIACOVO: Dramatic
16 capital cost overruns in its construction, yes.
17 MR. ANTOINE HACAULT: Okay. And who
18 ended up footing the bill? Was it the province who
19 footed the bill or was it the ratepayers?
20 MR. PELINO COLAIACOVO: Technically,
21 the ratepayers are in fact still supporting footing the
22 bill. The stranded debt continues to exist. And I
23 believe the latest schedule is that the stranded debt
24 will be, quote/unquote, "paid off" about 2018, which is
25 twenty-five (25) years after the completion of

1 construction of Darlington.

2 The practical mechanism was that at --

3 at the time of reorganization of Ontario Hydro, the

4 company had about $40 billion of outstanding debt.

5 When it was broken up into parts, approximately $25

6 billion of the debt was apportioned to the various

7 resulting companies that -- that were spun out of it.

8 The remaining approximately $15 billion of debt was put

9 into a stranded fund. Like Manitoba Hydro, Ontario

10 Hydro was the beneficiary of a provincial government

11 guarantee. So when all of that reorganization took

12 place, the $40 billion was actually a liability of the

13 province.

14 At the time, it did not affect Ontario's

15 credit rating, because at the time Ontario had

16 relatively minimal provincial debt of its -- tax-

17 supported debt. And the province was capable of

18 supporting that additional burden if it needed to. And

19 so Ontario's credit rating was not affected by that

20 whole process of reorganization.

21 And then the stranded debt continued to

22 accrue interest at the same time as a special charge

23 was imposed on ratepayers to pay it off. And it --

24 it's been slowly amortized. As I said, now here we are

25 in -- in 2014 and it's still not paid off yet, but it's

1 expected to finally be paid off in four (4) or five (5)
2 years.
3 MR. ANTOINE HACAULT: Thank you for
4 that. Now, I take you to pages 27 and 28 of your
5 evidence, because I want to try and fit this discussion
6 that we've had into the conclusions and -- that you've
7 made in your report on various issues that the
8 government may want -- want to take into consideration.
9 And we see the heading at line 8, "Minimize Risk of
10 Default on Guaranteed Debt."
11 Now, given Ontario and the fact that
12 when they had a bad stranded asset, just flipped it to
13 the ratepayers and it didn't affect their credit
14 rating, why is this an issue for the -- or should it
15 be, in your view, an issue for the Province of
16 Manitoba?
17 MR. PELINO COLAIACOVO: Well, if -- if
18 the events of 1993 to '8 took place in Ontario today as
19 opposed to taking place in the period 1993 to '98, it's
20 quite possible that the impacts on Ontario would be
21 much more severe. Ontario's credit rating has already
22 suffered a two (2) notch decline in the last five (5)
23 to seven (7) years because of economic challenges in
24 the province. And it's widely considered that Ontario
25 is on a fragile footing with its credit rating today as

1 it is.

2 As I noted earlier, as of last year,

3 Ontario's tax-supported debt was already at 42 percent

4 of GDP. So it very much depends on broader

5 circumstances, whether the risk is manageable or not

6 manageable. So the only question is a question of

7 prudency. If some steps could be taken to make risks

8 more manageable, they should be considered. They may

9 not necess -- necessarily be done, but they -- they are

10 cert -- it's certainly worth considering whether

11 prudent steps could be taken.

12 MR. ANTOINE HACAULT: Okay. Now, if I

13 take you back to the numbers that we had before adding

14 the 20 billion, and that's assuming that there's no

15 deficits going forward, plus another 30 billion for the

16 money the province is going to borrow for Hydro, it's

17 the highest net debt; we're around 50 -- 50 billion on

18 GDP of 70 billion or so. To my math that's about 70

19 percent.

20 And that's why I was asking you, does it

21 start to make a difference? If Hydro's at the rates

22 where they are but we get into debts in the range of 70

23 percent of GDP, does it make a difference?

24 MR. PELINO COLAIACOVO: Were the total

25 debt of Manitoba Hydro ever to be perceived as being a

1 direct tax liability, then in the case that you are
2 suggesting, probably it would make a difference.
3 However, that would have to be the entire projected
4 debt of Manitoba Hydro. And that wouldn't actually
5 make sense, given that Manitoba Hydro, even under the
6 most challenging conditions, would still have revenue
7 of its own which would be supporting a portion of that
8 debt. So it's -- it would never be the entire $30
9 billion.
10 MR. ANTOINE HACAULT: And might I
11 suggest to you, sir -- I'm playing the devil's advocate
12 here -- it's got a couple assets that produce revenue.
13 Is that also fair?
14 MR. PELINO COLAIACOVO: Absolutely.
15 MR. ANTOINE HACAULT: It's not only its
16 ability to earn the revenue, but all the assets that it
17 owns, all the bricks and mortar.
18 MR. PELINO COLAIACOVO: That's correct.
19 MR. ANTOINE HACAULT: Now, the one
20 thing that you said yesterday that -- in this area also
21 was that long-term relief of certain government
22 charges, like capital tax and the water rentals, might
23 be perceived by the markets that Manitoba Hydro is not
24 self-supporting.
25 MR. PELINO COLAIACOVO: That's correct.

1 MR. ANTOINE HACAULT: Now, let me
2 explore that a bit with you. Hydro's evidence is,
3 well, it has a fair amount of room to increase rates.
4 It really -- you know, it's always been self-
5 supporting. And actually the evidence of Manitoba
6 Hydro on a number of occasions was, Don't even suggest
7 that. Mr. Rainkie gets very, very upset if you suggest
8 that Manitoba Hydro will not be self-supporting.
9 In the context of the Corporation's deep
10 belief that it will always be self-supporting, if the
11 province reverts back to, say, half a percent on debt
12 guarantee, which was the former rate, as opposed to 1
13 percent, I'm challenging you, why would the markets
14 think that the government reverting back to, say, .5
15 percent instead of 1 percent, if it chose so at a
16 policy level, why would that affect the markets?
17 MR. PELINO COLAIACOVO: Oh, I don't
18 think it would. My comments were in the context if --
19 if all charges were lifted from Manitoba Hydro.
20 MR. ANTOINE HACAULT: Okay.
21 MR. PELINO COLAIACOVO: So most
22 provinces have water rental fees. Most provinces that
23 provide debt guarantees have debt guarantee fees. The
24 exact levels of those kinds of charges vary from
25 jurisdiction to jurisdiction. As long as it was

1 perceived to be a reasonable charge, there's no reason
2 why anyone's perception would change.
3 MR. ANTOINE HACAULT: And could I also
4 suggest to you, sir, that if the province, in its
5 wisdom, decided -- and we haven't looked at pro formas,
6 but for the numbers of years where Manitoba Hydro would
7 be in red ink and perhaps hit a drought scenario, that
8 it would forego or freeze some of those charges, that
9 that wouldn't be looked at negatively by the credit
10 rating agencies either?
11 MR. PELINO COLAIACOVO: One of the
12 points that we were trying to make in -- in some of our
13 comments in the report and in different IRs that we
14 responded to around this question was that there is no
15 black and white answer. And it's no single factor.
16 There's no single metric that you can point to to say,
17 This thing is going to change the perceptions of the
18 markets that Manitoba Hydro is financially self-
19 supporting or not.
20 Drought on its own will not be enough.
21 Decline export prices on their own might not be enough.
22 Capital cost overruns on their own might not be enough.
23 A pattern that occurs over an extended period of time
24 might well be enough, and a pattern might be made up of
25 ingredients from several different directions.

1 But it's -- it's impossible to -- to put
2 a finger on any single thing and say, That will turn
3 the tide. And at the same time, recognizing that
4 Manitoba Hydro has lots of tools on its own to respond
5 to challenging situations. It's -- it's not like the
6 Company won't react. Of course, it will, right.
7 All of this discussion is just in the
8 context of trying to identify options amongst possible
9 plans, and to add a flavour of what risks are being
10 entailed by those different plans so you can make a
11 comparative choice.
12 MR. ANTOINE HACAULT: And is it fair
13 then that your point is, given that Conawapa is an
14 opportunity merchant plant, it gets into your point
15 that there has to be a clear case why we get into that
16 as Manitobans and start taking on these risks?
17 MR. PELINO COLAIACOVO: I think that's
18 a fair point to make. We -- we've described it as one
19 (1) of several possible development opportunities. And
20 justifying continued spending of resources on that
21 opportunity is a legitimate question to ask. Manitoba
22 Hydro should have a -- a clear justification for why it
23 wants to continue spending money on that option as
24 opposed to other options, which at least, on the face
25 of some of the analysis that's been discussed here at

1 the -- at this process, some other options seem like
2 they might be more attractive.
3 MR. ANTOINE HACAULT: And the last,
4 hopefully, question relates to a different subject
5 totally. It relates to -- because you're -- you've
6 expressed some strong views on the importance of
7 transmission.
8 Can you comment on the advantages and
9 perhaps disadvantages -- I don't know if there are any
10 -- of choosing a 750 megawatt line as opposed to a 250
11 line as a transmission option?
12 MR. PELINO COLAIACOVO: Our expertise
13 is in financial flows and cashflows. It's not on the
14 physical operation of systems. I'm sure if you hear
15 from a system planner, they'll go into great detail of
16 why -- of the value and usefulness of -- of interties
17 from a system operations perspective.
18 From a financial perspective, in our
19 view export and import interties create a broader set
20 of options for value generation. There is opportunity
21 in trade, and -- and there is opportunity locked up in
22 Manitoba Hydro's storage capabilities that could be
23 usefully exploited with additional interties.
24 So from a financial perspective, that's
25 the kind of perspective that we have. A -- a 750

1 megawatt intertie is going to give you greater access
2 to market, both for import purposes and export purposes
3 and trade purposes.
4 MR. ANTOINE HACAULT: And -- and is it
5 your point, sir, that we haven't really analyzed all
6 those benefits, so we can't see them in the record the
7 way it's set up today?
8 MR. PELINO COLAIACOVO: I -- I think
9 that's true. You know, the -- for all the fact that
10 the -- that this process has -- has had to consider an
11 enormous volume of data and -- and a variety of options
12 and possibilities, there are still others, I think,
13 that are -- that are available that haven't been fully
14 explored. And -- and as I have referred back before to
15 La Capra's statements about optimization, you know, I
16 think there are optimization opportunities that are
17 likely there.
18 MR. ANTOINE HACAULT: And let me
19 perhaps just end this discussion and -- and my
20 questioning on this final example then. This kind of
21 line, for example, would enhance the opportunity of
22 industrials to participate with Manitoba Hydro in
23 benefiting from high opportunity sales.
24 If there is an opportunity at fifteen
25 (15) cents and a company was willing to forego 200

1 megawatts of capacity for a certain amount of time in
2 the energy, they could split those profits and it would
3 be beneficial for both people, couldn't it?
4 MR. PELINO COLAIACOVO: If -- if you
5 could arrange such transactions, I would commend you.
6 MR. ANTOINE HACAULT: Well, it does
7 exist. That's one (1) of the parts of the presentation
8 of the MIPUG members. Thank you very much, sir.
9 THE CHAIRPERSON: I have a few
10 questions in relation to the revenues that flow to the
11 province with respect to water rights and also with
12 respect to capital taxes. Now, you indicated that
13 there are other jurisdictions that have water revenues
14 flowing to the provincial government.
15 Can you give me an idea of -- of the
16 size and scale of those?
17 MR. PELINO COLAIACOVO: I'm -- I do
18 know that Ontario and Alberta and the maritime
19 provinces have water rental charges, as -- as does
20 Newfoundland and Labrador, the Atlantic provinces as
21 opposed to maritime provinces. I cannot give you a
22 number off the top of my head about the -- you know,
23 how much those represent in those provinces.
24 THE CHAIRPERSON: But -- but let's
25 address the policy justification for those water rights

1 and capital taxes or revenues and so on. You -- you
2 would expect that -- you know, we've had a discussion
3 around the debt guarantee fee and the justification for
4 that. And you indicated there is some basis for -- for
5 that because -- but anyway, I won't get into that
6 again. But in terms of looking to revenues that would
7 flow to the province, and looking to costs that would
8 be incurred by the Province because of the Development
9 Plan, do you see a match there?
10 Do you -- do you see that -- I mean, is
11 there a basis for justifying the kinds of water --
12 revenues that might flow to the province to -- from
13 this Development Plan?
14 MR. PELINO COLAIACOVO: The costs to
15 the province I think is -- I'm not sure I would put it
16 in that context, because I don't think any of the
17 development plans -- excuse me -- actually entail a --
18 expenses for the province, cash -- in cash terms.
19 There are risks that the province is accepting, and --
20 and the risks are in -- of different magnitudes
21 depending on -- on the plan chosen.
22 But I believe that all of the plans
23 would be net contributors to the government from the
24 perspective of cash revenues. It's just contributors
25 at different levels.

1 THE CHAIRPERSON: But the -- the
2 benefits flowing from those revenues are only part of
3 the benefits that flow to government from the
4 Development Plan. You know --
5 MR. PELINO COLAIACOVO: That's true.
6 THE CHAIRPERSON: -- the number of
7 other benefits that flow that -- some of which can be
8 quantified, some not, but, generally speaking, the
9 province benefits?
10 MR. PELINO COLAIACOVO: I think that's
11 right, with the one (1) caveat that I don't think has
12 been fully explored is the -- the costs to the
13 province's economy of rate increases that are entailed
14 in the plans.
15 And so I -- I think at the very outset
16 Manitoba Hydro made clear that there is -- the -- the
17 province will require some new generation capacity.
18 The question is: What kind of generation capacity and
19 when?
20 And the province will face higher rates.
21 The question is: Exactly how much higher and when?
22 So it's all a comparative analysis.
23 It's a relative analysis. But increased rates are a
24 drag on the economy and they have an impact on the
25 economy, particularly if those rate increases are

1 greater than rate increases that are occurring
2 elsewhere in other competitive jurisdictions. And I
3 don't think there has been, at least I have not noted
4 on the record, any macroeconomic analysis of the
5 magnitude and timing of those rate increases and the
6 impact that it has.
7 So that, broadly speaking, is a cost to
8 the government, because the government generates
9 revenue from growth in the economy. But all of the
10 other benefits that are associated with it in terms of
11 jobs and regional economic development, and -- and so
12 on and so forth, are benefits that I think have been
13 addressed elsewhere through this process.
14 THE CHAIRPERSON: Now, we've been
15 talking about water revenues and so on. But,
16 ultimately, provinces draw revenues from the utilities
17 in those provinces, some in the form of dividends,
18 other in the form of taxes, and so on.
19 Are you in a position to comment of the
20 relative importance of the draw by Man -- the
21 Government of Manitoba from Manitoba Hydro, relative to
22 what's going on in other provinces?
23 MR. PELINO COLAIACOVO: Off the top of
24 my head I -- I can't provide that. It's not actually
25 that difficult to obtain. The information from

1 different provincial governments is publically
2 available, and -- and so that kind of comparison can
3 easily be constructed.
4 THE CHAIRPERSON: I want to go back to
5 -- you know, you, at the outset in your presentation,
6 have narrowed down the -- what you consider to be the
7 more viable options, quite dramatically, down to,
8 fundamentally, the Preferred Development Plan, Keeyask,
9 and so on.
10 Would your view change, if I were to
11 tell you that the capital plan that you considered as
12 part of the Keeyask/750, was to increase by a billion
13 dollars? Would that fundamentally change your view
14 of...
15 MR. PELINO COLAIACOVO: If the base
16 estimated cost changed by a billion dollars for
17 Keeyask, it's possible that our views and conclusions
18 would change. The superiority of Keeyask to the All
19 Gas baseline is evident in the numbers and the data
20 that we reviewed. It's not clear that it's such a
21 great advantage that it couldn't be overcome, but it's
22 a question of examining the information closely.
23 If what you're suggesting is the risk of
24 a billion dollar cost overrun, that's a different
25 story. And, you know, the -- the risk of a billion

1 dollar cost overrun in fact is something that we
2 included in some of our own analysis, but that risk has
3 to be probability adjusted. And it's unlikely that on
4 a probability adjusted basis the risk of a billion
5 dollar cost overrun would be sufficient to change our
6 views.
7 If -- if Manitoba Hydro were to announce
8 tomorrow that, oops, their construction contract went
9 up by a billion dollars, yes, that would be a problem.
10
11 (BRIEF PAUSE)
12
13 THE CHAIRPERSON: I think that's all
14 the questions we have for the time being. We'll turn
15 the microphone over to you, Ms. Boyd.
16 MS. MARLA BOYD: Thank you, Mr. Chair.
17 Perhaps, we could take just a couple of minutes so that
18 I'm not asking these gentlemen questions from behind
19 them, and we'll swap with the Intervenors.
20 THE CHAIRPERSON: Let's -- let's stand
21 down then. Thank you.
22
23 --- Upon recessing at 2:06 p.m.
24 --- Upon resuming at 2:18 p.m.
25

1 THE CHAIRPERSON: I believe that we're
2 in a position to return to our proceedings. Before we
3 -- before I turn the microphone over to -- to Ms. Boyd,
4 we have a request from the panel.
5 Just after lunch Manitoba Hydro provided
6 an additional updates of the economic analysis for Plan
7 2. I understand that the economic summary tables
8 mentioned by Mr. Peters are in the process of being
9 filed. The panel would als -- would also like to see
10 the rate impacts that would result from Plan 2 both at
11 base DSM and at DSM Level 2.
12 Is that something that Manitoba Hydro
13 could provide to the panel?
14
15 (BRIEF PAUSE)
16
17 MS. MARLA BOYD: It sounds like such a
18 simple request, and yet -- my understanding is that
19 that will require a significant amount of work. It
20 requires redoing the financials. Because of the
21 changing of Keeyask it will require that they move
22 capital within those financial plans. So the estimate
23 by Ms. Carrier is that that's approximately three (3)
24 weeks worth of work.
25 The other problem is that that -- that

1 will interfere with the work that's currently being
2 undertaken, which was to analyze the pipeline load for
3 Plans 1, 5, and 14. So within the time that's
4 available here, my understanding is that we're not able
5 to accomplish both of those things.
6 So -- so in essence I suppose we can
7 leave it to the Board to decide if there's one (1) of
8 those that they prefer over the other, or -- or how we
9 best approach that.
10
11 (BRIEF PAUSE)
12
13 THE CHAIRPERSON: Let -- let us ponder
14 on that, please, if you don't mind.
15 MS. MARLA BOYD: Certainly. Thank you.
16 THE CHAIRPERSON: Ms. Boyd, I guess
17 we're prepared to go -- unless there's some other
18 matters to attend to appar --
19 MS. MARLA BOYD: I suppose the other
20 thing I could add is that the note that came to me from
21 upstairs with regard to the economic summary tables for
22 Plan 2 is that they should be able to be filed next
23 week, and they're targeting for Wednesday.
24
25 CROSS-EXAMINATION BY MS. MARLA BOYD:

1 MS. MARLA BOYD: Good afternoon,
2 gentlemen. I'm going to start with a series of short
3 snappers which I hope are short and snappy, but we'll
4 see. Beginning -- I suppose before I start, I should
5 mark Manitoba Hydro's book of documents. We -- we
6 circulated a -- a small book of documents, and I did
7 not get an exhibit number from Mr. Simonsen.
8 MR. KURT SIMONSEN: That'd be Manitoba
9 Hydro 179.
10 MS. MARLA BOYD: Thank you.
11
12 --- EXHIBIT NO. MH-179: Manitoba Hydro book of
13 documents
14
15 CONTINUED BY MS. MARLA BOYD:
16 MS. MARLA BOYD: I want to start with
17 just a couple of questions about your -- your direct
18 evidence, which was MPA Exhibit Number 4. On page 7 of
19 that evidence, you discussed the need to perform
20 analysis so as to address the interests of various
21 stakeholders, such as government or customers.
22 Do you remember that?
23 MR. PELINO COLAIACOVO: Yes.
24 MS. MARLA BOYD: And is it your
25 understanding that Manitoba Hydro performed a number of

1 different analyses: economic, financial, and multiple
2 account benefit cost analysis?
3 MR. PELINO COLAIACOVO: Yes.
4 MS. MARLA BOYD: In your view, is it
5 reasonable for Manitoba Hydro to use economics to
6 screen options to search for potential alternatives to
7 pursue, and then to follow that with other tools, such
8 as the financial or the multiple accounts analysis, to
9 consider the views of various stakeholders?
10 MR. PELINO COLAIACOVO: Yes, that's an
11 appropriate -- it's appropriate to use different tools
12 for different purposes. It's a -- a legitimate
13 methodology to follow.
14 MS. MARLA BOYD: Thank you. You stated
15 in your evidence yesterday that Manitoba Hydro's
16 seventy-eight (78) year period was -- I think your
17 words were, "simply an expression of terminal value"?
18 MR. PELINO COLAIACOVO: That's correct.
19 MS. MARLA BOYD: Would you agree that
20 for valuations of long-lived assets or for companies
21 considered as going concerns, it's common to append a
22 terminal value to the short -- shorter-termed detailed
23 analysis?
24 MR. PELINO COLAIACOVO: Absolutely.
25 MS. MARLA BOYD: And with respect to

1 slide 16 of your evidence, you noted a number of items
2 there that you considered important.
3 Would you agree that it's also important
4 for Manitoba Hydro, from a cost-of-service rate setting
5 perspective, to ensure that Manitoba Hydro maintains
6 its financial strength and its self-supporting status?
7 MR. PELINO COLAIACOVO: It's critical.
8 MS. MARLA BOYD: And you noted in your
9 response to CAC/MPA-12d today that the larger balance
10 sheet can actually be understood as a ratepayer
11 benefit.
12 Is that correct?
13 MR. PELINO COLAIACOVO: That's correct.
14 MS. MARLA BOYD: Do you recall Mr.
15 Williams discussing with you this morning that there
16 was new information on when Keeyask would be required
17 without new export contracts?
18 MR. PELINO COLAIACOVO: Yes.
19 MS. MARLA BOYD: And Mr. Williams took
20 you to slide 4 of Manitoba Hydro's Exhibit 95. He
21 suggested that the likely date for Keeyask had been
22 delayed, now in the range of 2027 to 2032.
23 Do you recall that?
24 MR. PELINO COLAIACOVO: Yes.
25 MS. MARLA BOYD: Are you aware that

1 Manitoba Hydro has testified that it's planning to
2 undertake a modified Level 2 DSM that will not include
3 the full level of DSM?
4 MR. PELINO COLAIACOVO: No, I was not.
5 MS. MARLA BOYD: If I could have slide
6 21 of Manitoba Hydro Exhibit 129-7, please?
7
8 (BRIEF PAUSE)
9
10 MS. MARLA BOYD: This slide is the
11 evidence of Manitoba Hydro as to the likely date for
12 Keeyask with no new export contracts, and it's based on
13 the most current information.
14 Looking at line 3, can you confirm that
15 the likely date for Keeyask ranges from 2026 to 2028,
16 assuming new pipeline load?
17 MR. PELINO COLAIACOVO: According to
18 this document, yes.
19 MS. MARLA BOYD: And not the 2027 to
20 2032 range that was suggested by Mr. Williams?
21 MR. PELINO COLAIACOVO: Yes.
22 MS. MARLA BOYD: You also had a
23 discussion today about qualitative versus quantitative
24 risks.
25 Do you recall that?

1 MR. PELINO COLAIACOVO: Yes.
2 MS. MARLA BOYD: And if you'd assume
3 with me for a moment a scenario in which Keeyask
4 proceeds with the 750 line, we'll come to a point where
5 there's a subsequent decision to be made on the next
6 source of generation, correct?
7 MR. PELINO COLAIACOVO: Yes.
8 MS. MARLA BOYD: And you would consider
9 that a qualitative decision to be made using judgment?
10 MR. PELINO COLAIACOVO: Absolutely.
11 MS. MARLA BOYD: What criteria would
12 you suggest should be used by the government or by
13 Manitoba Hydro when applying their judgment to that
14 decision?
15 MR. PELINO COLAIACOVO: There are a
16 whole range of considerations. I think just as this
17 process has been addressing a wide range of issues,
18 from expected rates to government revenues to impact on
19 the broader economy and the environment, as well as
20 risks relating to technology change and export markets
21 and so on, it's -- any decision to proceed with new
22 infrastructure should include a full survey of
23 potential costs, risks, and benefits.
24 MS. MARLA BOYD: The models that we've
25 looked at would inform that decision, but not make it,

1 correct?

2 MR. PELINO COLAIACOVO: I think that's

3 correct. No model in and of itself should be a

4 deciding factor, because every model prev -- provides

5 only a slice or -- or one (1) view of a -- of an issue.

6 MS. MARLA BOYD: Thank you. You made

7 mention in your testimony yesterday, in response to a

8 question about the value of the 750 megawatt

9 interconnection during a drought, to the current rules

10 which limit imports.

11 Do you recall that?

12 MR. PELINO COLAIACOVO: Yes.

13 MS. MARLA BOYD: Are you aware that the

14 10 percent limit which you referenced is for planning

15 purposes?

16 MR. PELINO COLAIACOVO: I've heard the

17 reference to it as a planning limit, yes.

18 MS. MARLA BOYD: So in other words, in

19 planning the design of the system to meet load, Hydro

20 has established a rule that no more than 10 percent of

21 a load can be met by import?

22 MR. PELINO COLAIACOVO: Correct.

23 MS. MARLA BOYD: And is it also your

24 understanding that for operational purposes, including

25 that of a drought, Hydro's imports are only limited by

1 the physical capabilities of the line?
2 MR. PELINO COLAIACOVO: That's my
3 understanding, yes.
4 MS. MARLA BOYD: And that would me that
5 if necessary, Hydro could import up to 100 percent of
6 the capability of the line?
7 MR. PELINO COLAIACOVO: Yes.
8 MS. MARLA BOYD: With respect to your
9 model -- and of course I'm not looking to obtain any
10 commercially sensitive information in the context of
11 this discussion -- but can you confirm that your model
12 is based on information obtained primarily from SPLASH,
13 from Appendix 11.4, and from Manitoba Hydro's annual
14 report?
15 MR. PELINO COLAIACOVO: That's correct.
16 And occasionally, other information that was included
17 in -- in the NFAT process, but primarily from those
18 sources, yes.
19 MS. MARLA BOYD: Is it correct that MPA
20 made simplifying assumptions about data that wasn't
21 directly available from those sources?
22 MR. PELINO COLAIACOVO: Yes, we had to
23 make simplifying assumptions in some cases because of
24 the lack of availability of detailed information.
25 MS. MARLA BOYD: And you would have

1 done that with things such as long-term debt, interest
2 payments, retirements?
3 MR. PELINO COLAIACOVO: Correct, as
4 well as some assumptions that we had to make around
5 variable operating costs associated with different
6 kinds of generation facilities and a few other
7 relatively more minor items.
8 MS. MARLA BOYD: Is it fair to say that
9 the MPA model is designed to be indicative and
10 informative in showing directional trends and providing
11 comparative results between development plans and
12 scenario assumptions?
13 MR. PELINO COLAIACOVO: Yes, it is.
14 MS. MARLA BOYD: Would it also be fair
15 to say that MPA does not have the same level of
16 understanding of Manitoba Hydro's operations or the
17 granularity in modelling that Manitoba Hydro's
18 financial results?
19 MR. PELINO COLAIACOVO: That's
20 absolutely correct, yes.
21 MS. MARLA BOYD: The model which you've
22 put forward is not designed to be used for rate setting
23 purposes.
24 Is that correct?
25 MR. PELINO COLAIACOVO: No.

1 MS. MARLA BOYD: Sorry. It is
2 Thursday. I will slowly turn to the question of
3 nominal versus real discount rates.
4 And I think you've been through this
5 already, but I just want to confirm that the discount
6 rates that you adopt at 6 percent and 10 percent are
7 nominal rates?
8 MR. PELINO COLAIACOVO: They are.
9 MS. MARLA BOYD: And if you were to
10 convert those to real rates using Manitoba Hydro's
11 inflation rate of 1.9 percent, those rates would be
12 4.02 percent and 7.95 percent, correct?
13 MR. PELINO COLAIACOVO: Correct.
14 MS. MARLA BOYD: On page 65 of your
15 report, in Figure 20, you calculated the implied Canada
16 long bond rate embedded in Hydro's weighted average
17 cost of capital, correct?
18 MR. PELINO COLAIACOVO: Yes.
19 MS. MARLA BOYD: And you calculated
20 rates ranging from 4.7 percent to 4.9 percent nominal,
21 correct?
22 MR. PELINO COLAIACOVO: That's right.
23 MS. MARLA BOYD: And you comment on
24 this rate just below that, suggesting that it was
25 common in the 1920s, the early 1930s, the 1950s, and

1 the early 1960s, and again in the last half of the
2 decade. And I take it that you're suggesting that
3 interest rates at that level are a bit of a thing of
4 the past.
5 Is that fair?
6 MR. PELINO COLAIACOVO: No. I -- I
7 think the point that I was trying to make there is that
8 historically, rates at that level have occurred in a
9 number of different economic contexts, and so they are
10 not unreasonable. It's not unreasonable to believe
11 that rates at that level would occur again.
12 MS. MARLA BOYD: You also state that
13 Hydro's 7.25 high percent high forecast was only
14 represented during the early 1970s and the early 1990s?
15 MR. PELINO COLAIACOVO: Yes. It's a
16 less common occurrence throughout history.
17 MS. MARLA BOYD: And I think I heard
18 you say today as well that bond rates have been in the
19 2 percent range only in the last couple of years?
20 MR. PELINO COLAIACOVO: In the 2
21 percent range it's been very rare in the historical
22 record, but in the last five (5) years and in a very
23 few selected instances in the 1930s and early 1950s, I
24 believe.
25 MS. MARLA BOYD: And those rates are

all nominal, again, not real, correct?

MR. PELINO COLAIACOVO: Nominal.

MS. MARLA BOYD: And you're aware that Manitoba Hydro's economic evaluations are all done in real and not nominal dollars?

MR. PELINO COLAIACOVO: I am.

MS. MARLA BOYD: Painfully. Have you had an opportunity to review Manitoba Hydro's repose to PUB/Manitoba Hydro I-165a?

MR. PELINO COLAIACOVO: I reviewed --

MS. MARLA BOYD: I'm -- I'm hoping it'll pop up.

MR. PELINO COLAIACOVO: Yes.

MS. MARLA BOYD: As opposed to this being a memory test, it should be on the screen shortly. PUB/Manitoba Hydro I-165a.

(BRIEF PAUSE)

MS. MARLA BOYD: If we could go to the second page of that response, please. Sorry, did you need a chance to read the first one?

MR. PELINO COLAIACOVO: It's okay. You can go to the table.

MS. MARLA BOYD: This is a chart of

1 interest rates. Have you had an opportunity to look at
2 before or...?
3 MR. PELINO COLAIACOVO: I recall seeing
4 this in the -- in the record, but I only went through
5 the many IRs relatively quickly.
6 MS. MARLA BOYD: Understood. Would
7 this suggest to you that periods of high interest rates
8 often correspond with periods of high inflation?
9 MR. PELINO COLAIACOVO: Generally, yes.
10 There are exceptions. Real interest rates have -- have
11 moved around. But typically, high inflation drives
12 high nominal interest rates. There are lags between
13 them, and occasionally they're going in different
14 directions. But on a broad historical basis, yes,
15 absolutely, nominal rates and inflation rates are
16 related.
17 MS. MARLA BOYD: And if you look at
18 real rates for periods -- for example, in the ten (10)
19 years from 1973 to 1982, you can see that the real
20 rates have actually been quite low?
21 MR. PELINO COLAIACOVO: Yes.
22 MS. MARLA BOYD: And they even went
23 negative in some of those high interest years, correct?
24 MR. PELINO COLAIACOVO: That's correct.
25

1 MS. MARLA BOYD: Are you able to
2 comment on the variability in the first column,
3 labelled, "Annual nominal interest rate," and would
4 agree with me that it's somewhat higher than the column
5 -- it's the third column labelled, "Annual real
6 interest rate"?
7 MR. PELINO COLAIACOVO: Yes, it is.
8 MS. MARLA BOYD: Are you aware of when
9 the Bank of Canada made an explicit poli -- policy
10 change to target inflation at 2 percent plus or minus 1
11 percent?
12 MR. PELINO COLAIACOVO: I am.
13 MS. MARLA BOYD: Is 1991 the right
14 year?
15 MR. PELINO COLAIACOVO: Thereabouts.
16 MS. MARLA BOYD: Would you agree that
17 rates since that 1991 policy change represent a
18 different paradigm?
19 MR. PELINO COLAIACOVO: I'm not sure I
20 would call it a different paradigm. There is
21 considerable variability, even in the twenty (20) odd
22 years since the policy change. There is a -- also,
23 that coincided with a fundamental change in the global
24 economy, driven by oil prices which collapsed fairly
25 dramatically and, therefore, drove inflation down

1 globally.
2 I'm not sure that I would ascribe the
3 happy benefit of lower inflation rates entirely to a
4 government -- of Bank of Canada policy change.
5 MS. MARLA BOYD: Would you agree that
6 the reasonableness of rates and the potential ranges --
7 that greater weight should be placed on that post-1991
8 period, given those changes?
9 MR. PELINO COLAIACOVO: If we were
10 talking about ten (10) or twenty (20) year forward
11 curves, then waiting to the last twenty (20) years
12 would make a lot of sense. But when we're looking at
13 models that extend for fifty (50) to seventy-five (75)
14 years into the future, I'm not sure having that waiting
15 there actually is a reasonable thing.
16 MS. MARLA BOYD: This morning you had a
17 discussion with Mr. Williams regarding the embedded
18 return on equity. And you postulated that it
19 represents the present value of changes to retained
20 earnings, but you also stated that you didn't fully
21 understand what Hydro meant by the term.
22 Did I sort of characterize your evidence
23 correctly there?
24 MR. PELINO COLAIACOVO: That's correct.
25 MS. MARLA BOYD: Would you accept that

1 Manitoba Hydro sets its -- its rates to recover costs
2 and achieve its financial targets?
3 MR. PELINO COLAIACOVO: Yes, it does.
4 MS. MARLA BOYD: And financial returns
5 in excess of the cota -- cost of debt essentially
6 represent profits, or net income?
7 MR. PELINO COLAIACOVO: Yes.
8 MS. MARLA BOYD: And that the 75:25
9 debt-equity target, 25 percent of Hydro's capital
10 structure has no actual financing cost associated with
11 it?
12 MR. PELINO COLAIACOVO: I'm not sure
13 that I agree with the -- the notion that there's no
14 financing cost associated with it. The 25 percent
15 retained earnings on Manitoba Hydro's balance sheet
16 comes from ratepayers. And so while there is no direct
17 Manitoba Hydro financing cost in the sense of debt
18 interest due on that, it actually comes out of
19 ratepayers, who have a notional financing cost attached
20 to providing that funding to Manitoba Hydro.
21 MS. MARLA BOYD: And for the purpose of
22 the Manitoba Hydro statements, there's no interest
23 costs --
24 MR. PELINO COLAIACOVO: For the purpose
25 of Manitoba Hydro statements, there's no interest to

it.

MS. MARLA BOYD: And that net income could be used to contribute to retained earnings?

MR. PELINO COLAIACOVO: That is retained earnings, yes.

MS. MARLA BOYD: And all of the net income not required to make contributions to retained earnings could be used to lower rates for customers, correct?

MR. PELINO COLAIACOVO: By definition, because Manitoba Hydro is structured as a cost-of-service company, all of its retained earnings are invested in capital, which are -- are used for the benefit of providing service to ratepayers.

(BRIEF PAUSE)

MS. MARLA BOYD: To the extent the financial target is achieved, we wouldn't be using retained earings. We'd be returning them in rates, correct? We wouldn't continue to contribute to retained earnings.

MR. PELINO COLAIACOVO: To the extent that the -- the equity ratio target and other financial targets are achieved, you wouldn't be requesting rate

1 increases. I think that's -- that's really how it
2 works. So by avoiding rate increases, it's a benefit
3 to ratepayers.
4 MS. MARLA BOYD: And if that were done,
5 then the rate of return on equity actually achieved or
6 measured would be less than the weighted average cost
7 of capital and not the 3 percent over debt, correct?
8 MR. PELINO COLAIACOVO: Absolutely.
9 The -- this goes to the issue that I tried to address
10 yesterday about why a return on equity is not a
11 sensible measure for the performance of Manitoba Hydro.
12 It -- in a cost of -- nominally speaking, Manitoba
13 Hydro has equity, but it's not a return-maximizing
14 enterprise. So measuring return on equity in the
15 context of the economic structure of Manitoba Hydro
16 doesn't really make sense.
17 MS. MARLA BOYD: I take it from that
18 you haven't calculated a return on equity for many of
19 Manitoba Hydro's financial projections?
20 MR. PELINO COLAIACOVO: No, because, as
21 I said, it -- it -- the objective of Manitoba Hydro is
22 not to maximize its return on equity. It's not
23 constrained in the maximization of its return on
24 equity. Its objective, in fact, is to reduce its
25 return on equity. So why measure it?

1 MS. MARLA BOYD: Would you accept that
2 the return on equity in Plan 14 averages less than 4
3 percent over fifty (50) years while achieving the
4 Corporation's financial targets?
5 MR. PELINO COLAIACOVO: It's quite
6 possible that it does. I did not attempt to measure
7 it, no.
8 MS. MARLA BOYD: And if that were the
9 case, would you accept that that difference represents
10 costs not being transferred to ratepayers?
11 MR. PELINO COLAIACOVO: Yes.
12 MS. MARLA BOYD: In effect, that would
13 be a real rate benefit to ratepayers?
14 MR. PELINO COLAIACOVO: Considered --
15 it's a benefit to ratepayers of the economic design of
16 Manitoba Hydro. So if the alternative being considered
17 was a full rate-regulated utility that submitted
18 profits to a shareholder, then the difference being
19 calculated is the difference between Manitoba Hydro as
20 it's currently organized and Manitoba Hydro organized
21 as a profit-making, rate-regulated enterprise.
22 But I'm not sure what relevance that has
23 to a choice of development plans. And -- and, as I
24 said earlier, I -- it was not clear to me from a review
25 of the undertaking how it -- it related to ratepayers.

1 Because you could do the same exercise with respect to
2 different development plans and say, Well, if Manitoba
3 Hydro was a rate-regulated utility achieving a 9
4 percent return on equity year in and year out, it would
5 have higher rates. And that would be true regardless
6 of which development plan was pursued.
7 But we're not discussing the org --
8 economic organization of Manitoba Hydro; we're just
9 trying to choose between development plans. So again,
10 I wasn't certain what the relevance of the measurement
11 was.
12
13 (BRIEF PAUSE)
14
15 MS. MARLA BOYD: The -- in comparing
16 between the development plans, the additional return
17 over the cost of debt would be the comparator in this
18 case, correct?
19 MR. PELINO COLAIACOVO: In my mind, the
20 -- the only relevant consideration is the expected
21 domestic rate revenue that's achieved over time.
22 That's what ratepayers actually perceive to be
23 important to them.
24 The financial statement returns of
25 Manitoba Hydro may vary between one (1) plan and

1 another plan, but those metrics actually -- I don't
2 believe are important to ratepayers. They may be
3 important to government. They may be important guar --
4 they may be important issues with respect to the
5 financial health of the enterprise. But to ratepayers,
6 I don't think a discussion of the calculated return on
7 equity is actually important.
8 MS. MARLA BOYD: To the extent that it
9 impacts the rates that customers are requested to pay,
10 you'd agree it's important, correct?
11 MR. PELINO COLAIACOVO: Yes, but I
12 think you could measure -- you can calculate and
13 measure those directly without recourse to the -- the
14 financial statement results of Manitoba Hydro over
15 time, because those financial statement results include
16 export revenues, which domestic ratepayers are not
17 paying. So it's hard to get from one calculation to
18 the other.
19 MS. MARLA BOYD: Thank you. Starting
20 on page 64 of your evidence, you have reviewed Manitoba
21 Hydro's cost of capital, including its projected cost
22 of long-term debt and an imputed cost of equity.
23 Manitoba Hydro was using a real weighted average cost
24 of capital of 5.05 percent in its initial filing.
25 And you've laid out there as it was

1 built up with the long-term Canadian rate of 6.3
2 nominal, the equity adder of 3 percent, less inflation
3 of 1.9 percent, correct?
4 MR. PELINO COLAIACOVO: That's what we
5 estimated at the time. As I under -- as I discovered
6 after the fact, you used slightly different numbers in
7 terms of the Manitoba -- the size of the Manitoba
8 spread over the Canadian long bonds and so on. But
9 it's -- that's all in the realm.
10 MS. MARLA BOYD: Are you aware that
11 Manitoba Hydro provided an August 2013 update to its
12 weighted average cost of capital in Chapter 12 of its
13 NFAT submission?
14 MR. PELINO COLAIACOVO: Yes.
15 MS. MARLA BOYD: So you're aware that
16 the weighted average capital cost is now 5.4 percent
17 real?
18 MR. PELINO COLAIACOVO: Yes.
19 MS. MARLA BOYD: And the underlying
20 cost of Manitoba Hydro's debt in that revised weighted
21 average cost of capital is 6.75 percent nominal?
22 MR. PELINO COLAIACOVO: Yes.
23 MS. MARLA BOYD: So with the 3 percent
24 premium, that would be an imputed cost of equity of
25 9.75 percent, correct?

1 MR. PELINO COLAIACOVO: Yes.
2 MS. MARLA BOYD: On page 66 of your
3 evidence, you suggest that Hydro's cost of equity is
4 too low, and you make reference to the 2009 Ontario
5 Energy Board ruling.
6 Do you recall that?
7 MR. PELINO COLAIACOVO: Yes, the -- the
8 document that we referred to was a report of the board
9 that was prepared through a -- a policy process. And
10 they serv -- included in that report are submissions
11 from a number of different experts on cost of capital
12 and equity premiums. The submissions to -- to that
13 process included North American-wide reviews over a
14 long period of time of the costs of capital that have
15 been evident from the market. And at the end of it,
16 the board came out with a summary view, which we
17 quoted.
18 MS. MARLA BOYD: And that's been
19 updated from time to time, correct?
20 MR. PELINO COLAIACOVO: I don't believe
21 they've gone through that process again since then.
22 They take a formulaic approach every year in adjusting
23 the rates, based on my --
24 MS. MARLA BOYD: I should have been
25 more specific in my question. My question was that

1 it's been updated in accordance with the formula?
2 MR. PELINO COLAIACOVO: Right.
3 MS. MARLA BOYD: So we've included at
4 Tab 2 of our book of documents the current year.
5 And at the bottom of page 3 of the book
6 of documents, which is the first page in that tab, you
7 see that the approved return on equity resulting from
8 the OAB ruling for this year is 9.36 percent, correct?
9 MR. PELINO COLAIACOVO: Yes.
10 MS. MARLA BOYD: And if I could ask you
11 just to turn over a couple of pages, the Alberta
12 Utilities Commission decision is also there?
13 MR. PELINO COLAIACOVO: Yes.
14 MS. MARLA BOYD: And it sets out their
15 generic return on equity of 8.75 percent in bullet 8?
16 MR. PELINO COLAIACOVO: Yes.
17 MS. MARLA BOYD: Are you familiar with
18 that?
19 MR. PELINO COLAIACOVO: Yeah.
20 MS. MARLA BOYD: So you'd agree that
21 the 9.75 percent cost of equity incorporated into
22 Hydro's economic analysis exceeds actually both the
23 approved ROEs for Ontario and Alberta?
24 MR. PELINO COLAIACOVO: I would caution
25 that both the Ontario and Alberta regulatory decisions

1 that you're referring to are for wires-exclusive
2 companies. So the Ontario rates apply exclusively to
3 distribution wires companies. And the Alberta rates, I
4 believe, also apply only to distribution, though they
5 may apply to transmission.
6 In Ontario there's a separate rate for
7 transmission. There's also a third rate that applies
8 to the regulated utilities -- the regulated assets of
9 Ontario Power Generation. And I believe, in fact, they
10 subdivide OPG's rates between nuclear facilities and
11 water power based facilities. So there are different
12 rates, capital structures and rates, that apply to
13 those assets. It's -- this particular rate doesn't
14 apply across the board to all the different assets in
15 Ontario.
16 MS. MARLA BOYD: Can we just flip back
17 to page 3 of the book of documents? Up at the top, the
18 letter is addressed to all licensed electricity
19 distributors and transmitters. And it includes Ontario
20 Power Generation, Inc.
21 Would that suggest to you that this is
22 the -- the appropriate rate for Ontario Power
23 Generation?
24 MR. PELINO COLAIACOVO: It's not. For
25 Ontario Power Generation's regulated generation assets,

1 this is not the rate that applies.

2 MS. MARLA BOYD: And are you aware of

3 what the rate is?

4 MR. PELINO COLAIACOVO: My recollection

5 is that the nuclear rate is the highest of the three

6 (3) rates, but there's also a lower equity portion in

7 the capital structure. In -- for distribution

8 companies in Ontario, it's a 60 percent debt/40 percent

9 equity split in the capital structure. My recollection

10 is that for nuclear it's 50/50, and the equity rate is

11 actually higher for nuclear.

12 So it -- it does -- they are actually in

13 process right now with Ontario Power Generation on a

14 new rate for them. That process has been going on for

15 the last six (6), eight (8) months, a year, and hasn't

16 completed. So they'll -- they'll have new rates for

17 them when that's done. But there are differences

18 between the wires and the generation rates.

19 MS. MARLA BOYD: Thank you.

20 MR. PELINO COLAIACOVO: If there's one

21 (1) thing that I could point out, based on your

22 document on page 5. I would note that the Canada long-

23 bond forecast in step 3 that the Ontario Energy Board

24 uses is 3.396 percent. And the -- the final return on

25 equity that they use is 9.3 percent, which is a nearly

1 6 percent spread.
2 And as I had referred to in the -- in
3 the report, the -- the target spread at the time in
4 2009 was five (5). And they're actually here at over
5 5.9 percent, because I was quoting the spread between
6 the long Canada bond and the equity rate.
7
8 (BRIEF PAUSE)
9
10 MS. MARLA BOYD: Appendix 11.2 will
11 show you that the long bond -- long Canada bond
12 forecast of Manitoba Hydro is actually similar to the
13 one (1) used in Ontario, correct?
14
15 (BRIEF PAUSE)
16
17 MR. PELINO COLAIACOVO: Would it be
18 possible to look at it? I -- I honestly don't remember
19 the...
20 MS. MARLA BOYD: It's Appendix 11.2,
21 page 1 of 3.
22
23 (BRIEF PAUSE)
24
25 MS. MARLA BOYD: Do you see about

1 three-quarters (3/4s) of the way down, our long-term
2 rate, three point eight-five (3.85).
3 MR. PELINO COLAIACOVO: Well, that's
4 the US long-term rate, but the Canadian long-term
5 rate's listed there at four point one-five (4.15). And
6 -- and that is for 2013. So I believe the -- that's
7 not actually the rate that is included in the weighted
8 average cost of capital that was on the -- that --
9 that's included in the calculation.
10
11 (BRIEF PAUSE)
12
13 MS. MARLA BOYD: I think you're
14 correct. It's the 2019 rate.
15 MR. PELINO COLAIACOVO: Yeah.
16 MS. MARLA BOYD: I just want to turn
17 for a minute to your high range of discount rate being
18 the 10 percent nominal.
19 Assuming that Hydro -- Manitoba Hydro
20 cost of debt of 6.3 percent, are you able to advise as
21 to the imputed return on equity inherent in the 10
22 percent discount rate?
23 MR. PELINO COLAIACOVO: So in choosing
24 the 10 percent discount rate, we were accepting the
25 fact that inflation was going to be in the range of 1

1 to 3 percent on that. It -- it's not an exact science,
2 because, as -- as we noted, we chose the discount rate
3 based on time value of money, not based on an imputed
4 weighted average cost of capital.
5 So we're trying to address a perception
6 issue on the -- from the perspective of stakeholders.
7 And in -- in choosing a 6 percent and a 10 percent
8 rate, we were trying to gain an understanding of what a
9 stakeholder that had a higher cost of money versus a
10 stakeholder with a lower cost of money, how they would
11 perceive the options and whether the stakeholder's view
12 on the -- on the time value of money would change their
13 support for one option versus another option.
14 In large measure, we didn't find that
15 that range of discount rates altered the rank ordering
16 of many of the plans. That was the purpose of taking -
17 - of doing the analysis, was to see whether the rank
18 ordering of the plans was sensitive to the time value
19 of money.
20 And within that range that -- of 6 and
21 10 percent, which we thought relatively reasonable,
22 given the different weighted average cost of capital
23 that were used in the analysis, it -- it didn't
24 actually change the rank orderings very much, which was
25 the purpose of doing the analysis in the first place.

1 MS. MARLA BOYD: Would you accept,
2 subject to check, that assuming the 6.3 percent cost of
3 debt, that that would imply a return on equity of 21.1
4 percent?
5 MR. PELINO COLAIACOVO: I'd have to see
6 that calculation.
7 MS. MARLA BOYD: I can tell you I
8 didn't do it. Are you able to make such a calculation?
9 MR. PELINO COLAIACOVO: I think the --
10 the issue of the 6 to 10 percent range, the -- it comes
11 down to a series of assumptions about inflation and
12 interest and -- and cost of money. So, you -- you
13 know, we can do the back calculation and -- to -- to
14 get a sense of what the -- the time value of money is
15 represented by those two (2).
16 Clearly, the 10 percent is going to be a
17 high time value of money. In one (1) of our IRs we
18 refer to some economic literature about consumer
19 surveys -- consumer analysis that's been done of
20 spending patterns by different classes of consumers
21 and, from their spending patterns, the imputed cost of
22 money that those consumers exhibit. Those econometric
23 studies show costs of money for consumers ranging
24 anywhere from a low of 5 percent to a high of 50
25 percent, depending on the class of consumer.

1 So in our minds, in choosing a 10
2 percent discount rate as the high end, we're actually
3 being relatively conservative with respect to the full
4 range of possible costs of money that have been
5 displayed within the economy by different stakeholders.
6 MS. MARLA BOYD: And that -- that
7 conservative calculation would result in a return on
8 equity of 21.1 percent, correct?
9 MR. PELINO COLAIACOVO: I'd have to
10 look at -- at the calculation that you're using to come
11 to that conclusion.
12 MS. MARLA BOYD: So if you took 25
13 percent of twenty-one point one (21.1) and 75 percent
14 of six point three (6.3), you'd get ten (10), correct?
15 MR. PELINO COLAIACOVO: Quite probably.
16 MS. MARLA BOYD: Okay. Thank you. I
17 just want to spend a couple of minutes looking at your
18 response to PUB/MPA I-27.
19 On page 16 of that response, you make
20 reference to implied stranded debt.
21 MR. PELINO COLAIACOVO: Can I ask if --
22 before you go here, has this been posted? Because to -
23 - to the best of our knowledge, we weren't even sure if
24 this had passed the CSI test or not.
25 MS. MARLA BOYD: It was included in Mr.

1 Peters's book of documents back at PUB Exhibit 58-4.
2 MR. PELINO COLAIACOVO: Okay.
3 MS. MARLA BOYD: It did, in fact, pass
4 the CSI test, so we can discuss it to that extent
5 certainly here.
6
7 (BRIEF PAUSE)
8
9 MS. MARLA BOYD: Are you able to pull
10 it up out of the PUB book of documents? Fifty-eight
11 four (58-4).
12
13 (BRIEF PAUSE)
14
15 MS. MARLA BOYD: Are you okay to have a
16 look at this yet? You've made a reference in this
17 response, and I'm looking at lines 1 to 5 on page 16,
18 that implied stranded debt requires careful
19 explanation. You've noted there that:
20 "This is simply a mathematical
21 calculation, not an expression of
22 financial judgement."
23 Is that correct?
24 MR. PELINO COLAIACOVO: Yes.
25 MS. MARLA BOYD: Could you explain what

1 is meant by, "simply a financial" -- sorry, "simply a
2 mathematical calculation"?
3 MR. PELINO COLAIACOVO: So Manitoba
4 Hydro's existing policy is to ensure that its interest
5 coverage ratio is one point two (1.2) times. And that
6 is calculated by adding net income and interest in any
7 given year divided by interest. It's a fairly
8 straightforward mathematical calculation.
9 What we did is in our analysis we
10 calculated the deficiency of that ratio in a wide
11 variety of situations. And wherever that deficiency
12 existed, we capitalized the amount of the deficiency at
13 the bond rates that were -- or the debt rates that were
14 included in that particular weighted average cost of
15 capital. And that would be the upper limit of
16 potentially unsupported debt that Manitoba Hydro held.
17 So it's a purely mathematical
18 calculation, and it's a theoretical upper limit, and by
19 no means is that a judgment of an actual financial
20 distress situation. It's simply one measurement that
21 was used to indicate for us -- when we were trying to
22 understand how financial distress could conceivably
23 occur, this would be a directional flag for us to look
24 at certain kinds of situations.
25 MS. MARLA BOYD: And that analysis used

1 the interest coverage ratio of one point two (1.2)?
2 MR. PELINO COLAIACOVO: That's right.
3 MS. MARLA BOYD: And did you do that
4 because that was Hydro's chosen one point two (1.2), or
5 --
6 MR. PELINO COLAIACOVO: Yes, it's --
7 it's Hydro's policy. And, so it's -- it's a legitimate
8 point to make use of.
9 MS. MARLA BOYD: And you're aware that
10 Hydro's calculation of the interest coverage ratio uses
11 an accounting net income which has non-cash items?
12 MR. PELINO COLAIACOVO: Absolutely.
13 MS. MARLA BOYD: And so if you were to
14 add back those non-cash items, such as depreciation and
15 amortization, there would be additional cashflow there
16 to meet bondholder --
17 MR. PELINO COLAIACOVO: Yeah, and we
18 also calculated -- in addition to interest coverage
19 ratio, we looked at equity ratio. We looked at
20 cashflow from operations. We looked at cashflow from
21 operations less capital expenditures. There's a
22 variety of different metrics that are covered.
23 MS. MARLA BOYD: At the interest
24 coverage ratio of one (1) or even less than one (1),
25 Hydro would still have a positive cashflow?

1 MR. PELINO COLAIACOVO: Absolutely.
2 MS. MARLA BOYD: And you're -- are you
3 aware of the testimony of Mr. Schulz and Mr. Rainkie
4 that occurred in this hearing at transcript pages 2,915
5 -- 2,912 through 2,915, that that interest coverage
6 ratio could actually go to below one (1) and as low as
7 point-eight (.8) before requiring additional
8 borrowings?
9 MR. PELINO COLAIACOVO: I don't recall
10 the exact testimony, but I certainly believe it.
11 MS. MARLA BOYD: I'm correct that
12 Morrison Park Advisors's analysis does not assume any
13 managerial intervention in situations of sustained or
14 severe water -- low water flows?
15 MR. PELINO COLAIACOVO: That's correct.
16 There's a variety of steps that could be taken by
17 Manitoba Hydro.
18 MS. MARLA BOYD: And it also doesn't
19 consider any of the operational actions that could be
20 undertaken?
21 MR. PELINO COLAIACOVO: That's correct.
22 MS. MARLA BOYD: Given your assertion
23 that financial risk arising from drought will -- will
24 adversely affect all development pan -- plans in the
25 near term -- and that's from page 54 of 56 of your

1 report -- in order to minimize this risk, would
2 Manitoba Hydro benefit from higher levels of rate
3 increases in the near term, even in wet years, in order
4 to strengthen its balance sheet?
5 MR. PELINO COLAIACOVO: Yes. That's
6 true, I think, across all of the scenarios. The
7 benefits -- the financial benefits of improving
8 Manitoba Hydro's bottom line have to be measured
9 against the cost to ratepayers. But for Manitoba
10 Hydro's financial health, definitely there would be a
11 benefit.
12 MS. MARLA BOYD: Thank you very much.
13 Those are my questions. Oh, sorry, maybe not.
14
15 (BRIEF PAUSE)
16
17 MS. MARLA BOYD: Apparently I have a
18 couple more, sorry.
19 Do you agree that water and energy are
20 Manitoba's major natural resources with profit
21 potential?
22 MR. PELINO COLAIACOVO: That's a
23 statement that's well outside of our scope. I -- I
24 couldn't comment on that.
25 MS. MARLA BOYD: Would you be able to

1 comment on whether, in your view, the Government of
2 Manitoba should always want these to be productive,
3 profit -- profit-wise, as possible?
4 MR. PELINO COLAIACOVO: I think it's --
5 I think there is a history of benefit from managing the
6 natural resource in Manitoba that is hydrology and
7 gaining export revenues from that. And, of course, the
8 Government of Manitoba should seek to manami --
9 maximize the economic -- overall economic benefits of
10 that natural resource. Exactly how that is done in the
11 future, I think, is part of the proper subject of these
12 discussions.
13 MS. MARLA BOYD: And in the vein of
14 your discussion of qualitative versus quantitative
15 benefits, if Manitoba Hydro had reasonable grounds to
16 believe that within a period of perhaps five (5) years
17 it would be able to sign several significant export
18 contracts, would your view on the viability of Conawapa
19 be different?
20 MR. PELINO COLAIACOVO: I've
21 characterized Conawapa that, in -- in my view, it is a
22 development opportunity. And like any development
23 opportunity, it may be worth spending time and effort
24 and resources to further develop that opportunity.
25 The question is whether that development

1 opportunity is more attractive than spending resources
2 on alternatives. It's not an absolute question. It's
3 a relative question. And I think that's an appropriate
4 judgment to make. It may well be worth spending some
5 additional dollars on -- on developing that
6 opportunity, but it should be justified in relative
7 terms.
8 MS. MARLA BOYD: And the level of
9 expenditure would rise or fall according to a qua --
10 qualitative judgment on the time period required to
11 develop Conawapa?
12 MR. PELINO COLAIACOVO: I think it's
13 always a qualitative judgment in the end.
14 MS. MARLA BOYD: Thank you very much.
15 I think those are now my final questions. I have a
16 couple of things to deal with just before we move to
17 the CSI, if I could. But thank you, gentlemen. I -- I
18 appreciate your answers.
19 I do have a filing to make. Manitoba
20 Hydro has Exhibit 104-1-1, which can be entered as an
21 exhibit.
22
23 --- EXHIBIT NO. MH-104-1-1: DSM Analysis Listing
24 of New Resources by
25 Development Plan and

In-service Date,
Plans 2 and 6

MS. MARLA BOYD: And given the discussion which we've had today about the -- the sophisticated treasury department that you've -- you've made reference to and -- and some of the concerns cited, I'm sure everyone will be pleased to know that Mr. Schulz had Chinese food for lunch, and on opening his fortune cookie it read:

"A financial investment will -- will yield returns beyond your hopes."

I was going to suggest that be made an exhibit, but I think we'll just leave it on the record.

THE CHAIRPERSON: Thank you, Ms. Boyd.

Mr. Peters, please?

CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. Good afternoon, Mr. Colaiacovo, Mr. Kinder. Welcome. And I have relatively few areas left to cover from what counsel have not asked you about, but please understand that no questions of mine are designed or intended to elicit CSI onto the public record.

Would that be acceptable?

1 MR. PELINO COLAIACOVO: Yes.
2 MR. BOB PETERS: And if a response by
3 Morrison Park Associates is -- or Morrison Park
4 Advisors, I'm sorry, is needed to include CSI to be a
5 full response to the panel, the please just undertake
6 to provide it through your counsel, or we can adjourn
7 the question until the CSI section which will
8 immediately follow.
9 Would that also be acceptable?
10 MR. PELINO COLAIACOVO: Yes.
11 MR. BOB PETERS: And in terms of
12 assisting the panel, the financial model that Morrison
13 Park Advisors constructed was the model on which the
14 conclusions were reached in the Morrison Park Advisors
15 report, corre -- correct?
16 MR. PELINO COLAIACOVO: That's correct.
17 MR. BOB PETERS: And why did Morrison
18 Park Advisors construct their own model?
19 MR. PELINO COLAIACOVO: The -- two (2)
20 reasons. In our view, the hydrology is a significant
21 risk in all the development plans, and we wanted to
22 understand, both in -- in terms of the full period of
23 the model and in terms of shorter periods in the model,
24 the -- the potential impact of different hydrology
25 situations on Manitoba Hydro and on its stakeholders.

1 In their own modelling, particularly
2 their own financial modelling, Manitoba Hydro chose to
3 use the financial average of a variety of hydrology
4 possibilities. And the financial average was
5 calculated in each year of their model, depending --
6 based on ninety-nine (99) different hydrology
7 possibilities.
8 Over the course of seventy-eight (78)
9 years, it's reasonable to believe that hydrology would
10 average over time. And so the purposes of calculating
11 a seventy-eight (78) year, or even a single forty-eight
12 (48) or fifty (50) year, net present value, it's
13 arguable, certainly over seventy-eight (78) years, that
14 average hydrology would occur.
15 However, because we were interested in
16 shorter-term impacts on rates, shorter-term impacts on
17 Manitoba Hydro's financial health, we wanted to
18 actually investigate what the impact of particular
19 hydrologies was. And Manitoba Hydro did not provide
20 financial models that took the perspective of high- or
21 low-impact hydrologies. And so we developed a model
22 that would actually allow us to -- to estimate the
23 financial performance of Manitoba Hydro, its cost to
24 ratepayers, its -- its revenues to government, based on
25 individual hydrology patterns in any given year.

1 It also allowed us to understand better
2 all the various financial flows to the stakeholders and
3 test the performance and the interaction between
4 hydrology and a number of the other elements that
5 Manitoba Hydro included in its scenarios.
6 Finally, by building our own model, we
7 were able to test some situations that were not tested
8 by Manitoba Hydro, including what I would characterize
9 as extra high capital costs, cost overruns that might
10 occur in the construction of a large facility that were
11 not captured by Manitoba Hydro in its analysis.
12 MR. BOB PETERS: Right. Do I take from
13 your answer that you -- that MPA was provided with
14 access to Manitoba Hydro's financial models?
15 MR. PELINO COLAIACOVO: We were given
16 outputs of Manitoba Hydro's financial models -- well,
17 not only financial models; the -- the outputs from
18 Manitoba Hydro's financial model were available
19 publically as Appendix 11.4 to their application.
20 We were also given one (1) of the
21 building blocks to their financial model, which was --
22 is referred to as their SPLASH model. And we were
23 given the full set of data on SPLASH model outputs on
24 the different scenarios that they produced. And that
25 information contains all of the detailed financial

1 results from ninety-nine (99) different hydrology
2 scenarios.
3 MR. BOB PETERS: Can you explain to the
4 panel briefly how MPA constructed its model?
5 MR. PELINO COLAIACOVO: I'm going to
6 turn that question over to my colleague, Ben.
7 MR. BOB PETERS: Mr. Kinder, welcome.
8 You've been relatively silent, so...
9 MR. BENJAMIN KINDER: Is it -- is it my
10 turn yet? Can I -- can I go?
11 MR. BOB PETERS: This is it.
12 MR. BENJAMIN KINDER: We -- we took
13 what we found on the public record, being the Appendix
14 11.4 and 11.2. We took the SPLASH outputs that we
15 received from Manitoba Hydro, which got us down to a
16 net flow-related revenue line item. And what we could
17 do with SPLASH and 11.4 is put the two (2) together.
18 So we could run the scenarios, and the
19 outcomes, and the assumptions, and the sensitivities
20 that Pelino was talking about. So I could marry the
21 SPLASH data with the 11 -- Appendix 11.4 data, put the
22 two (2) together, and then we could have a little bit
23 of, what we would say, fun with numbers. So we could
24 see if you have a good hydrology year, what does that
25 look like? If you have a bad hydrology year, what does

1 that look like? If you have capital cost overruns,
2 what does that look like?
3 So in the development, design, and
4 implementation of a financial model, you build many
5 assumptions. We call them switches. You build it into
6 Excel. You can flip a switch and you can say, we have
7 good hydrology, we have bad hydrology, we have this
8 scenario, we have that scenario, we have capital cost
9 overruns, we don't have capital cost overruns.
10 So the idea is to build a functional,
11 adaptable set of financial statements for each resource
12 plan that we looked at in twenty-seven (27) different
13 scenarios and in ninety-nine (99) different
14 hydrological patterns.
15 MR. BOB PETERS: So backing up on that,
16 you would take the ninety-nine (99) different hydrology
17 scenarios from SPLASH, each beginning in a separate
18 year, and then have to sort those into your model?
19 MR. BENJAMIN KINDER: Yeah, we would
20 take the SPLASH data that we received and we would say,
21 All right, assuming a 1912 hydrology pattern, going
22 forward beginning in model year 2015, what would that
23 look like to Manitoba Hydro? And then we could say,
24 What about a 1920 hydrology scenario, or a 1960, or
25 1980. So for the vast majority of the resource plans

1 we looked at, we chose twenty-one (21) different
2 hydrological years, even though we were provided with
3 ninety-nine (99) different hydrological years. And we
4 did that just as a -- as a sample so that we could get
5 a sense of what financial results would look like with
6 hydrology from every decade.
7 MR. BOB PETERS: How did you pick the
8 twenty-one (21) years?
9 MR. BENJAMIN KINDER: We had a few
10 criteria. I think number 1 was it's very important to
11 have a hydrological year from every decade, so we did,
12 starting with 1912. So we -- we bookended it. So we
13 had 1912 and we had 20 -- 2010. And then we made sure
14 that we had two (2) hydrological years from every
15 decade, and we attempted to space them out. And the
16 idea was to get a good sample of hydrology over the
17 full ninety-nine (99) years.
18 MR. BOB PETERS: Did you provide your
19 model to Manitoba Hydro?
20 MR. BENJAMIN KINDER: We did.
21 MR. BOB PETERS: And as a result of
22 providing it to Manitoba Hydro, did you make any
23 changes to it?
24 MR. BENJAMIN KINDER: What we did was
25 we prevented changes to the model, so --

1 MR. BOB PETERS: You locked it?

2 MR. BENJAMIN KINDER: I locked it. And
3 the reason that we did lock is not because I believed
4 that there would be a problem if I didn't. It's just
5 that we had forty (40) to fifty (50) different
6 infrastructure scenarios, twenty-seven (27) different
7 infrastructure plans, twenty-seven (27) different
8 scenarios, ninety-nine (99) different hydrological
9 years, and hundreds, literally, of assumption buttons
10 that you could change.

11 Within each infrastructure scenario,
12 there was probably over five thousand (5,000) rows of
13 Excel code for one (1) infrastructure plan, under one
14 (1) scenario, under one (1) hydrology year. It was
15 complicated. It took me quite a bit of time to come --
16 to execute and design. So we had natural hesitations
17 that if we shared that, that we wanted to make sure
18 that the other party could understand what they were
19 interpreting and what they were seeing.

20 So I felt a little hesitant in not
21 locking it, because I didn't want Manitoba Hydro to
22 draw conclusions that we couldn't necessarily support.
23 I wanted to be there when they were running their model
24 -- our model, to make sure that we were on the same
25 page.

1 MR. BOB PETERS: Were you?
2 MR. BENJAMIN KINDER: We had a chat. I
3 think it was -- what day did we fly in, Wednesday --
4 Tuesday. And they brought to my attention five (5) or
5 six (6) different pieces of information that they
6 wanted questions about. We talked for about forty-five
7 (45) minutes, and I think at the end of the
8 conversation we were basically all on the same page.
9 MR. BOB PETERS: So as a result of your
10 discussions, no changes were made by Morrison Park --
11 MR. BENJAMIN KINDER: No.
12 MR. BOB PETERS: -- to the model that
13 Morrison Park used?
14 MR. BENJAMIN KINDER: That's correct.
15 MR. BOB PETERS: And how did you
16 determine the results you were expecting mimicked
17 Manitoba Hydro's outputs?
18 MR. BENJAMIN KINDER: We would say that
19 we found a broad range of consistency. So where we
20 would select an infrastructure plan, a scenario, and a
21 hydrology that would give kind of average or reference
22 outputs, we would find that our model matched up quite
23 nicely with Manitoba. The whole point of designing the
24 model was that when you would take it away from the
25 ref/ref/ref scenarios and away from standard

1 assumptions, what would happen on the -- on the
2 margins? And that's where we'd find divergences.
3 But I don't think that was totally
4 unexpected. In fact, I think it's totally expected,
5 because that was the point of the model, was to find
6 how our modelling could be different from theirs.
7 MR. BOB PETERS: If we turn, Mr. Kinder
8 and Diana, on the screen to page 16 of 94 of MPA's
9 report, Exhibit 3, and go down, please, scroll to line
10 26 and following. And I know Mr. Hacault was on this
11 page earlier, so I won't repeat where he was.
12 But I just want the panel to understand
13 that, you know, we've talked about the -- the model to
14 some extent, Mr. Kinder. On -- perhaps on line 28 and
15 29, I'll read it in:
16 "However, these models are only as
17 accurate as the assumptions about the
18 future that underlies them."
19 You see that?
20 MR. BENJAMIN KINDER: I do.
21 MR. BOB PETERS: And at the bottom,
22 starting on lines 31/32:
23 "This means that mathematical models
24 sometimes can be capable of excluding
25 certain decision options from the

1 realm of reasonable commercial choice
2 but cannot always point to a single
3 preferred outcome among several. In
4 these cases, decisions still must be
5 made, but they must be rendered on
6 the basis of judgment."
7 I've read that correctly?
8 MR. BENJAMIN KINDER: Correct.
9 MR. BOB PETERS: And that's -- that's
10 Morrison Park's view, even with the precision that
11 you've built into the model? That there still is going
12 to be judgment needed by this panel in making its
13 decision?
14 MR. BENJAMIN KINDER: I don't know of
15 any decision that could be made without judgment.
16 MR. BOB PETERS: And you say that on
17 line 36:
18 "Commercial decisions are ultimately
19 about judgment, and judgment is
20 extremely difficult to quantify."
21 MR. BENJAMIN KINDER: I would think
22 that a financial model is your starting point. It's
23 almost never your finishing point. So it helps you
24 exclude bad options. It helps you avoid mistakes. But
25 ultimately you are given a range of alternatives, and

1 in one (1) scenario alternative A is better than
2 alternative B.
3 And standing where we are today, we have
4 no idea about what is going to happen in the future.
5 And the financial model can help us exclude paths that
6 we don't want to take. It is much -- it's a task
7 that's really not up to financial models to say, This
8 is the one. That's not what we design them to do.
9
10 (BRIEF PAUSE)
11
12 MR. BOB PETERS: When you give that
13 answer, Mr. Kinder, with respect to the financial
14 model, is that the same opinion that is held by MPA
15 respecting the financial model of Manitoba Hydro?
16 MR. BENJAMIN KINDER: It would be the
17 opinion of MPA for any financial model.
18 MR. BOB PETERS: Would it be the
19 opinion of MPA for any other metrics, such as an
20 economic analysis?
21 MR. BENJAMIN KINDER: Absolutely.
22 MR. BOB PETERS: I'd like to turn to
23 Figure 6 on page 41 of the evidence, please. And I'd
24 just like you to explain to the panel what you're
25 attempting to show in -- in Figure 6, please?

1 MR. BENJAMIN KINDER: We are attempting
2 to show the present value on a risk-adjusted basis of
3 the domestic revenue to the Manitoba ratepayer. So we
4 have five (5) development plans presented: 1, 4, 6, 12,
5 and 14, 14 being the Preferred Development Plan, 1
6 being the All Gas at a 6 percent discount rate. And
7 we've had multiple discussions today and yesterday
8 about 6 percent, 10 percent, and everything in between.
9 But assuming for this discussion a 6
10 percent discount rate, what would be the present value,
11 meaning the value today, of that stream of domestic
12 revenue that would eventuate in those plans, in those
13 scenarios over forty-eight (48) years.
14 MR. BOB PETERS: And why forty-eight
15 (48) years?
16 MR. BENJAMIN KINDER: That was the
17 financial model forecast that we received from Manitoba
18 Hydro.
19 MR. BOB PETERS: And in this -- in this
20 information you're showing the Board that Plans 4 and 6
21 with Keeyask and some level of transmission and gas
22 plants fare better than other options.
23 Is -- is that what could be taken?
24 MR. BENJAMIN KINDER: Yeah, that could
25 be a general conclusion.

1 MR. BOB PETERS: And another
2 observation is that Plans 14 and 12, which include
3 Conawapa, rank as more costly to ratepayers than Plans
4 4 and 6 that do not include Conawapa?
5 MR. BENJAMIN KINDER: On a pure,
6 present value to domestic revenue at this NPV and these
7 scenario analysis, yes.
8
9 (BRIEF PAUSE)
10
11 MR. BOB PETERS: This analysis, Mr.
12 Kinder, was based on the August 16th, 2013, filing?
13 MR. BENJAMIN KINDER: That's correct.
14 MR. BOB PETERS: It hasn't been updated
15 for the recent information?
16 MR. BENJAMIN KINDER: It has not.
17 MR. BOB PETERS: Are you in a position
18 to indicate directionally to the panel what the -- what
19 the 2014 capital cost updates and DSM information would
20 do to these numbers in relative terms?
21 MR. BENJAMIN KINDER: I would be very
22 hesitant to make a statement to that effect without
23 actually incorporating the numbers and -- and running
24 the model.
25 MR. BOB PETERS: I thought you'd say

1 that.

2 MR. BENJAMIN KINDER: Okay.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: Mr. Kinder, there's

7 been some discussion about updated information, but if

8 Morrison Park was requested by the panel to update some

9 of its information based on the latest information

10 that's available to the panel, what would be the

11 approximate timeline that Morrison Park would need to

12 do that?

13 MR. BENJAMIN KINDER: I think that we

14 would -- we'd need to take a look at how much

15 information we were -- received and what was

16 specifically asked of us. I think -- I wouldn't give

17 you an exact answer, but I would say that we would be

18 very mindful of the panel's timing on this and the need

19 to move quickly. So if we were asked to do that by the

20 panel we would move with all possible speed.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: I take from your

25 answer you were looking -- you -- I think somebody had

said earlier that you'd need the SPLASH runs from Hydro on some of their most recent financial analysis?

MR. BENJAMIN KINDER: I think we've received that.

MR. BOB PETERS: And is it in the form, or have you been able to even determine if it's been in the form that's -- that it's required for your input?

MR. BENJAMIN KINDER: No, our attention was on these proceedings. So I think one (1) of the things that we'll do when we get home is we can crack it open and we'll take a look. And I think that if it's in the same format as it was presented to us previously, that would be greatly expeditious to us achieving that result.

MR. BOB PETERS: And as greatly expeditious is that -- is that a couple of weeks, ten (10) days, three (3) weeks, a month?

MR. BENJAMIN KINDER: I think a couple of weeks is -- is quite doable.

MR. BOB PETERS: At -- on page 25 of the evidence there was a clarification that I wanted to -- while we're talking about consumer impacts. And I'm on page 25 of 94, approximately line 26. In this paragraph that's on the page on line 21, Morrison Park concludes that:

1 "Ratepayers' interests are fairly
2 straightforward to identify. They
3 want safe, reliable electricity
4 service at the lowest possible cost
5 over time."
6 And then at line 25 and 6, MPA
7 indicates:
8 "As a result, it is better to
9 formulate ratepayer interest as safe,
10 reliable electricity services at the
11 lowest possible risk adjusted cost-
12 over-time."
13 Do you see that?
14 MR. PELINO COLAIACOVO: I do.
15 MR. BOB PETERS: And when you insert
16 the words 'risk adjusted cost' what specifically is
17 Morrison Park referring to?
18 MR. PELINO COLAIACOVO: It's a
19 quantitative and qualitative assessment of the
20 variability, quantum timing of cashflows, risks, and
21 burdens distributed amongst the stakeholders in this
22 process.
23 So we would ask ourselves, you know,
24 have we incorporated hydrology correctly, have we
25 thought about the ways in which cashflows can vary,

1 have we thought about ways in which discounts rates can
2 vary, are we using the right cashflows and discount
3 rates, are we matching them correctly, are we asking
4 ourselves the right questions, have we incorporated the
5 risks' variability and volatility in our analysis?
6 So it's a package of quantitative and
7 qualitative adjustments that we would make.
8 MR. BOB PETERS: And that's a package
9 of qualitative and quantitative adjustments that
10 Morrison Park has already made in preparing its report?
11 MR. BENJAMIN KINDER: Correct.
12 MR. BOB PETERS: So we'll find -- no,
13 that's okay. I understand your answer. Thank you.
14
15 (BRIEF PAUSE)
16
17 MR. BOB PETERS: If we can turn to
18 Table 8 on page 74, please.
19 One (1) of the issues that was discussed
20 in the MPA report had to deal with the risks and the --
21 and how those risks apply to par -- across the
22 development plans, correct?
23 MR. BENJAMIN KINDER: Correct.
24 MR. BOB PETERS: Can you indicate to
25 the panel in summarizing the thoughts of -- of this

1 chart, what the -- what the risk is related to the
2 demand?
3 MR. BENJAMIN KINDER: I think the risk
4 in demand is the distribution and allocation of burdens
5 in terms of the recovery of -- of cost. So as domestic
6 demand declines, how does that affect the ability of
7 Manitoba Hydro to recover cost, and whether that needs
8 to be recovered from an external party or here within
9 Manitoba.
10 MR. BOB PETERS: Basically saying that,
11 if Manitoba Hydro cannot recover it from export
12 revenues, then the domestic ratepayer is the one that's
13 captive?
14 MR. BENJAMIN KINDER: That's my
15 understanding, correct.
16 MR. BOB PETERS: And from hydrology --
17 there's been a lot of discussion about hydrology. What
18 was the conclusion of Morrison Park respecting the risk
19 of hydrology?
20 MR. BENJAMIN KINDER: We concluded that
21 hydrology is destiny. We concluded that hydrology is
22 an extremely important variable. We agree with
23 Manitoba Hydro when they say that over a long-term,
24 average hydrology is -- is a very safe assumption
25 hydrology will revert to the mean.

1 We were concerned with shorter time
2 periods, three (3), five (5), seven (7), ten (10)
3 years, and what that might do on a cashflow profile and
4 the domestic revenue requirement in Manitoba. So we
5 wanted to assure ourselves that, given that we live in
6 the real world and that in any given year it may rain,
7 it may not, or it may not rain to a sufficient amount,
8 or water inflows to generate excess returns, that
9 Manitoba Hydro would be in a position to still satisfy
10 its obligations to its ratepayers and its
11 counterparties.
12 MR. BOB PETERS: Is it correct that
13 Morrison Park has provided an analysis of a 10 percent
14 below average flow, including historic droughts?
15 MR. BENJAMIN KINDER: Yes, that's
16 correct.
17 MR. BOB PETERS: And that was a thirty
18 (30) year scenario studied somewhere from 2029 out to
19 20 -- sorry, I think it started in 2025?
20 MR. BENJAMIN KINDER: Is that the 2015
21 to 2040 supplemental analysis?
22 MR. BOB PETERS: Correct.
23 MR. BENJAMIN KINDER: Yes, correct.
24 MR. BOB PETERS: And is it correct that
25 that scenario suggested a more favourable picture for

the All Gas and less favourable picture for the Preferred Development Plan?

MR. BENJAMIN KINDER: In certain scenarios, yes, I believe that's correct.

MR. BOB PETERS: And I think it was your colleague, Mr. Colaiacovo, who indicated that in the last twenty (20) years, Manitoba hydrology has been relatively above average.

MR. BENJAMIN KINDER: I think --

MR. BOB PETERS: Did you hear words to that effect?

MR. BENJAMIN KINDER: I think the last twenty (20) years have been about 110 percent of average, so I think we were looking for a scenario that was the negative mirror of 110 percent. So we were looking for a scenario that gave us 90 percent hydrology.

MR. BOB PETERS: And that's how you picked the 10 percent below number?

MR. BENJAMIN KINDER: Correct.

MR. BOB PETERS: And that's the premise of reverting to the mean?

MR. BENJAMIN KINDER: Yeah. I mean, I think that over any given twenty (20) years it's quite reasonable to assume that hydrology is not going to be

100 percent of the mean.

Over an extended period of time hydrology should return to the mean -- should revert to the mean. That means that, if you have twenty (20) bad years, this too shall pass, and it will revert to the mean. If you have twenty (20) good years, this too also shall pass and it will revert to the mean.

MR. BOB PETERS: So you're suggesting in that answer that following the twenty (20) years of 110 percent of average flows, Manitoba Hydro should expect twenty (20) years of 90 percent flows?

MR. BENJAMIN KINDER: No. No. I'm not suggesting that. I'm suggesting that over the long-term Manitoba Hydro should expect a hundred percent of average hydrology, which is exactly what I think they do assume.

MR. BOB PETERS: And how possible, or how probable is it that there'll be another twenty (20) years of high flows?

MR. BENJAMIN KINDER: Quite possible. I mean, in an indefinite future everything that Manitoba Hydro has experienced in the past they will experience again.

(BRIEF PAUSE)

1 MR. BOB PETERS: In terms of the
2 import-export prices, we've talked about that as well,
3 you would agree that the added capacity of Keeyask and
4 Conawapa provide for a higher upside potential for
5 Manitoba Hydro and its customers?
6 MR. BENJAMIN KINDER: We would agree.
7 MR. BOB PETERS: It also provides a --
8 a larger downside in terms of the hydrology risk?
9 MR. BENJAMIN KINDER: We would agree.
10 MR. BOB PETERS: And also for the
11 export-import prices if the -- there's higher highs and
12 perhaps lower lows in the hydraulic intensive plans?
13 MR. BENJAMIN KINDER: We would agree.
14 MR. BOB PETERS: In terms of
15 construction costs, one (1) of the risks that has been
16 mentioned when you wrote this report was a risk of cost
17 overruns, correct?
18 MR. BENJAMIN KINDER: Correct.
19 MR. BOB PETERS: And since then you're
20 aware that Manitoba Hydro has updated the capital cost
21 of both Keeyask and Conawapa, correct?
22 MR. BENJAMIN KINDER: Correct.
23 MR. BOB PETERS: Can you tell the panel
24 whether or not Manitoba Hydro's adjustment for the
25 risks of Keeyask and Conawapa is sufficient at this

1 point in time, or whether there's still concern there?
2 MR. BENJAMIN KINDER: I don't know if I
3 can speak to that.
4 MR. BOB PETERS: Did you analyze what -
5 - what the high -- what additional high capital costs
6 would do to the various plans?
7 MR. BENJAMIN KINDER: We analyzed a
8 capital cost overrun scenario where we added a certain
9 percentage amount to Conawapa at the time of its
10 construction to get a sense of what that would do to
11 the domestic revenue requirement, or domestic revenue
12 and rates, with no surprise being that -- to the extent
13 that there's capital cost overruns, it will require a
14 greater domestic revenue and ultimately greater rates.
15 We also tested Keeyask.
16 MR. BOB PETERS: Do you recall what
17 your -- your high assumptions were for Keeyask and
18 Conawapa?
19 MR. BENJAMIN KINDER: I think we looked
20 up -- up to 5 to 10 percent in capital cost overruns.
21 MR. BOB PETERS: And you were using the
22 base cases filed in...
23
24 (BRIEF PAUSE)
25

1 MR. BENJAMIN KINDER: We tested a
2 variety of scenarios, a certain set of scenarios in our
3 report and a certain set of scenarios in our responses
4 to IRs.
5 MR. BOB PETERS: Starting from the
6 premise of Manitoba Hydro's assumptions from their
7 August 2013 filing?
8 MR. BENJAMIN KINDER: Correct.
9
10 (BRIEF PAUSE)
11
12 MR. BOB PETERS: You had some
13 discussion this afternoon, as well as I think
14 yesterday, with respect to Conawapa. And we know that
15 it was in -- it's either Step 2, or was it -- it was
16 Part 2 of the -- your interpretation of the Preferred
17 Development Plan, that was where Conawapa currently
18 fits in under Morrison Park's view, correct?
19 MR. PELINO COLAIACOVO: That's correct.
20 MR. BOB PETERS: And there's also been
21 discussion about what additional steps should be taken
22 to review any decisions to proceed with Conawapa. And
23 in Morrison -- sorry, in PUB/Morrison Park First Round
24 1-30 -- sorry. PUB/Morrison Park First Round Question
25 35 was posing that -- that same question. And I want

1 to make sure the panel understands what Morrison Park's
2 advice is, in terms of what additional steps would be
3 required to make any decision to proceed with Conawapa
4 in light of the view being taken by Morrison Park as
5 presented in your direct evidence.
6 Would it be correct to say that whether
7 or not there's a further NFAT process or some other
8 review, you've listed here the factors that would need
9 to be considered as to whether or not to proceed with
10 Conawapa?
11 MR. PELINO COLAIACOVO: We've listed a
12 number of factors that we think should be addressed. I
13 don't think it's an exhaustive list. But our view is
14 that the planned expenditure of multiple billions of
15 dollars on a new facility has to be treated with
16 extreme caution and should be thoroughly reviewed.
17 This is not to say that it -- it's not
18 in the normal course of Manitoba Hydro to do that.
19 However, our perception of the Preferred Development
20 Plan was that it was in some sense requesting support
21 for that intention to proceed with Conawapa. And we
22 did not, in our review of all of the evidence, come to
23 the conclusion that there was sufficient basis today to
24 say that Conawapa is more attractive than other
25 options.

1 And therefore, you know, we would
2 recommend proceeding with caution on further
3 expenditures and -- and think that before there's any
4 sizeable expenditure a thorough review in comparison to
5 other options is required.
6 MR. BOB PETERS: In terms of other
7 options are you able to define or indicate what those
8 might be?
9 MR. PELINO COLAIACOVO: As we said in
10 the IR that's here, we think the options that should be
11 reviewed -- it -- it should be a thorough review of
12 options, including additional DSM, including gas
13 facilities, and including potentially any other types
14 of generation facilities that may become more
15 attractive, economically and technologically, by the
16 time that decision has to be taken, because the prices
17 of different forms of generation technologies are
18 always changing.
19 MR. BOB PETERS: On the next page, you
20 also indicate that the testing should be through a -- a
21 Monte Carlo modelling?
22 MR. PELINO COLAIACOVO: We made
23 comments in our report and -- and in several IRs about
24 the method of modelling and testing. What has been
25 assumed is ranges of economic and capital cost and

1 energy price variables at high, reference, and low.
2 And those were applied to extended periods of time.
3 There is a different kind of modelling,
4 referred to as Monte Carlo modelling, which actually
5 tests scenarios where the -- the prices of different
6 variables change on an annual basis according to a
7 probability curve for each individual variable. And so
8 that kind of modelling allows, arguably, a more
9 realistic perspective on the future, where prices are
10 constantly changing. Interest rates are going up and
11 down. Capital costs have a wide range of potential
12 outcomes.
13 It's clearly a kind of modelling that is
14 time consuming and challenging. But for an inte -- for
15 a resource expenditure in the multiple billions of
16 dollars, it's appropriate to undertake that kind of
17 modelling, in our view.
18 MR. BOB PETERS: That wasn't done in
19 the current situation?
20 MR. PELINO COLAIACOVO: No, it was not.
21 I believe there was references to Monte Carlo modelling
22 being used in some of the construction cost analysis,
23 but Monte Carlo modelling was not used in -- in the
24 overall analysis of the different resource plans.
25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Does that suggest then
4 that Manitoba Hydro would have to create a different
5 model, or is it something that can be...
6 MR. PELINO COLAIACOVO: There are off-
7 the-shelf modelling programs available for Monte Carlo
8 modelling, three (3) or four (4) that are commonly used
9 commercially. They would have to be adapted to the
10 particular circumstances of Manitoba Hydro.
11 Manitoba Hydro has a particular
12 challenge in its modelling because of the fact that
13 it's primarily a hydrology-based system. So there is
14 no question that using Monte Carlos to help modelling
15 coupled with hydrological variation is a daunting
16 challenge. We're not trying to minimize that. But it
17 may prove to be a useful type of analysis in the
18 future, rather than the probabilistic scenario
19 modelling that was used for the purposes of the NFAT.
20 MR. BOB PETERS: Thank you. I want to
21 turn just to page 76 of 94 and just deal with a few
22 conclusions that I wanted to -- to make sure the panel
23 understood the Morrison Park Advisors's position on.
24 In the -- at the time you wrote this,
25 this was prior to any updated information being

1 provided, and this -- this information hasn't been
2 updated as a result of that, has it?
3 MR. PELINO COLAIACOVO: No, it has not.
4 MR. BOB PETERS: And so when -- when
5 Morrison Park indicates that Manitoba Hydro's ability
6 to meet its financial targets will require increases
7 approximately two (2) times the rate of inflation under
8 all development plans is dependent on the continued
9 absence of a significant drought, does that number of
10 rate -- or that number for rate increases change as a
11 result of the updates?
12 MR. PELINO COLAIACOVO: I don't think
13 we can say for certain, but I suspect not. Manitoba
14 Hydro is at the moment quite financially robust. They
15 are projecting rate increases of -- of approximately
16 two (2) times the rate of inflation, and I don't
17 believe that the updates are significant enough to
18 change that.
19 The question is really whether the
20 updates change the relative attractiveness of the
21 different options.
22 MR. BOB PETERS: And in terms of a
23 drought impact, would the panel be correct in
24 interpreting your conclusions to be that a drought in
25 the next twenty (20) years is going to be a bigger

1 hurdle than a drought subsequent to those twenty (20)
2 years?
3 MR. PELINO COLAIACOVO: I think that's
4 definitely the case. Facing a drought while in the
5 midst of an aggressive expenditure plan would -- would
6 be a risk. Drought has the impact of reducing revenues
7 and increasing costs, which will inevitably reduce the
8 retained earnings of Manitoba Hydro and put stress on
9 its finances. And the net effect of -- of reducing net
10 income, reducing retained earning, reducing cashflows,
11 is that more debt will have to be taken on to complete
12 the construction projects.
13 After the construction projects are
14 complete, then the fact that a drought occurs and
15 cashflows may be reduced will -- should not have as
16 lasting an impact on the Company. So timing is very,
17 very important.
18
19 (BRIEF PAUSE)
20
21 MR. BOB PETERS: The last item I want
22 to talk to you about was the conclusion about an
23 extremely important intergenerational decision is
24 embedded in the choice of resource plan, and cost to
25 ratepayers will be distributed very differently over

1 time. I know in your report you provided some charts
2 and graphs attempting to show the panel that, depending
3 on the view taken, the impact on ratepayers will be
4 different over those time periods.
5 Have I got that right?
6 MR. PELINO COLAIACOVO: That's correct.
7 MR. BOB PETERS: And I'm just going to
8 pull up one (1) of those tables, if you can access it
9 quickly,
10
11 (BRIEF PAUSE)
12
13 MR. BOB PETERS: Maybe we'll start on
14 page 45 of 94, sorry about that delay, Figure 8. Can
15 you explain to the panel what you're showing on the --
16 and if we could get the page where we have both the top
17 and the bottom chart. It's not that we're going to
18 follow any particular line, I don't think.
19 But if you could describe the -- what
20 you're trying to depict to the panel, showing the All
21 Gas Plan on the top and then the Preferred Development
22 Plan on the bottom.
23 MR. PELINO COLAIACOVO: So what our
24 model -- one (1) of the outputs of the model was an
25 estimate of what the -- the path of rates over time for

1 domestic ratepayers; again, all domestic ratepayers, as
2 if there was only one (1) class, no differentiation
3 amongst classes.
4 And in constructing our model, we took -
5 - we -- we built in a rule that said rates are only
6 allowed to go up or down by a maximum of two (2) times
7 the rate of inflation, so -- with a view of ensuring
8 that Manitoba Hydro achieves its various financial
9 targets over time, its equity ratio and interest
10 coverage ratio and so on and so forth.
11 In our model, in the early years under
12 all plans, the various financial ratios cannot be
13 achieved even with rate increases of two (2) times the
14 rate of inflation. This is not a surprise, because
15 when you're pursuing a large development project and
16 spending substa -- substantial sums, it puts pressure
17 on all of your financial ratios.
18 And so in the first ten (10) or twelve
19 (12) years or so, all of the five (5) different plans
20 we examined assume that rates are going up by two (2)
21 times the rate of inflation. Depending on which plan
22 is selected, however, and depending on the hydrology
23 pattern that we examined, some plans, after about
24 twelve (12) years or so, in some hydrology situations
25 ceased to require steady rate increases on an annual

1 basis.

2 So in the top chart that's depicted on

3 the -- on the page is the All Gas Plan. And what it

4 shows is that for the first dozen years or so, it

5 doesn't matter what hydrology pattern occurs; rates are

6 going to go up by two (2) times the rate of inflation.

7 However, after a dozen years or so, if

8 it's a wet year, essentially, in Manitoba and Manitoba

9 Hydro is able to produce lots of revenue from exports,

10 then they'll have the opportunity to moderate rate

11 increases.

12 And because we tested ninety-nine (99)

13 different hydrology patterns, there's a mess of lines

14 on this page. But what it demonstrates is that, based

15 on hydrology, the range of rate increases over a twenty

16 (20) year period in the All Gas scenario, or a twenty-

17 four (24) year period, by the time you get to the

18 midpoint of the model in twenty-four (24) years, rates

19 could have increased between 60 and approximately 120

20 percent, depending on the hydrology experienced over

21 that twenty-four (24) year period, because in many

22 instances, rate increases can either cease or be

23 moderated after ten (10) or fifteen (15) years or so.

24 However, if you scroll down, there's a

25 separate chart for the Preferred Plan. And the

1 Preferred Plan requires expenditure of a lot more
2 capital, which raises debt costs, which delays Manitoba
3 Hydro's ability to moderate its rate increases.
4 So in the case of the Preferred Plan, in
5 our view there was no hydrological scenario that lead
6 to moderate rate increases for approximately twenty
7 (20) years. So the domestic customers would -- would
8 face rate increases at two (2) times the rate of
9 inflation every year for a full twenty (20) years or
10 longer. And by the -- by the time you reach the
11 twenty-fourth year of the model rates would be between
12 100 and 150 percent higher than they are at the
13 beginning of the model.
14 However, the path then changes
15 dramatically. In the case of the Preferred Plan, after
16 that point Manitoba Hydro has managed to pay off a sum
17 -- a sufficient amount of its debt principle and
18 generate a sufficient amount of export revenue that its
19 rates can actually start to decline over time. In the
20 case of the All Gas Plan, that event doesn't occur. In
21 -- in the All Gas Plan rates continue to rise beyond
22 twenty-four (24) years. So by the time you get to the
23 forty-eighth year of the model rates are very different
24 between the two (2) plans.
25 What this illustrates is the impact on

1 customers from a gener -- an intergenerational
2 perspective. In the Preferred Plan's case, customers
3 in the more distant future are going to benefit from
4 lower rates. In the All Gas Plan it's customers in the
5 nearer term future that benefit from lower rates, but
6 in the -- in the further future they are paying higher
7 rates.
8 What we didn't put on here was the
9 inflation line of 2 percent, which could be added to
10 the chart. And you'd -- you'd see that by the time you
11 get to the end of the model at forty-eight (48) years,
12 the cumulative rate increase in the Preferred Plan is
13 actually less than inflation, whereas in the All Gas
14 Plan it's higher than inflation.
15 But from a -- from a generational
16 perspective it's ratepayers at different times that are
17 benefiting from the different plans that are offered.
18 So the -- it underlies our comments about the
19 intergenerational choice.
20 Now, these cash flows, of course, are
21 only one (1) part of the judgment. Manitoba Hydro has
22 made comments about the benefits of construction, the
23 benefits of jobs, and regional development, and so on.
24 And those are also intergenerational considerations,
25 because the benefits of construction jobs and whatnot

1 apply to a certain generation of people and not others.
2 However, from the perspective or rates
3 it's very clear that the choice of a rate plan does
4 affect who benefits from low rates and when it occurs.
5 MR. BOB PETERS: All right. With those
6 two (2) in mind, I think on page 47 of 94 you interleaf
7 Plan 6 into the mix in the middle -- the middle graph,
8 correct?
9 MR. PELINO COLAIACOVO: Yes, we do.
10 MR. BOB PETERS: Can you explain how
11 Plan 6 fairs relative to the All Gas and the Preferred
12 Development Plan?
13 MR. PELINO COLAIACOVO: Plan 6 is -- is
14 essentially a middle ground between the other two (2)
15 options.
16 MR. BOB PETERS: And just to be clear,
17 Plan 6 was Keeyask in '19, Gas in '31 --
18 MR. PELINO COLAIACOVO: '31.
19 MR. BOB PETERS: -- and then the 750
20 intertie?
21 MR. PELINO COLAIACOVO: That's correct.
22 So in the case of Plan 6 rates rise steadily for
23 somewhat longer than All Gas, and then hydrology
24 asserts itself and rate increases can be moderated.
25 The rate increases don't last as long as they do in the

1 Preferred Plan. And then, essentially, rate increases
2 remain relatively flat and depend very much on
3 hydrology.
4 So they're not declining in -- in
5 nominal terms the way they are in the Preferred Plan,
6 but they're not increasing as they do in the All Gas
7 Plan either. So it -- it's essentially a middle ground
8 between the other two (2) options.
9 MR. BOB PETERS: The last one I want to
10 review is on page 50 of 94 dealing with the difference
11 in -- in load. And can you explain through the use of
12 these graphs to the panel what the impact is of
13 Manitoba load either being high load or low load?
14 MR. PELINO COLAIACOVO: So the --
15 because Manitoba Hydro is a cost of service company its
16 costs have to be covered by Manitoba ratepayers
17 regardless of the number of ratepayers or their level
18 of consumption.
19 And because most of Manitoba Hydro's
20 generation costs are not related to output, they're not
21 -- Manitoba Hydro isn't -- isn't burning more fuel for
22 the bulk of its output. It's -- it's mostly a
23 hydrological system under all the different plans. If
24 demand in Manitoba goes down, then the issue of the
25 relationship between rates in Manitoba and export rates

1 becomes very relevant.

2 If export rates are lower than domestic

3 rates in Manitoba, then a decline in consumption in

4 Manitoba actually does not shift a sufficient amount of

5 -- of the burden of Manitoba Hydro's costs, and rates

6 for ratepayers in Manitoba actually rise. So on an

7 individual level, some people who are using less power

8 will have a lower bill, but on a collective basis

9 customers are -- are bearing a significant burden and

10 rates can actually rise in the face of a -- a decline

11 in consumption.

12 However, I hasten to add that when we

13 constructed these -- these two (2) plans, export prices

14 remained the same. If -- if you look at the same

15 situation with higher export prices, then there may be

16 a difference, in -- in terms of the relationship of the

17 -- of rates and demand.

18 But in -- in the ref/ref/ref scenario

19 that was assumed here, rates in Manitoba are actually

20 higher than export rates, partly because -- and this

21 goes to a -- a comment that I made yesterday -- partly

22 because in Manitoba rates are charged on an all-in

23 basis. And a decline in demand actually affects the

24 entire cost of a kilowatt hour of electricity.

25 MR. BOB PETERS: Thank you. Mr.

1 Chairman, with that answer, those complete my questions
2 for Mr. Colaiacovo and Mr. Kinder, and I want to thank
3 them for their responses.
4 THE CHAIRPERSON: Thank you, Mr.
5 Peters. I just have a question in relation to what
6 you'd be able to do with your model, and specifically,
7 the Plan 2 which is the Keeyask/Gas.
8 Have you got the data that would allow
9 you to give us a table like this one, or a graph like
10 this one?
11 MR. PELINO COLAIACOVO: We do based on
12 the original information. And we had all of the
13 information available to us when we built these other -
14 - we built models for -- for all of the other plans.
15 However, we didn't do -- as -- as we said, there were
16 actually se -- there was data available for seven (7)
17 plans. We chose to do only five (5).
18 Part of the consideration for that was
19 the fact that it appeared to be redundant, given some
20 of the other plans that were on the table, and it was a
21 time consideration, in terms of preparing five (5)
22 versus seven (7). So we could prepare the same
23 information for Plan 2.
24 Now, in addition, the -- the new
25 information that's available, there is updated

1 information for one (1) and fourteen (14). There is
2 new information available for Plan 5, which we never
3 had before. So that is -- that is brand new. But I'm
4 given to understand from the comments of Manitoba Hydro
5 that there is not updated information available for
6 Plan 2, and that would take some time, obviously, to --
7 to get.
8 THE CHAIRPERSON: And the follow-up
9 question is in relation to what you indicated at the
10 outset in your report. And -- and namely that -- or at
11 least your presentation, namely that it's the Keeyask22
12 and the -- oh, I'm sorry, Keeyask19 and the intertie.
13 Would -- if you strip out Conawapa,
14 would you be able to generate a -- a graph like this
15 one?
16 MR. PELINO COLAIACOVO: I'm not sure I
17 understand the question, Mr. Chair.
18 THE CHAIRPERSON: Well, you're
19 suggesting that it -- it boils down to Keeyask and
20 interie -- intertie, and the Conawapa decision is one
21 that needs to be taken at a later date.
22 And I guess my question is: This kind
23 of table, could you generate that assuming that
24 Conawapa does not proceed?
25 MR. PELINO COLAIACOVO: As I understand

it, Manitoba Hydro has just provided us with SPLASH data for Plan 5, and -- and the -- on Friday they provided financial data for Plan 5. So we should be able to prepare exactly the same sort of chart for Plan 5, which includes Keeyask but not Conawapa and -- based on all of that updated information.

(BRIEF PAUSE)

THE CHAIRPERSON: I'm hesitating because I -- you know, I'm trying to -- trying to assess what you've testified -- you know, the information that you provided to us over the last couple days. And -- and, you know, fundamentally, I think what you're suggesting to us is that it -- it boils down to a decision whether to proceed or not with Keeyask, leaving aside the intertie question.

And what would you say to somebody who was suggesting to the panel that, you know: You should be looking at gas. You should be looking at wind as an option rather -- you know, just punt the decision for Keeyask and just go with an alternative which is probably more accessible, cheaper.

It -- it really is -- is it really a tradeoff in relation to paying later rather than paying

1 now, or is it fundamentally tied to the view that you
2 have that, you know, you've -- you've made a commitment
3 already, you've already gone a far distance down the
4 road, and you now are at the point where you -- you
5 pretty well have to go ahead with what you've committed
6 to already as a province.
7 MR. PELINO COLAIACOVO: I think Mr.
8 Williams asked the -- in one (1) of his questions was
9 trying to clarify whether we were suggesting that
10 somehow it would be inappropriate to not proceed with
11 Keeyask, even if there were good reasons to not proceed
12 with it. And -- and my response to that is no.
13 In fact, there is a legitimate question
14 to be asked. Should Keeyask proceed or not? I -- our
15 point was that given all of the money that's been spent
16 on Keeyask, given the commercial arrangements that have
17 been a made for Keeyask, a decision to not proceed has
18 to -- could only occur if there was very, very strong
19 evidence that not proceeding would be advantageous to
20 the ratepayer and to other stakeholders.
21 That it's not sufficient to say that
22 financial modelling, or economic modelling suggests
23 that All Gas is preferable to -- to going ahead with
24 Keeyask on some narrow basis. That the burden of
25 proof, frankly, lies on people who question the

1 decision to go forward with Keeyask, to demonstrate
2 that other options are conclusively better. If they
3 can't demonstrate that their -- their other options are
4 conclusively better, then Keeyask is the real option
5 that -- that is before the Government of Manitoba, is
6 before the NFAT process.
7 There has been some new information.
8 The cost of Keeyask has gone up. It's legitimate to
9 recalculate numbers to ensure that those -- that new
10 information doesn't change all of the analysis that's
11 happened so far to date.
12 I think on Conawapa, it's a very
13 different situation. Conawapa is a development
14 opportunity. It's a development project. I don't
15 think that there -- the burden of proof is the same on
16 Conawapa as it is for Keeyask. I think it's actually
17 incumbent on Manitoba Hydro to demonstrate that
18 Conawapa is attractive enough to just -- as an
19 opportunity, to justify more spending.
20 So that's why we made that distinction
21 that we did. It's a -- it's a burden of proof issue.
22 And on Keeyask the decision is imminent, and it's --
23 it's very serious and it has very significant
24 consequences. And therefore a judgment to not proceed
25 with it has to be made with strong evidence and strong

1 grounds.

2 And all of the financial modelling and

3 analysis that we did as part of this process suggests

4 there isn't that strong evidence and strong grounds

5 based on the data we had. And we came to the

6 conclusion, therefore, that, in our view, commercially

7 Keeyask makes sense as a project to go forward with

8 based on that analysis and information.

9 There is some new information. Will it

10 -- is it -- is it sufficient -- is it significant

11 enough to change that judgment? I'm not sure. I

12 suspect not, to be honest, based on what I've heard so

13 far, the new information that I've seen, but it's worth

14 doing the analysis if it can be done quickly and -- and

15 provided to you, I think.

16 THE CHAIRPERSON: In effect, you're --

17 the suggestion -- if you (sic) follow what you're

18 saying, basically you're saying proceed with Keeyask,

19 do the Wind/Gas/Conawapa decisions at some later date,

20 because you have a range of options. You have the

21 luxury, I guess, of -- of considering all of the

22 available options that exist, right? I mean...

23 MR. PELINO COLAIACOVO: I think that's

24 -- that's correct. And -- but, in fact, I -- I would

25 be a little stronger about that and say it's -- it's

1 not just that the decision on Conawapa can be left to a
2 later date. Yes, the decision on Conawapa can be left
3 to a later date. But I think even some care should be
4 taken on whether resources should be expended on
5 Conawapa in the meantime leading up to that decision,
6 how -- how much spending should continue to be done on
7 Conawapa before any future decision point?
8 Development of projects is -- is
9 difficult and requires expenditure, but I think care
10 should be taken to not presuppose that it's appropriate
11 to spend 'X' dollars per year developing Conawapa if
12 Manitoba Hydro's not actively considering other options
13 too. Because it's -- it's not clear that Conawapa is
14 the most attractive option for the future, so should
15 additional dollars be spent on it. And that's the
16 question that we were raising.
17 On Keeyask, as we said, the burden is
18 different.
19 THE CHAIRPERSON: Thank you very much.
20 I think that's it for now. So with that, I think that
21 -- oh, I'm sorry. Ms. Boyd...?
22 MS. MARLA BOYD: Thank you. Just
23 before we go off the public record I do have two (2)
24 additional exhibits to file.
25

(BRIEF PAUSE)

MS. MARLA BOYD: So the first one is Manitoba Hydro Exhibit 104-3-1. I'm advised it's been numbered so that if you fit it in behind 104-3 it's the additional supply and demand tables for the Plan 2 DSM analysis.

--- EXHIBIT NO. MH-104-3-1:
Additional supply and demand tables for the Plan 2 DSM analysis

MS. MARLA BOYD: It's not as much weekend reading as Ms. Ramage gave you.

The second one is Manitoba Hydro Exhibit 150 revised. It's a response to Undertaking 54 from transcript page 3,436. It's been updated.

--- EXHIBIT NO. MH-150-REVISED: Response to Undertaking 54

THE CHAIRPERSON: Thank you for that. And with that, I believe that's the end of the proceeding -- the public proceedings regarding this hearing.

1 So I will adjourn temporarily the --
2 pardon me, recess the proceedings for the time being to
3 allow the room to be reorganized and allow the people
4 who are not eligible to consider CSI to go off and
5 enjoy their weekend. So we'll take five (5).
6
7 (PANEL RETIRES)
8
9 --- Upon adjourning at 4:10 p.m.
10
11
12 Certified Correct,
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17 _____
18 Cheryl Lavigne, Ms.
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$1,319,000,000 7404:17

$1,421 7497:2

$1.4 7480:22 7481:2 7482:10 7483:2,3

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$111 7503:14

$14 7509:8

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$15.8 7508:13

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$20 7506:17 7510:25

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$45 7403:14

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$70 7507:5

$77 7507:10

$900 7437:23 7498:1 7500:12

1

1 7373:23 7395:11 7396:2 7401:20 7405:2,3,21 7414:24 7416:24 7419:18 7421:24 7430:18 7431:2 7433:12 7434:4,14 7435:24 7437:19,23 7438:18 7446:8,17,18 7447:24 7448:14,18 7449:3 7451:12 7452:6 7455:6 7457:16 7459:12 7463:20 7464:7 7468:2 7470:11,24 7476:18,21 7478:8 7483:21 7484:10,19 7488:5 7492:25 7496:9,11 7500:10,11 7512:14 7513:21,23 7517:9,12 7522:12,15 7524:19 7527:7 7529:11 7534:3,7 7540:5 7547:10 7553:25 7559:21 7560:13,21 7561:25 7563:17 7565:17 7567:24 7568:6 7575:20 7578:10 7579:13,14 7583:1 7584:4,5 7587:9 7589:19 7594:15 7603:8,24 7604:2 7607:21 7612:1 7614:8

1,400 7500:24

1,421 7500:22

1,696 7497:25

1,749,000,000 7438:4

1.2 7566:5 7567:1,4

1.319 7406:12

1.4 7482:20

1.86 7470:20

1.9 7543:11 7555:3

1:06 7491:16

10 7372:21 7379:10 7380:3,8 7385:5 7394:13 7423:23 7427:19 7428:18 7441:13 7454:12 7455:1,18,25 7456:4 7458:20,23 7459:5 7460:16,17,18,23 7465:16 7468:3 7476:1,3 7496:21 7507:5 7509:19 7540:14,20 7543:6 7546:18 7548:10 7561:18,21,24 7562:7,21 7563:10,16 7564:1,14 7584:8 7587:17 7591:2,13 7592:19 7595:20 7604:18 7605:23

10:01 7414:3

10:09 7414:4

100 7408:19 7428:6 7541:5 7593:1 7606:12

104 7493:18

104-1-1 7571:20

104-12.2 7469:12

104-12-2 7469:4

104-14 7493:23 7499:13

104-15 7494:11

104-16 7494:22

104-3 7618:5

104-3-1 7618:4

104-4 7504:25 7505:16

104-8 7434:18 7447:7

10th 7437:21

11 7419:7 7440:16 7450:1 7470:16 7474:20 7475:5 7479:13 7485:13 7576:21

11.2 7560:10,20 7576:14

11.4 7541:13 7575:19 7576:14,17,21

110 7592:13,15 7593:10

12 7391:3 7421:17 7427:20 7441:15 7452:19,22 7453:3 7468:3 7555:12 7584:4 7585:2 7604:19,24

12:06 7491:15

120 7605:19

128 7446:19

129-7 7400:19 7494:7 7538:6

12D 7468:2

13 7459:25 7460:5 7509:8

1-30 7596:24

1319 7406:12

14 7403:4 7405:9 7440:15 7446:5 7452:17,21 7471:12,20 7488:5 7493:21 7495:16,25 7496:9,14 7497:3,19, 23 7499:19 7500:6,16 7503:16 7509:15 7534:3 7552:2 7584:5 7585:2 7612:1

14s 7497:20

15 7379:11 7380:3,9 7385:6 7418:12 7426:11,12 7427:2,20 7460:2,4 7461:7,9,2 3,24 7462:5,14, 25 7465:17 7467:4 7473:4,5 7476:3 7477:14 7501:5 7503:5,9,1 1 7506:17 7510:13 7526:25 7605:23

150 7507:14 7606:12 7618:16

1-5-0 7507:14

16 7419:7 7421:16 7479:13 7485:14 7503:9 7507:2 7508:20,22 7537:1 7564:19 7565:17 7581:8

16th 7585:12

17 7366:24 7391:11 7418:12 7472:14 7477:14 7496:9 7500:10

175 7404:14

179 7535:9

18 7444:22

19 7507:2 7515:11 7608:17

1912 7577:21 7578:12,13

1920 7577:24

1920s 7543:25

1930s 7543:25 7544:23

1950s 7543:25 7544:23

1960 7577:24

1960s 7544:1

197 7503:18

1970s 7544:14

1973 7546:19

1980 7577:25

1982 7546:19

1983 7459:4

1990s 7544:14

1991 7547:13,17

1993 7519:18,19

1998 7467:11

2

2 7369:18,21 7370:25 7373:21 7375:9,10 7391:2 7400:5,7 7403:6 7404:25 7405:9 7409:7,10, 16 7410:11,13 ,18 7416:24 7431:2 7434:3 7443:2,17 7446:18 7448:8 7456:8 7469:12 7470:17 7471:13,20 7473:5 7475:4 7481:11 7482:24 7483:1 7487:18 7488:9 7494:7,8 7497:17 7498:6,7 7501:14 7502:15,16 ,19,21,22, 24 7503:10,12 ,14,17,19, 20 7504:3,10, 24 7505:14 7507:4 7509:7 7515:8 7517:12 7519:22 7533:7,10, 11 7534:22 7538:2 7544:19,20 7547:10 7557:4 7563:15 7572:2 7573:19 7576:17,22 7578:14 7596:15,16 7601:7,16 7604:6,13, 20 7605:6 7606:8,24 7607:9 7608:6,14 7609:8 7610:13 7611:7,23 7612:6 7617:23 7618:6,11

2,580 7440:16

2,594 7498:1

2,912 7568:5

2,915 7568:4,5

2.3 7461:6,11

2/3s 7486:19

2:06 7532:23

2:18 7532:24

20 7391:3 7418:12 7427:2 7428:5 7450:24 7458:24,25 7463:5 7469:25 7470:3,10, 12 7472:2,14, 15,17,18 7473:6 7479:16 7510:14 7514:7,10 7520:14 7543:15 7547:21 7548:10,11 7578:13 7591:19 7592:7,13, 24 7593:4,6,9 ,11,18 7601:25 7602:1 7605:16 7606:7,9

200 7526:25

2008 7459:17,25 7460:9 7466:15

2009 7556:4 7560:4

2010 7578:13

2012 7496:12 7508:10

2013 7403:6 7508:8 7555:11 7561:6 7585:12 7596:7

2014 7366:24 7403:6,7 7440:15 7518:25 7585:19

2015 7577:22 7591:20

2016 7465:21
2018 7517:24
2019 7387:22 7480:24 7561:14
2020 7464:24
2022/'23/'24 7386:7
2023/'24 7387:10
2025 7436:7 7591:19
2026 7509:20 7538:15
2026/'7 7387:23
2027 7387:14 7537:22 7538:19
2028 7509:14 7538:15
2029 7591:18
2031 7436:9 7502:25
2032 7387:14 7537:22 7538:20
2040 7402:9 7591:21
20-9 7369:14 7505:25 7506:4
21 7485:8 7492:13 7515:13 7538:6 7578:1,8 7587:24
21.1 7563:3 7564:8,13
21st 7490:9
22 7420:24 7479:13,16 7485:9 7492:13 7515:13
22nd 7490:9
23 7398:1 7474:20 7475:5
2374 7405:12
24 7605:17,18,21 7606:22
25 7401:22 7417:17 7428:5,6 7436:15 7497:23 7498:17 7517:25 7549:9,14 7564:12 7587:20,23 7588:6
250 7442:21 7443:10,16,25 7444:3 7445:21,25 7447:2,11 7449:10,13 7525:10
26 7388:5 7450:1,2 7581:10 7587:23
268 7435:25
27 7497:24 7508:18 7519:4 7577:12 7579:6,7
27.4 7472:7 7473:14 7474:7
28 7420:25 7519:4 7581:14
28.4 7508:18
29 7450:1,2 7581:15
29.3 7472:5
29.6 7508:19

3

3 7375:6 7394:15 7397:7 7398:2 7399:18,21 7405:2,3 7408:20 7421:18 7426:11 7430:16,17 7444:21 7446:18 7454:16 7455:21 7456:2 7461:3,6,11 7467:5 7471:14,15,16,17 7477:13 7481:6 7484:9 7496:8 7506:14,25 7507:9 7509:25 7533:23 7538:14 7551:7 7555:2,23 7557:5 7558:17 7559:6,23 7560:21 7562:1 7581:9 7587:17 7591:2 7600:8
3,436 7618:17
3.396 7559:24
3.85 7561:2
3/4s 7561:1
30 7373:3 7388:6 7458:21,23 7459:5 7460:19 7463:24 7470:13 7498:17 7514:9,10 7520:15 7591:18
308 7433:15 7440:16
308-megawatt 7435:22 7436:17
30s 7460:18
31 7503:17 7608:17,18
31/32 7581:22
31st 7483:23
32 7388:6 7398:1
33 7394:20
330 7366:22
34 7373:17
35 7420:25 7596:25
36 7582:17
370 7503:16
38 7394:20
386 7403:24 7447:19

4

4 7370:21 7386:16 7400:22 7421:19 7430:17 7445:21,24 7446:14,18 7447:1,4,8,9,10,25 7451:7 7457:16 7461:3 7481:6 7500:10 7519:1 7535:18 7537:20 7552:2 7584:4,20 7585:4 7600:8
4.02 7543:12
4.15 7561:5
4.4 7457:23 7458:7
4.65 7405:5,13,25 7406:10 7408:22
4.7 7543:20
4.9 7543:20
4:00 7414:13 7484:23
4:10 7619:9
4:30 7484:23 7492:19,20
40 7579:5
400 7366:22
41 7583:23
410 7404:4
42 7394:20 7398:2 7513:3,7 7520:3
43 7394:14
45 7406:9 7580:7 7603:14
47 7608:6
48 7450:16,22 7451:4 7453:13 7463:6 7470:7,11 7574:12 7584:13,15

7607:11

484 7437:12

5

5 7404:3 7423:23 7427:19,22 7435:6,7 7436:4,7 7437:11 7439:1,23 7440:10 7450:17 7460:4,6 7464:8,9,10 7465:10,14 7488:5 7503:16 7504:3,8,11 7517:12 7519:1,22 7522:14 7534:3 7544:22 7559:22 7560:4 7563:24 7565:17 7570:16 7580:4 7584:4 7591:2 7595:20 7604:19 7611:17,21 7612:2 7613:2,3,5 7619:5

5,000 7579:12

5.05 7554:24

5.4 7403:20 7405:4,14,22 7408:21 7503:22 7555:16

5.9 7560:5

50 7373:6 7458:7 7461:25 7462:2,7 7464:7,11 7470:3 7482:13 7520:17 7548:13 7552:3 7563:24 7574:12 7579:5 7609:10

50/50 7559:10

500 7482:19

52 7420:15

54 7369:22 7568:25 7618:16,20

56 7568:25

58-4 7565:1,11

5b 7474:20

5th 7490:11

6

6 7369:19 7403:24 7434:23 7435:5,15 7436:3,8 7437:10 7438:3,5 7439:1,2,23 7440:10 7445:21 7446:5,8,14 7447:3,9 7448:1 7454:11,25 7455:18,25 7456:4 7504:3,9,13 7543:6 7559:15 7560:1 7562:7,20 7563:10 7572:2 7580:5 7583:23,25 7584:4,6,8,9,20 7585:4 7588:6 7608:7,11,13,17,22

6.3 7555:1 7561:20 7563:2 7564:14

6.75 7555:21

60 7464:8 7559:8 7605:19

64 7554:20

65 7543:14

651 7447:14

66 7556:2

662 7437:11

67 7390:16

68 7375:6 7377:24 7454:15

69 7381:5

7

7 7427:25 7428:10 7454:16 7457:22 7506:15 7519:23 7535:18 7591:2 7611:16,22

7,223 7485:15

7,224 7485:15

7.05 7457:22

7.25 7544:13

7.95 7543:12

70 7506:14 7509:25 7511:8 7520:18,22

7-0 7506:14

7366 7366:25

7369 7368:3

7370 7368:9

74 7371:15 7589:18

7414 7368:10

7493 7369:6

7494 7369:9,13

75 7373:6 7401:22 7548:13 7564:13

75:25 7402:15 7408:20 7417:14 7549:8

750 7424:19 7434:25 7443:2,7,16,24 7444:8,11 7445:22 7447:3,19 7449:6 7525:10,25 7539:4 7540:8 7608:19

7506 7369:14

7534 7368:11

7535 7369:15

7571 7369:19

7572 7368:12

76 7600:21

7618 7369:21,22

7619 7366:25 7368:14

77 7511:8

78 7422:17,19 7423:1,5,9,10,22,25 7462:7 7536:16 7574:8,11,13

7b 7455:6

8

8 7419:7 7421:17 7444:21 7452:11 7456:6 7506:15 7519:9,18 7557:15 7559:15 7568:7 7589:18 7603:14

8.75 7557:15

8:59 7370:1

9

9 7370:21 7427:25 7428:11,16,18 7444:21 7452:15,17 7459:19,24 7553:3

9.3 7559:25

9.36 7557:8

9.7 7457:22

9.75 7555:25 7557:21

90 7592:16 7593:11

900 7406:4 7498:8 7500:23

94 7581:8 7587:23 7600:21 7603:14 7608:6

7609:10

95 7386:16
7387:5
7537:20

98 7519:19

99 7574:6
7576:1
7577:13,16
7578:3,17
7579:8
7605:12

A

a.m 7370:1
7414:3,4

ability
7399:5
7415:17
7417:1
7468:5
7516:16,18
7521:16
7590:6
7601:5
7606:3

able
7385:7,8
7418:1
7436:18
7463:23
7470:21
7479:3
7492:19
7534:4,22
7547:1
7561:20
7563:8
7565:9
7569:25
7570:17
7575:7
7587:6
7598:7
7605:9
7611:6
7612:14
7613:4

absence
7601:9

absolute
7571:2

absolutely
7383:2
7419:16
7451:24
7455:13
7521:14
7536:24
7539:10
7542:20
7546:15
7551:8
7567:12
7568:1
7583:21

absolutes
7502:2

absorb
7413:1
7468:5
7469:19

absorbs
7411:9

academic
7439:12

accept
7387:4
7437:3
7472:22
7486:24
7548:25
7552:1,9
7563:1

acceptable
7380:17
7572:25
7573:9

accepting
7379:25
7413:16,17
7430:12
7472:19
7528:19
7561:24

access
7458:9,20
7526:1
7575:14
7603:8

accessible
7613:23

accomplish
7534:5

accordance
7557:1

according
7432:3
7509:15
7510:6
7538:17
7571:9
7599:6

account
7390:2
7416:13
7448:20
7451:23
7477:3
7513:12
7536:2

accountants
7491:24

accounting
7479:15
7567:11

accounts
7536:8

accrue
7518:22

accumulate
7420:6

accuracy
7420:8
7451:3

accurate
7420:10,11
7581:17

achieve
7491:5
7549:2

achieved
7550:19,25
7551:5
7553:21
7604:13

achieves
7402:14
7604:8

achieving
7401:25
7510:7
7552:3
7553:3
7587:14

acknowledge
7488:25

across
7372:18
7427:19
7450:16
7457:5
7471:20,21
7473:5
7558:14
7569:6
7589:21

actions
7568:19

actively
7617:12

actor
7383:14

actual
7402:20
7459:2,8
7549:10
7566:19

actualized
7514:2

actually
7373:8
7379:5
7380:9
7390:6
7394:19
7399:4
7409:1
7410:6
7424:5
7426:16
7435:24
7436:17
7446:10
7448:13
7449:6,12
7455:5
7458:17
7464:17
7469:14
7473:8
7495:20
7496:3
7497:12,14
7498:24
7503:2,18,19,21
7506:25
7516:6
7518:12
7521:4
7522:5
7528:17
7530:24
7537:10
7546:20
7548:15
7549:18
7551:5
7553:22
7554:1,7
7557:22
7559:11,12
7560:4,12
7561:7
7562:24
7564:2
7568:6
7574:18,22
7585:23
7599:4
7606:19
7607:13
7610:4,6,10,19,23
7611:16
7615:16

adaptable
7577:11

adapted
7600:9

add 7489:15
7496:19
7510:24
7524:9
7534:20
7567:14
7610:12

added
7408:21

7435:1
7494:8
7497:20
7502:22
7594:3
7595:8
7607:9

adder 7555:2

adding
7383:8
7417:6
7435:23
7437:11
7477:18
7502:14
7510:18
7520:13
7566:6

addition
7435:22
7436:16
7567:18
7611:24

additional
7369:20
7398:20,24
7399:3,10
7400:7,14
7409:25
7410:9
7425:11,16
7431:6
7436:16
7458:10
7469:17
7472:18
7481:22
7485:19,22
7498:19
7504:17
7518:18
7525:23
7533:6
7553:16
7567:15
7568:7
7571:5
7595:5
7596:21
7597:2
7598:12
7617:15,24
7618:6,10

address
7485:5
7527:25
7535:20
7551:9
7562:5

addressed
7397:6
7409:12,13
7492:9
7530:13
7558:18
7597:12

addressing
7463:21
7539:17

adjourn
7492:19
7573:6
7619:1

adjourning
7619:9

adjusted
7387:18
7445:6
7450:14
7532:3,4
7588:11,16

adjusting
7556:22

adjustment
7478:19
7594:24

adjustments
7589:7,9

adopt 7543:6

advance
7381:18
7504:16

advanced
7504:12

advancing
7437:12
7504:15

advantage
7399:9
7409:10
7531:21

advantageous
7410:7,12
7614:19

advantages
7525:8

adverse
7377:20
7382:20

adversely
7568:24

advice
7597:2

advise
7561:20

advised
7618:4

advises
7437:3

advisors
7368:5
7370:13
7493:4
7573:4,13,
14,18

Advisors's
7568:12
7600:23

advocate
7449:13
7521:11

advocating
7449:6

affect
7387:18
7453:12
7512:7
7518:14
7519:13
7522:16
7568:24
7590:6
7608:4

affected
7372:19
7374:7
7432:17
7443:13
7518:19

affecting
7390:21
7476:22

affects
7413:10
7610:23

affirmed
7368:6,7
7370:14,15

afternoon
7414:11,12
7484:22,23
7491:18,19
7535:1
7572:20
7596:13

afterwards
7510:9

against
7379:17
7485:24
7501:16
7503:5
7517:2
7569:9

agencies
7506:16,18
7510:15
7511:12,18
7512:12
7515:4
7523:10

agency
7511:22

aggregate
7478:7,22

aggressive
7602:5

ago 7372:22
7373:4
7397:7
7399:19,21
7430:3
7464:8
7496:11

agreed
7387:15

agreeing
7381:3

agreements
7433:8

ahead
7387:21
7399:16
7411:12
7430:13
7614:5,23

aiming
7486:18

Alberta
7527:18
7557:11,23
,25 7558:3

align 7409:9

all-in
7610:22

allocated
7392:3

allocation
7389:17,25
7390:9
7412:2,3,1
4,15,18,19
7413:8,14
7590:4

allocational
7389:11
7416:4,6

allow
7450:18
7490:21
7574:22
7611:8
7619:3

allowed
7382:9
7506:7
7575:1
7604:6

allowing
7501:22

allows
7382:13
7599:8

already

7396:11
7416:25
7417:6
7425:3
7428:23
7441:24
7477:16
7501:9
7519:21
7520:3
7543:5
7589:10
7614:3,6

als 7533:9

altered
7562:15

alternate
7488:16

alternative
7382:10
7406:19
7410:8
7438:18,20
7552:16
7583:1,2
7613:22

alternatives
7366:8
7378:20,21
7379:6
7400:16
7409:4,25
7422:17
7536:6
7571:2
7582:25

am 7417:15
7430:5
7431:25
7472:3
7473:11
7480:25
7482:1
7545:6
7547:12

amended
7389:10

amends
7389:6

America
7372:18

American
7449:11

American-wide
7556:13

among 7582:3

amongst
7418:25
7497:6
7512:12
7524:8
7588:21
7604:3

amortization
7567:15

amortized
7518:24

amount
7371:5
7372:23
7385:15
7393:4
7398:4
7402:16
7412:25
7463:1
7480:22
7481:20
7484:11
7500:7
7515:6
7522:3
7527:1
7533:19
7566:12
7591:7
7595:9
7606:17,18
7610:4

amounts
7417:23
7425:22
7427:24

analogous
7382:25

analy
7499:12

analyses
7496:9
7536:1

analysis
7369:16,21
7372:6
7390:20,21
7395:20
7396:4
7398:13
7399:8
7400:5,21
7406:16
7408:17
7417:10
7419:25
7421:8,22
7422:16
7424:1,5,11 7433:4,8
7434:13
7444:5
7448:2,4
7454:24
7456:18
7458:22
7462:18
7464:13,14
7466:13
7467:1,15,16,19
7468:16
7474:3,15
7477:4,5
7479:20
7480:13
7481:16
7483:14
7485:12,17,22
7496:12
7498:4,6
7501:11
7511:13,23
7513:16,20
7524:25
7529:22,23
7530:4
7532:2
7533:6
7535:20
7536:2,8,23 7557:22
7562:17,23
,25
7563:19
7566:9,25
7568:12
7571:23
7575:11
7583:20
7585:7,11
7587:2
7589:5
7591:13,21
7599:22,24
7600:17
7615:10
7616:3,8,14
7618:7,11

analysts
7410:1
7499:12
7515:5

analytical
7420:21

analyze
7534:2
7595:4

analyzed
7526:5
7595:7

analyzing
7470:6

and/or
7485:8

Anderson
7367:20

announce
7532:7

announced
7430:19
7431:1,3,4

announcement
7465:19
7491:23

annual
7541:13
7547:3,5
7599:6
7604:25

answer
7418:1,3
7421:5
7425:20
7444:12,13
7500:25
7505:16
7523:15
7575:13
7583:13
7586:17,25
7589:13
7593:9
7611:1

answers
7517:10
7571:18

anticipated
7443:10

Antoine
7367:17
7368:10
7413:22
7414:1,10,18,21,22
7415:7,13,22
7416:8,21
7417:5,12,25 7418:18
7419:6
7420:23
7421:11
7422:11
7424:7
7425:18
7426:8,19
7427:1
7430:1,14
7431:13
7432:1,11,13,14
7433:9,24
7434:11,17
7435:6,9,21
7436:10,13
7437:1,5,16
7438:1,10
7440:12
7442:16,17

7443:1,7
7444:6,17
7445:13,18
7447:6,13,
17,22
7448:10
7449:2,16,
23 7450:6
7452:9
7454:1,10,
22
7455:5,10,
14
7457:15,25
7458:5
7461:15,19
7462:12,23
7463:13
7467:21,22
7469:1,11
7470:14
7471:5,8,1
7,19,25
7472:12,21
7473:1,10,
18,23
7474:9,18
7475:1
7476:17
7477:11
7479:2,10
7480:2,12
7482:1,16
7483:9
7484:7
7487:14
7505:21
7506:6,10,
11,23
7507:1,8,1
2,25
7508:7,22
7509:6,10,
18,23
7510:11,18
,24 7511:6
7514:5
7515:7
7516:8,13
7517:8,17
7519:3
7520:12
7521:10,15
,19
7522:1,20
7523:3
7524:12
7525:3
7526:4,18
7527:6

anybody
7433:10
7490:4

anyone
7432:10
7433:7

anyone's
7523:2

anything
7388:18,21
7420:21
7424:13
7444:16
7502:1
7514:25
7515:19

anyway
7528:5

anyways
7463:16

anywhere
7563:24

apart
7475:11

apologies
7503:6

appar
7534:18

Apparently
7445:24
7569:17

appear
7388:2
7406:14
7410:16
7419:9
7438:24
7445:23
7451:20
7513:19

APPEARANCES
7367:1

appeared
7431:18,20
7442:20
7480:4
7611:19

appears
7399:10,17
7410:2,22
7437:19,22
7438:7
7452:19
7469:2
7483:10
7508:16

append
7536:21

Appendix
7541:13
7560:10,20
7575:19
7576:13,21

applicable
7380:1,8
7427:16

application
7410:11
7445:5
7575:19

applied
7417:19
7429:2
7462:1
7599:2

applies
7428:11
7558:7
7559:1

apply
7558:2,4,5
,12,14
7589:21
7608:1

applying
7428:22
7539:13

apportioned
7518:6

apportioning
7378:11

appreciate
7571:18

appro 7498:4

approach
7480:16
7534:9
7556:22

appropriate
7391:5
7393:11
7397:16
7398:25
7429:24
7454:25
7456:11,17
7485:2
7490:22
7504:1
7508:4
7536:11
7558:22
7571:3
7599:16
7617:10

approval
7382:11
7426:6,7
7441:23

approvals
7424:25

approved
7557:7,23

approves
7426:3

approximate
7586:11

approximatel
y 7498:5
7518:5,8
7533:23
7587:23
7601:7,15
7605:19
7606:6

April
7366:24
7459:25
7460:9
7485:8,9,1
3,14
7490:9
7492:13

area 7421:11
7444:18
7454:2
7506:11
7521:20

areas
7371:21
7484:9
7572:21

aren't
7411:25

arguable
7574:13

arguably
7599:8

argue
7388:11,21
7391:11
7423:13

arguing
7388:18

argument
7512:8

arise
7492:12
7493:8

arisen
7501:21

arising
7568:23

arrange
7441:11
7527:5

arrangement
7428:11,13
7431:1

arrangements
7441:21
7614:16

arrive
7491:10

ascribe

7548:2

ascribed
7516:5

Asian
7467:11

aside
7376:24
7411:23
7412:2
7477:12
7492:2
7613:17

aspersions
7466:10

asserting
7475:11

assertion
7395:6
7568:22

asserts
7608:24

assess
7407:1,3
7613:12

assessment
7406:21
7588:19

asset
7373:22
7519:12

assets
7373:17
7521:12,16
7536:20
7558:8,13,
14,25

assist
7434:12

assistance
7488:4

assisting
7573:12

associated
7372:7
7398:16
7452:21
7530:10
7542:5
7549:10,14

Associates
7573:3

assume
7419:4
7426:4
7448:11
7465:15
7466:19
7479:8
7482:13
7510:2,9,1
2 7514:18
7539:2
7568:12
7592:25
7593:16
7604:20

assumed
7418:19
7458:22
7461:4
7483:4
7598:25
7610:19

assumes
7417:16
7420:5
7464:14
7482:25

assuming
7384:15
7387:20
7394:6
7421:1
7464:25
7482:9
7499:15
7520:14
7538:16
7561:19
7563:2
7577:21
7584:9
7612:23

assumption
7433:25
7453:6
7481:20
7482:12
7507:3
7510:5
7579:9
7590:24

assumptions
7403:7,16
7418:19
7420:1
7465:5,8
7507:21
7508:8,10
7514:7
7541:20,23
7542:4,12
7563:11
7576:19
7577:5
7581:1,17
7595:17
7596:6

assurance
7449:9

assure
7591:5

Atlantic
7527:20

attach
7426:17

attached
7441:5
7549:19

attachment
7426:17

attempt
7463:16
7552:6

attempted
7578:15

attempting
7583:25
7584:1
7603:2

attend
7370:10
7534:18

attention
7390:19
7454:15
7468:16,24
7497:9,11
7508:1
7580:4
7587:8

attracting
7427:20

attractive
7397:15
7399:11
7422:18,19
7425:6
7525:2
7571:1
7597:24
7598:15
7615:18
7617:14

attractivene
ss 7397:9
7601:20

attributed
7505:25

auditors
7481:15
7483:21

August
7374:20
7424:11
7555:11
7585:12
7596:7

availability
7464:4
7465:2
7541:24

available
7378:17,20
,25 7379:2
7380:25
7381:1
7385:4
7447:5
7448:11
7460:14,19
,21
7464:8,10
7465:12
7485:1,9
7490:10
7491:11
7499:24
7505:7,14,
17 7526:13
7531:2
7534:4
7541:21
7575:18
7586:10
7600:7
7611:13,16
,25
7612:2,5
7616:22

Avenue
7366:22

aver 7445:3

average
7391:4
7404:10
7405:1
7408:8,18
7427:25
7428:10,15
7429:2,12,
23
7438:18,21
7439:3,19
7445:2,3
7455:20,23
7456:1
7458:22
7460:15,16
,17
7462:6,10
7463:7
7507:9
7543:16
7551:6
7554:23
7555:12,16
,21 7561:8
7562:4,22
7566:14
7574:3,4,1
0,14
7580:21
7590:24
7591:14
7592:8,14
7593:10,15

averages

7422:20,21
7439:19
7463:8
7552:2

averse
7439:14,17

averseness
7439:24
7440:2

avoid
7466:18
7582:24

avoiding
7551:2

aware
7386:15
7395:19
7489:21
7537:25
7540:13
7545:3
7547:8
7555:10,15
7559:2
7567:9
7568:3
7594:20

away
7441:13,15
7484:14
7580:24,25

B

backburner
7483:14

background
7461:20
7469:16
7477:15
7485:24

backing
7432:2
7577:15

backwards
7452:25
7460:8

bad 7400:13
7512:15
7519:12
7576:25
7577:7
7582:24
7593:4

balance
7402:6,8,9,11 7407:5
7420:17
7468:4
7507:17
7510:8
7537:9
7549:15
7569:4

balanced
7439:20

band 7421:6

Bank 7459:3
7460:14
7465:20
7547:9
7548:4

bankers
7410:2

banking
7401:7

bar
7403:4,14
7404:7

barking
7437:9

base 7369:13
7413:11,12,16,17
7418:20
7428:21
7475:10
7483:4
7494:20
7495:2
7498:7
7502:17
7503:14
7531:15
7533:11
7595:22

based 7376:5
7377:8
7388:1
7395:17
7397:17
7403:5,15
7408:19
7410:21
7418:22
7419:1,3
7427:10
7429:17
7444:7
7453:7,24
7458:5
7461:5,10
7482:4
7492:3
7507:3
7538:12
7541:12
7556:23
7558:11
7559:21
7562:3
7574:6,24
7585:12
7586:9
7605:14
7611:11
7613:5
7616:5,8,12

baseline
7531:19

basic
7513:13

basically
7430:21
7441:23
7580:8
7590:10
7616:18

basis 7380:5
7384:1,8
7389:11
7408:10
7413:9
7426:6
7428:4
7431:23
7439:6,10
7448:3
7449:1
7451:17,21
7452:23
7457:1
7459:23
7460:25
7467:2
7476:2,4
7478:7
7480:16,17
7481:16
7482:3,4,5
7528:4,11
7532:4
7546:14
7582:6
7584:2
7597:23
7599:6
7605:1
7610:8,23
7614:24

bearing
7379:12
7398:3
7610:9

bears
7398:13

become
7420:14
7512:23
7514:2
7598:14

becomes
7373:7
7447:5
7491:1
7610:1

Bedford
7367:7

begin
7464:24

beginning
7535:4
7577:17,22
7606:13

behalf
7393:14
7449:7

behi 7462:16

behind
7532:18
7618:5

Bel 7366:16

belabour
7373:11
7441:8

belief
7480:5
7522:10

believe
7370:4
7371:3
7386:9
7414:6
7422:9
7424:16
7431:2,3
7434:19
7441:14,15
7442:12
7446:22
7454:25
7456:10
7457:2
7458:11
7470:8,11,16 7472:24
7477:13
7478:25
7481:10
7483:5,21
7493:1
7495:4
7517:23
7528:22
7533:1
7544:10,24
7554:2
7556:20
7558:4,9
7561:6
7568:10
7570:16
7574:9
7592:4
7599:21
7601:17
7618:23

believed
7579:3

Ben 7576:6

benchmark 7459:5
benchmarks 7459:2
beneficial 7487:5 7527:3
beneficiary 7518:10
benefit 7381:10 7419:10 7468:7 7479:3,4 7497:13 7498:9 7500:12 7536:2 7537:11 7548:3 7550:14 7551:2 7552:13,15 7569:2,11 7570:5 7607:3,5
benefiting 7526:23 7607:17
benefits 7370:24 7393:18 7398:19 7435:11 7478:12 7498:11,21,23 7499:25 7526:6 7529:2,3,7,9 7530:10,12 7539:23 7569:7 7570:9,15 7607:22,23,25 7608:4
BENJAMIN 7368:7 7370:15 7576:9,12 7577:19 7578:9,20,24 7579:2 7580:2,11,14,18 7581:20 7582:8,14,21 7583:16,21 7584:1,16,24 7585:5,13,16,21 7586:2,13 7587:3,8,18 7589:11,23 7590:3,14,20 7591:15,20,23 7592:3,9,12,20,23 7593:12,20 7594:6,9,13,18,22 7595:2,7,19 7596:1,8
best 7418:3 7419:22 7534:9 7564:23
best-case 7441:14
better 7379:18 7410:14,16 7445:23 7446:21 7447:2,9,25 7452:7,19,22 7454:7 7482:7 7488:22 7502:18 7503:15 7515:9 7575:1 7583:1 7584:22 7588:8 7615:2,4
beyond 7386:25 7510:8 7572:12 7606:21
bias 7396:19 7397:18
biassing 7396:12
bigger 7407:17 7601:25
biggest 7371:4
bill 7444:10 7477:20 7517:18,19,22 7610:8
billion 7395:15 7396:10 7397:5,20 7404:16 7405:23 7406:1,4,12 7437:23 7438:3,8 7441:24 7471:23 7472:7 7473:8,14 7480:22 7481:2 7482:10 7483:2,3 7498:2,8 7506:17 7507:5,10 7508:14,21,23 7509:8,11 7510:14,25 7511:2,8 7514:8,9,10 7518:4,6,8,12 7520:14,15,17,18 7521:9 7531:12,16,24,25 7532:4,9
billions 7597:14 7599:15
binge 7512:9
Bipole 7398:6,19 7399:10,15,19
bird 7449:5
bit 7375:16 7378:6,12 7385:6 7390:18 7396:6 7421:2 7431:16 7435:2 7461:20 7475:9 7480:14 7491:19 7492:20,22 7496:1 7508:9 7509:18,21 7510:22 7522:2 7544:3 7576:22 7579:15
black 7514:3 7523:15
blame 7432:5,10
blocks 7575:21
blue 7403:14 7404:7
board 7366:3,14,15,16,17,21 7367:2 7392:6 7395:1 7419:15 7484:22 7487:15,16 7490:7 7492:1 7493:3 7534:7 7556:5,8,16 7558:14 7559:23 7584:20
Bob 7367:2 7368:12 7474:20 7485:7 7491:22 7492:21 7504:21 7505:12 7572:18,19 7573:2,11,17 7575:12 7576:3,7,11 7577:15 7578:7,18,21 7579:1 7580:1,9,12,15 7581:7,21 7582:9,16 7583:12,18,22 7584:14,19 7585:1,11,14,17,25 7586:6,24 7587:5,15,20 7588:15 7589:8,12,17,24 7590:10,16 7591:12,17,22,24 7592:5,10,18,21 7593:8,17 7594:1,7,10,14,19,23 7595:4,16,21 7596:5,12,20 7598:6,19 7599:18 7600:3,20

7601:4,22
7602:21
7603:7,13
7608:5,10,16,19
7609:9
7610:25

boils
7612:19
7613:16

bond 7458:24
7459:10,20
7460:15,16,22
7461:5,10
7464:6
7506:21
7510:14
7543:16
7544:18
7559:23
7560:6,11
7566:13

bondholder
7567:16

bonds
7458:21,23,25
7459:5,14
7460:18,19
7464:11,24
7465:3,12
7555:8

book
7369:14,15
7505:22
7506:4
7535:5,6,12 7557:4,5
7558:17
7565:1,10

bookended
7578:12

books 7480:3
7514:20,22

border
7443:19,24
7444:3

borne 7379:6

borrow
7408:13
7520:16

borrowed
7408:10

borrowing
7465:22

borrowings
7512:6
7568:8

bottom
7375:7,10
7400:23
7401:2
7434:21
7437:9
7452:11
7470:21
7497:17,18,23
7498:20
7557:5
7569:8
7581:21
7603:17,22

bounds
7517:7

Bowman
7440:13

box 7435:24

Boy 7493:14

Boyd 7367:6
7368:11
7486:8
7489:18,19
7492:23
7493:7,11
7504:22
7505:3
7532:15,16
7533:3,17
7534:15,16,19,25
7535:1,10,15,16,24
7536:4,14,19,25
7537:8,14,19,25
7538:5,10,19,22
7539:2,8,11,24
7540:6,13,18,23
7541:4,8,19,25
7542:8,14,21
7543:1,9,14,19,23
7544:12,17,25
7545:3,7,11,14,20,25
7546:6,17,22
7547:1,8,13,16
7548:5,16,25
7549:4,8,21
7550:2,6,18
7551:4,17
7552:1,8,12 7553:15
7554:8,19
7555:10,15,19,23
7556:2,18,24
7557:3,10,14,17,20
7558:16
7559:2,19
7560:10,20,25
7561:13,16
7563:1,7
7564:6,12,16,25
7565:3,9,15,25
7566:25
7567:3,9,13,23
7568:2,11,18,22
7569:12,17,25
7570:13
7571:8,14
7572:4,15
7617:21,22
7618:3,13

bracket
7416:11
7454:25
7455:19

brand 7612:3

break 7405:7
7413:24
7414:24
7418:5
7485:3,5
7490:16

Brent
7396:23

bricks
7521:17

brief
7375:19
7386:18
7394:17,22
7398:10
7414:16
7418:16
7426:24
7433:21
7440:19
7450:4
7454:20
7455:8
7458:14
7461:17
7469:9
7474:22
7485:24
7489:7
7495:22
7505:1
7532:11
7533:15
7534:11
7538:8
7545:18
7550:16
7553:13
7560:8,15,23 7561:11
7565:7,13
7569:15
7583:10
7585:9
7586:4,22
7589:15
7593:25
7595:24
7596:10
7600:1
7602:19
7603:11
7613:8
7618:1

briefly
7576:4

brilliance
7377:18

bring
7419:23
7421:18,23
7426:13
7436:21
7455:6
7457:16
7458:12
7485:23

brings
7452:14

broad
7546:14
7580:19

broader
7520:4
7525:19
7539:19

broadly
7372:17
7416:3
7530:7

broke
7416:23

broken
7518:5

brought
7580:4

budget
7413:11

build 7383:9
7384:7,14
7577:4,5,1

0

building
7398:18
7399:2,9,17 7410:9
7575:6,21

builds
7376:11
7428:14

built 7374:2
7384:16,22
7453:2
7474:3
7480:24
7555:1
7582:11
7604:5
7611:13,14

bulk 7609:22

bullet
7391:11
7430:18
7445:2,12,14,20
7446:12,15,18 7447:1
7450:9,10
7452:15
7453:9
7454:23
7557:15

bullets
7391:2
7450:8
7452:11

bunch 7425:2
7448:25
7463:4
7500:14,16
7512:22

burden
7381:12
7398:3
7412:14,15
7442:6
7477:25
7487:19
7488:23
7489:1
7518:18
7610:5,9
7614:24
7615:15,21
7617:17

burdened
7480:21

burdens
7412:18,20
7588:21
7590:4

burning
7609:21

business
7370:10
7377:18
7416:14,17,19,20
7476:4,14
7516:4,21

businesses
7390:4
7412:5,13
7413:3

buttons
7579:9

buying
7466:5

Byron
7367:11
7368:9
7370:17,18
7371:12,19
7372:1,5,10
7373:10,15,20
7374:9,15,25
7375:5,15,21
7376:1,8,17,23
7377:7,12,17,23
7378:4
7381:4,8,15,22
7382:16,22
7383:16,24
7386:4,11,14,20
7387:3,7,12,17
7388:4,11,16,20,23,24 7390:13
7391:1,10,19 7392:25
7394:4,9,12,19,24
7395:5,9,17,23
7396:8,17,18 7397:22
7398:12
7399:22
7400:12,18
7401:1,5,15
7403:2,11,13,19,22
7404:2,6,13,20
7405:6,16,20,25
7406:3,8,15 7408:2
7486:12
7488:21
7499:10

C

CAC 7367:11
7455:6
7468:2
7485:16
7489:14
7517:12

CAC/MPA-12d
7537:9

calamitous
7514:24

calamity
7513:10

calculate
7407:2
7456:7
7477:9
7554:12

calculated
7393:6
7404:23
7448:12
7470:20
7506:17
7543:15,19
7551:18
7552:19
7554:6
7566:6,10
7567:18
7574:5

calculates
7435:16

calculating
7574:10

calculation
7397:9
7406:21
7408:25
7409:1
7417:16
7422:20
7423:1
7445:3
7470:13
7511:1
7554:17
7561:9
7563:6,8,13
7564:7,10
7565:21
7566:2,8,18 7567:10

calculations
7431:22
7433:2
7435:23
7438:25
7451:6
7482:15

calm 7466:18

Canada
7427:19
7428:3
7459:2,3,9,20
7460:14,15,16,22
7461:5,10
7465:20
7543:15
7547:9
7548:4
7559:22
7560:6,11

Canadian
7555:1,8
7561:4

cancelling
7395:13

canvass
7486:7

canvassing
7488:8

capabilities
7525:22
7541:1

capability
7541:6

capable
7518:17
7581:24

capacity
7380:6
7384:10,12
7398:21,22,25
7399:10
7436:16,20
7527:1
7529:17,18
7594:3

capital
7371:5,22
7380:11
7383:8
7388:13
7391:4
7402:4,12
7403:7
7404:10
7405:2
7408:8,14,18
7426:3,5
7427:23,25
7428:10,16
7429:2,6,12,23
7445:7

7451:9
7455:20,23
7456:2,12,
19,24
7457:18
7465:5,11
7466:16
7467:6,14
7473:2,17,
18
7474:2,7
7478:10
7504:10
7508:3,9
7512:1
7515:5
7516:2
7517:16
7521:22
7523:22
7527:12
7528:1
7531:11
7533:22
7543:17
7549:9
7550:13
7551:7
7554:21,24
7555:12,16
,21
7556:11,14
7558:12
7559:7,9
7561:8
7562:4,22
7566:15
7567:21
7575:9
7577:1,8,9
7585:19
7594:20
7595:5,8,1
3,20
7598:25
7599:11
7606:2

capitalized
7566:12

Capra
7395:19
7422:1
7496:1

Capra's
7398:18
7526:15

captive
7590:13

captured
7451:14
7575:11

care 7418:21
7617:3,9

careful
7565:18

carefully
7448:19

Carlo
7598:21
7599:4,21,
23 7600:7

Carlos
7600:14

Carrier
7533:23

case 7384:19
7392:9
7393:5,22
7394:1
7402:17
7412:4,23
7415:15
7418:20
7429:25
7440:2
7456:22
7470:15,25
7471:3
7474:6,7
7480:23
7481:16,25
7482:9,13
7484:5
7490:1
7496:2,3,4
,6 7502:23
7514:24
7516:16
7521:1
7524:15
7552:9
7553:18
7602:4
7606:4,15,
20 7607:2
7608:22

cases
7385:6,13
7406:24
7415:14
7446:17
7474:16
7501:12
7541:23
7582:4
7595:22

cash 7391:5
7465:13,14
7528:18,24
7607:20

cashflow
7452:22
7567:15,20
,25 7591:3

cashflows
7410:2
7422:21
7448:5
7449:1
7457:2,4
7468:15,19
,20
7525:13
7588:20,25
7589:2
7602:10,15

casting
7466:10

caucus
7490:17

cause
7414:12
7499:12
7515:21

caution
7419:8,14
7452:4,8
7557:24
7597:16
7598:2

cautions
7418:9
7451:2

caveat
7529:11

cease
7605:22

ceased
7604:25

central
7371:13

cents
7526:25

cert 7520:10

certain
7384:15
7402:22
7412:9
7418:6
7436:25
7446:17
7475:25
7487:17
7521:21
7527:1
7553:10
7566:24
7581:25
7592:3
7595:8
7596:2,3
7601:13
7608:1

certainly
7376:7
7395:10
7481:24
7484:13
7486:14,21
7487:7
7520:10
7534:15
7565:5
7568:10
7574:13

certainty
7381:18
7413:5
7431:21
7467:6,8
7490:25

Certificate
7368:14

Certified
7619:12

cetera
7448:24
7516:11

Chair
7370:19
7394:12
7408:16
7421:25
7485:25
7489:13
7532:16
7612:17

chairman
7378:5
7484:7
7485:8,20
7489:8
7493:17
7505:13
7611:1

Chairperson
7366:13
7370:3
7408:4,12
7409:2
7410:24
7411:12,20
7413:19,23
7414:6,25
7440:21
7463:19
7465:18
7484:25
7486:10
7487:12
7488:19
7489:4,10,
16 7490:14
7491:18
7492:17
7493:14
7495:6
7499:6
7500:25
7503:24
7504:7,20

7505:9,18
7527:9,24
7529:1,6
7530:14
7531:4
7532:13,20
7533:1
7534:13,16
7572:15
7611:4
7612:8,18
7613:10
7616:16
7617:19
7618:22

challenge
7487:15
7512:17
7600:12,16

challenges
7519:23

challenging
7428:23
7429:24
7430:2
7439:2,5
7440:9
7521:6
7522:13
7524:5
7599:14

chance
7418:13
7461:24
7469:19
7545:22

change
7372:13,19
7419:13
7432:17
7436:4
7444:24
7445:10
7446:2,6,22 7452:23
7453:23
7464:1
7465:4
7500:11,17
7501:18
7515:22
7523:2,17
7531:10,13,18 7532:5
7539:20
7547:10,17,22,23
7548:4
7562:12,24
7579:10
7599:6
7601:10,18,20
7615:10
7616:11

changed
7389:10
7500:6
7531:16

changes
7372:24
7374:7
7419:13
7424:9
7432:20,22
7435:2
7446:9
7453:11,17
7467:13
7500:11,16
7548:8,19
7578:23,25
7580:10
7606:14

changing
7372:23
7500:9
7533:21
7598:18
7599:10

Chapter
7555:12

characteristics
7456:15
7475:21

characterization
7424:19

characterize
7548:22
7575:8

characterized 7424:17
7570:21

characterizing 7421:10
7424:8

charge
7518:22
7523:1

charged
7610:22

charges
7521:22
7522:19,24
7523:8
7527:19

chart 7459:2
7460:13
7473:21
7545:25
7590:1
7603:17
7605:2,25
7607:10
7613:4

charts
7389:22
7458:17
7603:1

chat 7580:2

chatting
7440:13
7470:17

cheap
7465:12

cheaper
7613:23

check 7437:4
7475:3
7563:2

Cheryl
7619:18

chicken
7426:21

Chinese
7572:9

choice
7381:18,23
7383:20
7430:8
7438:25
7442:3,8
7443:17
7450:20
7454:11
7512:3
7524:11
7552:23
7582:1
7602:24
7607:19
7608:3

choices
7439:13
7482:22
7517:6

choose
7382:13
7383:23
7439:16,17
7476:9
7553:9

chooses
7389:13,16
7390:10,12

choosing
7392:5
7467:16
7525:10
7561:23
7562:7
7564:1

chose
7440:10
7456:3
7476:15
7483:13
7522:15
7562:2
7574:2
7578:1
7611:17

chosen
7528:21
7567:4

Christian
7367:24
7388:17
7396:14
7432:8

circulated
7535:6

circumstances 7446:15
7473:2
7515:1
7520:5
7600:10

cited 7572:8

citizens
7389:14

clarification 7503:25
7587:21

clarify
7499:13,16
7614:9

class
7563:25
7604:2

classes
7389:11
7416:6
7423:12
7563:20
7604:3

classic
7438:17

clause
7382:12

clear
7410:12
7424:22,24
7436:6
7441:18,19
7444:7
7464:9
7524:15,22
7529:16
7531:20
7552:24
7608:3,16
7617:13

clearly
7387:23
7435:11

7500:15
7563:16
7599:13

client
7399:24

clients
7486:14,22

close 7456:2
7498:2
7514:9

closed
7384:18

closely
7531:22

closer
7461:7
7465:23
7509:21

coal 7378:22
7379:4
7380:18

code 7579:13

coincided
7547:23

Colaiacovo
7368:6
7370:14
7371:3,18,25
7372:4,9,15
7373:14,19,25
7374:12,18
7375:1,4,14,25
7376:7,15,20
7377:6,11,14,22
7378:3,15
7381:7,14,21,25
7382:21
7383:2,21
7384:3
7386:9,12
7387:2,6,11,16,20
7388:10,15
7389:4
7390:25
7391:9,18,21 7393:2
7394:8,10
7395:4,7,16,21
7396:7,22
7398:8,17
7400:10,17,25
7401:4,8,19
7403:10,12,17,21
7404:1,5,11,19,24
7405:15,19,24
7406:2,7,13,18
7408:11,16
7409:21
7411:10,19
7412:1
7415:6,12,18
7416:2,15
7417:4,9,20 7418:24
7419:16
7421:9
7422:9,15
7424:16
7425:24
7426:16
7427:11
7430:9,24
7431:25
7432:19
7433:20
7434:5,15
7435:4,7,20
7436:2,11,24
7437:2,15,24
7438:9,14
7441:7
7442:25
7443:6,15
7444:15
7445:1,16,19
7447:12,16,21
7448:2,16
7449:14,18
7450:25
7452:16
7454:9
7455:2,12,15 7457:24
7458:3,8,16
7462:3,21
7463:3
7464:3
7466:4
7468:14
7470:5
7471:2,7,16,18,24
7472:8,19,24
7473:9,16,20
7474:1,14,24 7475:12
7476:24
7478:6
7479:8,25
7480:11,18
7482:8,21
7483:19
7506:12,20,24
7507:6,11,24
7508:6,15
7509:5,9,17,22
7510:4,16,22
7511:4,11
7514:12
7515:23
7516:12,15
7517:15,20
7519:17
7520:24
7521:14,18,25
7522:17,21
7523:11
7524:17
7525:12
7526:8
7527:4,17
7528:14
7529:5,10
7530:23
7531:15
7535:23
7536:3,10,18,24
7537:7,13,18,24
7538:4,17,21
7539:1,7,10,15
7540:2,12,16,22
7541:2,7,15,22
7542:3,13,19,25
7543:8,13,18,22
7544:6,15,20
7545:2,6,10,13,23
7546:3,9,21,24
7547:7,12,15,19
7548:9,24
7549:3,7,12,24
7550:4,10,23
7551:8,20
7552:5,11,14 7553:19
7554:11
7555:4,14,18,22
7556:1,7,20
7557:2,9,13,16,19,24
7558:24
7559:4,20
7560:17
7561:3,15,23
7563:5,9
7564:9,15,21
7565:2,24
7566:3
7567:2,6,12,17
7568:1,9,15,21
7569:5,22
7570:4,20
7571:12
7572:20
7573:1,10,16,19
7575:15
7576:5
7588:14,18
7592:6
7596:19
7597:11
7598:9,22
7599:20
7600:6
7601:3,12
7602:3
7603:6,23
7608:9,13,18,21
7609:14
7611:2,11
7612:16,25
7614:7
7616:23

collapsed
7547:24

colleague
7421:13
7484:8
7576:6
7592:6

collected
7471:22

collecting
7388:12
7389:10

collective
7610:8

colloquial
7410:20

column
7470:9,18
7471:14,15

,21 7473:6
7507:20
7547:2,4,5

combination
7496:24

combined
7436:8,9

comes 7398:4
7399:8
7415:23
7439:8
7549:16,18
7563:10

coming
7452:3
7489:23,25
7505:17
7516:14

commencing
7370:1

commend
7527:5

comment
7395:6,24
7433:2,22
7448:23
7450:13
7451:1
7476:19
7479:9
7484:4
7486:13
7489:5
7525:8
7530:19
7543:23
7547:2
7569:24
7570:1
7610:21

commented
7461:14

comments
7424:17
7427:17
7452:12
7484:11
7485:20
7489:13,15
7522:18
7523:13
7598:23
7607:18,22
7612:4

commercial
7389:24
7395:10
7396:25
7397:16
7401:7
7406:16
7412:7
7416:18
7427:9
7431:15
7432:6,16,
24 7433:11
7438:17
7439:2
7440:23,25
7441:4,12
7443:12
7449:15
7454:24
7480:13
7582:1,18
7614:16

commercially
7442:4
7541:10
7600:9
7616:6

Commission
7557:12

commitment
7614:2

committed
7614:5

common
7401:9
7427:22
7536:21
7543:25
7544:16

commonly
7600:8

companies
7518:7
7536:20
7558:2,3
7559:8

company
7383:22
7407:17
7429:9
7480:15
7518:4
7524:6
7526:25
7550:12
7602:16
7609:15

comparable
7498:19

comparative
7417:10
7419:24
7524:11
7529:22
7542:11

comparator
7553:17

compare
7412:10
7447:17
7471:6
7473:12
7501:16
7502:2
7503:5

compared
7369:5
7376:5
7403:24
7405:13
7408:17
7425:7,13
7434:25
7488:4
7493:21
7494:3
7497:13
7503:15
7511:9
7513:22

comparing
7435:5
7437:7
7473:17
7474:16
7488:2
7502:9
7553:15

comparison
7396:1
7403:23
7434:23
7482:10
7531:2
7598:4

compendium
7474:3

compensate
7380:22

competency
7461:14

competent
7477:4

competing
7379:16,21
,22

competitive
7476:10
7530:2

**competitiven
ess**
7423:17

complete
7486:16
7602:11,14
7611:1

completed
7425:3,4
7559:16

completion
7465:23
7517:25

complicated
7579:15

complicating
7429:19

component
7499:25

computer
7426:18

con 7395:13
7466:5

Conawapa
7373:23
7374:11,22
7386:13,14
7397:24
7399:25
7400:8,13,
15 7421:24
7422:1,3,1
2
7424:4,15,
17,21
7425:4,16
7426:5,10
7430:6
7433:16
7434:2,7,1
0 7435:24
7440:17
7441:1,8,1
3
7442:10,11
,13
7446:13
7452:18,20
7453:2
7464:22,25
7480:5
7482:6,11,
25
7483:12,13
,24,25
7484:1
7497:23,24
7524:13
7570:18,21
7571:11
7585:3,4
7594:4,21,
25
7595:9,18
7596:14,17
,22
7597:3,10,
21,24
7612:13,20
,24 7613:5
7615:12,13
,16,18
7617:1,2,5
,7,11,13

conceivably
7566:22

conceive
7376:9

concept
7377:9

conceptual
7376:3,4,9
7377:1,4
7515:10

conceptually
7439:14

concern
7395:12
7489:22
7512:4,12
7595:1

concerned
7467:24
7468:11,17
7471:11
7591:1

concerns
7485:16,21
7536:21
7572:7

concluded
7590:20,21

concludes
7587:25

conclusion
7399:20
7419:21
7451:5
7453:11,23
7475:11
7516:3,14
7564:11
7584:25
7590:18
7597:23
7602:22
7616:6

conclusions
7387:19
7397:14
7519:6
7531:17
7573:14
7579:22
7600:22
7601:24

conclusive
7451:16

conclusively
7615:2,4

concur
7489:8

conditions
7464:14
7465:15
7466:22
7516:25
7521:6

confident
7383:25

confidential
7475:19

confirm
7446:7
7505:24
7538:14
7541:11
7543:5

confluence
7514:1

consensus
7491:10

consequence
7399:12
7516:20

consequences
7377:21
7382:20
7393:20
7395:13
7400:15
7497:8
7516:19
7615:24

conservative
7564:3,7

consider
7384:4
7391:5
7399:1
7409:4
7441:8
7457:5
7468:23
7476:13
7479:19
7492:4,6
7526:10
7531:6
7536:9
7539:8
7568:19
7619:4

considerable
7428:25
7431:9
7547:21

considerably
7463:24

consideration 7400:6
7431:12
7444:5
7513:11
7519:8
7553:20
7611:18,21

considerations 7539:16
7607:24

considered
7434:9
7443:25
7448:19
7459:23
7460:25
7468:7
7471:4
7480:6
7512:16
7515:4
7516:17
7519:24
7520:8
7531:11
7536:21
7537:2
7552:14,16
7597:9

considering
7391:6
7399:7
7460:4
7520:10
7616:21
7617:12

consistency
7580:19

consistent
7433:18
7448:17
7498:3

consistently
7445:23
7447:25
7461:25

constant
7453:14
7501:15,18
7502:1

constantly
7599:10

constrained
7551:23

construct
7379:7
7432:21
7573:18

constructed
7404:25
7428:4
7442:2
7459:1
7531:3
7573:13
7576:4
7610:13

constructing
7392:19
7466:25
7604:4

construction
7376:13
7379:19
7382:4
7427:24
7433:17
7434:6
7441:12,25
7443:20
7464:21,25
7473:24
7512:9
7517:16
7518:1
7532:8
7575:10
7594:15
7595:10
7599:22
7602:12,13
7607:22,25

consult
7489:20

consumer
7477:20,21
7563:18,19
,25
7587:22

consumers
7415:3
7469:25
7470:7,8,1
9 7471:22
7472:9
7473:8,13
7477:22
7563:20,22
,23

consuming
7599:14

consumption
7374:3
7478:4,11,
16,20
7609:18
7610:3,11

contains
7493:5
7575:25

CONTENTS
7368:1

context
7378:15
7384:4
7399:13
7401:7
7450:11,21
7454:12
7480:12
7513:17
7522:9,18
7524:8

7528:16
7541:10
7551:15

contexts
7544:9

contingent
7511:16

contingently
7511:15

continue
7414:7
7432:15
7434:10
7443:11
7465:16
7480:9
7483:11
7515:19
7524:23
7550:21
7606:21
7617:6

continued
7368:5,8
7370:13,17
7388:23
7396:17
7432:13
7442:16
7467:21
7506:10
7518:21
7524:20
7535:15
7601:8

continues
7479:17
7483:16
7517:22

Continuing
7426:9

contract
7379:1
7385:8
7428:6
7430:20,22
7433:12
7434:3,6,7
7435:22
7436:17,18
,19
7441:2,5
7442:22
7532:8

contracted
7428:4

contracts
7378:7,8,18
7379:10,25
7380:2,15,17,24,25
7381:2
7384:24
7385:4,14
7424:20
7430:18,23
7431:5,10,11 7441:25
7452:21
7466:6
7537:17
7538:12
7570:18

contrary
7410:19
7444:2

contrast
7392:22
7403:22

contribute
7500:12
7550:3,21

contributions 7550:7

contributors
7528:23,24

control
7385:18
7432:23

controversial 7453:10

conversation
7580:8

conversely
7438:1

convert
7543:10

cookie
7572:10

copy
7426:15,20

Corey
7367:23

Cormie
7440:15

corner
7470:22

corporate
7401:10
7416:10

corporations
7416:10

Corporation's 7522:9
7552:4

corre
7573:15

correct
7371:25
7372:4,9
7373:19
7375:25
7377:1,6,11,22
7378:3
7381:14,20
7382:21
7387:2,11
7388:9,15
7391:17,18
7395:16
7396:7
7398:8
7400:10
7403:21,25
7404:1
7405:15,24
7406:7
7408:11
7411:19
7412:2
7415:5,6,11,12
7416:1,2,14,15
7417:3,4,15,24
7418:23
7433:14
7434:4,14
7437:23
7438:8
7447:11,20,21
7457:24,25
7462:22
7471:24
7472:3,8
7473:11
7504:5
7506:1
7507:5,7,10,11
7508:5,6
7509:16,17,21
7517:14
7521:18,25
7536:18
7537:12,13
7539:6
7540:1,3,22
7541:15,19
7542:3,20,24
7543:12,13,17,21
7545:1
7546:23,24
7548:24
7550:9,21
7551:7
7553:18
7554:10
7555:3,25
7556:19
7557:8
7560:13
7561:14
7564:8,14
7565:23
7568:11,15,21
7573:15,16
7580:14
7582:8
7585:13
7589:11,22,23
7590:15
7591:12,16,22,23,24
7592:4,20
7594:17,18,21,22
7596:8,18,19 7597:6
7601:23
7603:6
7608:8,21
7616:24
7619:12

correcting
7386:22

correctly
7459:17,18
7462:4
7471:9
7548:23
7582:7
7588:24
7589:3

correspond
7546:8

cost 7369:11
7370:24
7374:1
7379:24
7380:12
7384:15,17
7391:4
7395:13,15
7404:10
7405:1
7408:8,18
7412:25
7413:12
7427:21,25
7428:10,15
7429:2,12,23 7448:3
7450:20
7453:12,21
7455:20,23
7456:1,19
7457:7,8,13,17
7459:8,13
7465:2
7474:2,7,11,12
7481:7,12

7494:19,25 7517:2,14, 16 7523:22 7530:7 7531:16,24 7532:1,5 7536:2 7543:17 7549:5,10, 14,17,19 7551:6,12 7553:17 7554:21,22 ,23 7555:12,16 ,20,21,24 7556:3,11 7557:21 7561:8,20 7562:4,9,1 0,22 7563:2,12, 21 7566:14 7569:9 7574:23 7575:9 7577:1,8,9 7585:19 7588:4,11, 16 7590:5,7 7594:16,20 7595:8,13, 20 7598:25 7599:22 7602:24 7609:15 7610:24 7615:8

cost-based 7411:8

costly 7446:13 7585:3

cost-of 7550:11

cost-of-service 7429:22 7440:6 7537:4

costs 7379:6,12 7380:7 7381:12 7383:12 7385:23 7389:8 7390:8 7391:24 7392:1,3 7396:6 7397:6,13 7398:15 7400:7 7403:7 7409:12 7413:12 7428:21 7429:15,16 7445:7 7450:15 7451:9 7456:11 7473:2,17, 19 7474:4 7479:12 7480:19,22 ,25 7482:25 7504:11 7508:3,9 7528:7,14 7529:12 7539:23 7542:5 7549:1,23 7552:10 7556:14 7563:23 7564:4 7575:9 7594:15 7595:5 7599:11 7602:7 7606:2 7609:16,20 7610:5

cota 7549:5

counsel 7367:2 7437:2 7485:3,15, 16 7486:1,2,7 7487:15 7572:22 7573:6

counsels 7490:16

counterparties 7591:11

couple 7389:21 7403:3 7414:22 7422:18 7438:15 7462:13 7467:7,24 7489:2 7492:5 7521:12 7532:17 7535:17 7544:19 7557:11 7564:17 7569:18 7571:16 7587:16,18 7613:14

coupled 7600:15

course 7374:20 7462:7 7502:6 7524:6 7541:9 7570:7 7574:8 7597:18 7607:20

cover 7572:21

coverage 7566:5 7567:1,10, 18,24 7568:5 7604:10

covered 7567:22 7609:16

crack 7587:10

create 7525:19 7600:4

created 7493:4

creates 7398:20

creating 7507:22

credible 7466:11

credit 7484:12 7506:16,21 7511:12,18 ,22 7512:12 7513:8 7515:4,22 7518:15,19 7519:13,21 ,25 7523:9

crisis 7467:10,11

criteria 7427:8 7462:19 7496:21 7497:7 7498:13 7499:23 7500:3 7539:11 7578:10

critical 7537:7

criticism 7395:25

cross 7497:12,16

cross-examination 7368:8,10, 11,12 7370:17 7414:21 7484:19 7488:3 7534:25 7572:18

CSI 7492:25 7493:1,5,6 ,7 7564:24 7565:4 7571:17 7572:24 7573:4,7 7619:4

cumulative 7607:12

current 7397:13 7463:25 7538:13 7540:9 7557:4 7599:19

currently 7397:5 7534:1 7552:20 7596:17

cursory 7402:24 7417:21

curve 7456:9 7599:7

curves 7439:7 7548:11

customer 7416:18 7477:19

customers 7376:11 7377:3 7383:6 7389:12 7475:14,17 ,21,23 7476:1,5,1 3,16 7479:2

7535:21
7550:8
7554:9
7594:5
7606:7
7607:1,2,4
7610:9

cycle
7423:20,25
7436:8,9
7465:11

D

danger
7420:25

dark 7403:14

Darlington
7517:11
7518:1

data 7374:24
7410:21
7418:25
7453:24
7458:10
7526:11
7531:19
7541:20
7575:23
7576:21
7577:20
7611:8,16
7613:2,3
7616:5

data's
7459:2

date 7369:18
7386:6,25
7387:9,14,
18 7431:11
7436:21
7452:20
7479:6
7481:13
7485:18,22
7487:8,17,
25 7488:16
7495:15
7537:21
7538:11,15
7572:1
7612:21
7615:11
7616:19
7617:2,3

daunting
7600:15

day 7400:3
7469:6
7492:1
7580:3

days 7490:8
7491:11
7492:2,14,
15 7587:17
7613:14

deadline
7490:7

deal 7418:7
7436:20
7457:17
7479:12
7571:16
7589:20
7600:21

dealing
7422:2
7609:10

deals
7441:12
7464:6
7495:25

dealt
7416:22
7438:16
7457:17

debate
7441:17

debt
7398:4,16
7401:22
7402:14
7408:19,21
7427:21
7429:6,7,8
7457:1
7459:8,13
7463:23
7464:4
7465:11
7484:10,11
7506:12,17
7507:17
7508:13
7509:1,13
7510:15
7511:14,16
,21
7512:5,10,
16,23
7513:3,5,1
4,15,18
7514:9,19,
21,23
7515:3,6
7516:5
7517:22,23
7518:4,6,8
,16,17,21
7519:10
7520:3,17,
25
7521:4,8
7522:11,23
7528:3
7542:1
7549:5,17
7551:7
7553:17
7554:22
7555:20
7561:20
7563:3
7564:20
7565:18
7566:13,16
7602:11
7606:2,17

debt/40
7559:8

debt-equity
7408:20
7549:9

debts
7520:22

debt-to-GDP
7513:7

decade
7481:11
7544:2
7578:6,11,
15

decades
7481:11

December
7483:23

decide
7534:7

decided
7443:8
7523:5

deciding
7540:4

decision
7391:7,15
7396:13
7397:17
7399:12,15
,19
7409:19
7412:20,24
7419:19
7422:12
7424:4,15
7425:15,17
,21 7430:5
7431:12
7432:18
7433:16
7434:1
7438:17
7439:2,25
7443:11,14
7448:20
7451:20
7456:14,21
7481:4,5,8
,14
7483:25
7490:25
7491:5,7
7539:5,9,1
4,21,25
7557:12
7581:25
7582:13,15
7597:3
7598:16
7602:23
7612:20
7613:16,21
7614:17
7615:1,22
7617:1,2,5
,7

decision-making
7448:25

decisions
7392:6
7423:19
7439:5,10
7476:1,5,9
7557:25
7582:4,18
7596:22
7616:19

decline
7478:3
7519:22
7523:21
7606:19
7610:3,10,
23

declines
7590:6

declining
7609:4

deep 7522:9

def 7450:19

Default
7519:10

deferred
7490:2

deferring
7487:8

deficiency
7566:10,11
,12

deficits
7510:3,7,1
0,13,19
7520:15

deficts
7510:12

define
7598:7

defined
7395:11

definitely

7471:4
7481:1
7569:10
7602:4

definition
7550:10

definitive
7450:19

degree
7371:8
7425:1
7467:6,8

delay
7374:22
7481:5
7603:14

delayed
7453:4
7496:5
7537:22

delays
7606:2

demand
7369:20
7372:17
7373:1,2,7
7384:10
7453:12,17
,19
7464:23
7478:19
7590:2,4,6
7609:24
7610:17,23
7618:6,10

demonstrate
7493:3
7615:1,3,1
7

demonstrates
7500:8
7605:14

department
7572:6

depe 7443:16

depen
7384:25

depend
7481:4
7609:2

dependable
7384:23,25
7385:3,12,
14 7387:24

dependent
7601:8

depending
7377:17
7416:5,17
7478:24
7510:14
7512:2
7528:21
7563:25
7574:5
7603:2
7604:21,22
7605:20

depends
7416:13
7434:6
7439:12
7443:17
7472:16
7479:7
7520:4

depict
7603:20

depicted
7448:8
7605:2

depreciation
7567:14

describe
7383:25
7386:1
7603:19

described
7496:18
7524:18

describes
7404:9

describing
7401:13

description
7369:2
7378:16
7384:2
7404:12
7496:17

descriptive
7430:23

design
7540:19
7552:15
7577:3
7579:16
7583:8

designed
7542:9,22
7572:23

designing
7580:23

designs
7401:23

desirable
7487:18
7490:12

destine
7385:20

destiny
7590:21

detail
7438:16
7475:20
7481:18
7498:25
7525:15

detailed
7481:14
7536:22
7541:24
7575:25

details
7433:23
7481:4

determinatio
n 7449:21

determinativ
e 7444:1

determine
7384:13
7421:4
7479:17
7502:3
7580:16
7587:6

determined
7491:25

determines
7453:17

determining
7407:7
7434:9

develop
7379:7
7402:4
7432:20
7570:24
7571:11

developed
7496:16
7574:21

developer
7379:15,16
,20
7380:1,18,
23 7441:11

developers
7379:17
7428:9

developing
7380:10
7571:5
7617:11

development
7366:10
7369:17
7372:22
7374:2,19,
22 7385:11
7387:22
7392:9,17,
23
7393:3,23,
24 7395:11
7400:6
7402:1
7407:10
7424:18
7425:2,6,7
,8,11,13
7432:3
7434:10
7436:5
7441:9,10
7452:19
7453:1
7467:2
7482:6
7508:5
7509:3,14
7524:19
7528:8,13,
17 7529:4
7530:11
7531:8
7542:11
7552:23
7553:2,6,9
,16
7568:24
7570:22,25
7571:25
7573:21
7577:3
7584:4,5
7589:22
7592:2
7596:17
7597:19
7601:8
7603:21
7604:15
7607:23
7608:12
7615:13,14
7617:8

devices
7372:25
7373:3

devil's
7521:11

Diana
7418:11
7434:17
7452:10
7457:16
7581:8

difference
7371:4,8
7372:3
7376:4
7405:11
7406:5,9

7412:17
7417:19
7420:7
7436:3
7448:6,7,12,17
7451:17
7472:7,10,23
7474:6,8
7477:10
7482:15
7498:18
7504:3,4
7509:2,7
7514:6
7520:21,23
7521:2
7552:9,18,19 7609:10
7610:16

differences
7416:6
7421:23
7451:22,23,25 7453:5
7559:17

different
7371:6,9
7373:3
7379:23,24
7380:21
7382:13
7389:11,18
7390:1,10
7393:25
7397:10,14
7399:20
7402:1,6,21 7405:1
7406:22
7412:11,15,19 7415:3
7416:9,16
7419:12
7422:7
7423:5,9,10,11
7425:13
7433:4
7441:20
7442:3,14
7444:12
7446:24
7451:18
7455:21
7456:5,11,12,15
7457:10,11
7460:13
7466:25
7474:4,13
7477:6,7
7488:4
7500:14
7501:14
7507:17,19,20,21
7523:13,25
7524:10
7525:4
7528:20,25
7531:1,24
7536:1,11,12 7542:5
7544:9
7546:13
7547:18,20
7553:2
7555:6
7556:11
7558:11,14
7562:22
7563:20
7564:5
7567:22
7570:19
7573:24
7574:6
7575:24
7576:1
7577:12,13,16
7578:1,3
7579:5,6,7,8 7580:5
7581:6
7598:17
7599:3,5,24 7600:4
7601:21
7603:4
7604:19
7605:13
7606:23
7607:16,17
7609:23
7615:13
7617:18

differentiate 7371:16

differentiation 7604:2

differentiator 7371:17

differentiators 7371:1

differently
7457:10
7602:25

difficult
7481:18
7530:25
7582:20
7617:9

diminishes
7453:19

direct
7390:5
7454:15
7521:1
7535:17
7549:16
7597:5

direction
7438:12
7469:22

directional
7542:10
7566:23

directionally 7585:18

directions
7523:25
7546:14

directly
7393:20
7406:22
7427:16
7541:21
7554:13

disadvantage
7396:21
7398:13

disadvantages 7525:9

disappointment
7488:24,25

disastrous
7516:7

discount
7390:14,22
7403:20
7405:1,4,10,14,18,22
7406:1,5
7408:18,19
7427:3
7446:20,21
7451:4
7456:8,12,17
7457:6,11
7497:4
7543:3,5
7561:17,22,24
7562:2,15
7564:2
7584:6,10
7589:2

discounts
7589:1

discovered
7555:5

discuss
7485:3
7506:15
7509:1
7565:4

discussed
7414:25
7415:2
7416:25
7428:24
7430:2
7431:14
7438:14
7477:16
7496:11
7504:15
7515:12
7524:25
7535:19
7589:19

discussing
7434:24
7441:1
7454:3
7475:6
7479:1
7510:1,2
7537:15
7553:7

discussion
7373:11,13,17 7375:2
7378:5,6,16 7380:19
7395:1
7399:18
7400:2
7417:13
7421:14,20
7427:2,4
7430:15
7433:25
7441:17
7454:11,14,17
7484:8,17
7487:8
7496:1
7502:15,16
7506:13
7507:15
7508:2
7511:25
7512:14
7517:4
7519:5
7524:7
7526:19
7528:2
7538:23
7541:11
7548:17
7554:6
7570:14
7572:5
7584:9
7586:7
7590:17
7596:13,21

discussions

7424:11
7570:12
7580:10
7584:7

displayed
7564:5

disposition
7441:18
7489:9

disproportionate
7374:10,13

distance
7614:3

distant
7607:3

distinction
7382:23
7383:18
7389:2,5
7396:3
7448:9
7511:13
7615:20

distinctions
7390:24

distress
7423:7
7516:2
7566:20,22

distributed
7431:22
7450:18
7469:21
7505:23
7588:21
7602:25

distribution
7389:17
7411:24
7558:3,4
7559:7
7590:4

distributional 7388:12

distributors
7558:19

divergences
7581:2

diversities
7496:23
7498:16
7500:4

diversity
7498:16

divided
7566:7

dividends
7530:17

doable
7587:19

document
7369:10
7433:21
7494:19,24
7505:25
7507:16
7538:18
7556:8
7559:22

documents
7369:14,15
7480:3
7495:5
7505:23
7506:4
7535:5,6,13 7557:4,6
7558:17
7565:1,10

dog 7437:9

dollar
7396:10
7400:14
7406:4
7531:24
7532:1,5

dollars
7395:15
7396:10
7397:6,20
7404:17
7425:11
7434:10
7441:24
7498:2,8
7531:13,16
7532:9
7545:5
7571:5
7597:15
7599:16
7617:11,15

domestic
7374:3,16
7386:6,23
7387:10,25
7388:2
7392:13,15
7411:5,6
7412:6
7463:17
7468:11,21,23 7470:8
7471:22
7472:11
7475:7
7553:21
7554:16
7584:3,11
7585:6
7590:5,12
7591:4
7595:11,14
7604:1
7606:7
7610:2

domestically
7374:6
7427:10

Dominion
7506:21

done 7408:24
7409:11
7413:9
7424:6
7431:22
7441:23
7442:9
7450:9
7464:6,14
7466:13
7485:18
7516:22
7520:9
7542:1
7545:4
7551:4
7559:17
7563:19
7570:10
7599:18
7616:14
7617:6

double
7475:3

Douglas
7367:7

downside
7381:10
7422:25
7437:22
7594:8

dozen
7605:4,7

drag 7529:24

Dramatic
7517:15

dramatically
7516:20
7531:7
7547:25
7606:15

draw
7389:1,5
7508:1
7530:16,20
7579:22

drawn
7372:23

dreams
7414:19

drive
7516:20

driven
7547:24

drivers
7379:24

drives
7546:11

drop 7496:21

drought
7468:6
7515:16,20
7516:1,24
7517:5
7523:7,20
7540:9,25
7568:23
7601:9,23,24
7602:1,4,6,14

droughts
7512:22
7591:14

drove
7547:25

DSM
7369:9,10,13,16,21
7403:6
7410:5
7470:17
7471:13,20
7473:5
7477:18,19
7478:6,9,13
7494:8,10,16,19,20,24 7495:2
7496:25
7497:14
7498:5,7,9,11,24
7499:22
7500:3,7,9,11,22
7501:15,18,20,22
7502:4,10,17,20,21,24
7503:10,14,17,19,20
7504:3,9,10,24
7505:14
7533:11
7538:2,3
7571:23
7585:19
7598:12
7618:6,11

due 7418:21
7497:14
7498:11,12

7499:25
7549:18

duplication
7488:9

during
7423:5,10
7464:21
7516:24
7540:9
7544:14

E

earings
7550:20

earlier
7436:18
7440:24
7454:3
7477:16
7479:6
7498:6
7503:15
7520:2
7552:24
7581:11
7587:1

early
7380:12
7436:21
7476:25
7543:25
7544:1,14,
23 7604:11

earn 7521:16

earning
7602:10

earnings
7383:3,5,6
,10,11
7401:20
7402:15,21
7407:11,13
7456:25
7548:20
7549:15
7550:3,5,8
,12,22
7602:8

earns 7416:1

easily
7531:3

Easter
7490:4
7491:25

econo
7485:12

econometric
7563:22

economic
7369:11
7383:14
7392:20
7393:8,24
7434:13
7445:9
7448:14
7455:21,24
7459:15,21
7461:5,9
7463:10
7477:1,9
7485:11
7494:20
7495:1
7497:8
7501:19
7503:21
7504:13,14
,23
7505:13
7519:23
7530:11
7533:6,7
7534:21
7536:1
7544:9
7545:4
7551:15
7552:15
7553:8
7557:22
7563:18
7570:9
7583:20
7598:25
7614:22

economical
7424:10

economically
7388:8
7410:7
7477:2
7478:9
7598:15

economics
7401:9
7406:21
7432:17
7437:12
7461:3
7463:9
7501:20
7502:18,20
7536:5

economists
7395:2
7486:25
7491:24

economy
7507:3
7529:13,24
,25 7530:9
7539:19
7547:24
7564:5

ED 7495:8,24
7499:8,17
7501:2
7504:6,8

effect
7389:22
7408:7
7423:4,8
7465:20
7501:5
7552:12
7585:22
7592:11
7602:9
7616:16

effected
7432:7

effects
7423:2,3

efficiency
7474:12
7486:14,21
7488:13

efficient
7379:19
7486:17
7487:9
7488:1

effort
7431:10
7570:23

eight
7423:9,22
7559:15

eight-five
7561:2

either
7377:20
7379:4
7381:17
7388:21
7406:19,23
7428:5,22
7430:7
7445:21
7456:25
7458:20
7464:10
7523:10
7596:15
7605:22
7609:7,13

elasticity
7516:10

electric
7378:21
7475:8

electricity
7372:25
7373:2
7382:4
7398:22
7412:4,6,7
,14,18,24
7413:6,17
7416:19
7423:18
7476:7
7478:17
7558:18
7588:3,10
7610:24

electronic
7372:25
7373:1

element
7439:25

elements
7474:4
7499:21
7575:4

elicit
7572:24

eligible
7619:4

else
7500:5,13
7503:5
7515:19

elsewhere
7456:16
7476:9,14
7530:2,13

embedded
7401:3,12
7404:7,9,2
3 7417:15
7543:16
7548:17
7602:24

employed
7375:22

encompass
7409:16

energy
7371:9
7384:23,25
7385:3,12,
14,15,16
7387:24
7416:14
7426:3,7
7477:24
7527:2
7556:5
7559:23
7569:19
7599:1

enhance
7526:21

enjoy 7619:5

enormous
7439:12

7526:11

ensure
7537:5
7566:4
7615:9

ensuring
7604:7

entail
7528:17

entailed
7524:10
7529:13

entails
7478:9

enter
7505:22

entered
7571:20

enterprise
7551:14
7552:21
7554:5

entire
7399:7
7478:23
7481:2
7514:19
7521:3,8
7610:24

entirely
7382:2
7398:25
7468:20
7517:6
7548:3

entirety
7483:4

entitled
7369:10
7494:19,24

entity
7429:6
7440:6

environment
7372:16
7391:22
7517:5
7539:19

environmental 7400:1
7424:25
7441:22
7448:23

equal
7407:17,20
7415:23
7498:5

equally
7399:11

equation
7407:23

equity
7383:4,5,7
7401:3,12,20,22,23,25
7402:2,15,16
7404:8,23
7405:2,4
7408:20
7417:15,18
7427:20
7428:15,17
7429:11,18
7456:23
7548:18
7550:24
7551:5,10,13,14,18,22,24,25
7552:2
7553:4
7554:7,22
7555:2,24
7556:3,12
7557:7,15,21
7559:6,9,10,25
7560:6
7561:21
7563:3
7564:8
7567:19
7604:9

error
7499:15,18

especially
7488:2

essence
7396:12
7406:8
7430:11
7534:6

essentially
7370:21
7380:22
7402:20
7496:18
7498:1
7549:5
7605:8
7608:14
7609:1,7

established
7540:20

estimate
7533:22
7574:22
7603:25

estimated
7453:2
7531:16
7555:5

estimates
7388:2
7484:21

et 7448:24
7516:11

evaluation
7395:10
7396:25
7397:16,17

evaluations
7545:4

evening
7370:6
7492:10

event 7516:7
7606:20

events
7519:18

eventuate
7584:12

everybody
7426:20
7431:22
7442:20

everyone
7414:7
7420:4
7442:11
7572:8

everyone's
7370:4

everything
7488:1
7497:11
7500:5,13
7503:5
7584:8
7593:21

evidence
7370:25
7371:15
7373:16
7375:10,23
7386:5
7387:9
7388:5
7390:17
7394:15
7395:18
7410:3
7418:2
7433:14
7438:24
7439:11
7444:2
7462:25
7487:3
7497:15,16
7500:2
7515:8
7519:5
7522:2,5
7535:18,19
7536:15
7537:1
7538:11
7548:22
7554:20
7556:3
7583:23
7587:21
7597:5,22
7614:19
7615:25
7616:4

evident
7531:19
7556:15

exact 7455:3
7522:24
7562:1
7568:10
7586:17

exactly
7439:1
7496:17
7529:21
7570:10
7593:15
7613:4

examinations
7444:7

examined
7445:24
7604:20,23

examining
7439:6
7531:22

example
7385:5
7390:3
7402:7
7415:9
7446:6
7450:24
7470:23
7471:12
7475:24
7476:2,20
7477:17
7480:20
7481:20
7482:23
7483:12
7498:12
7502:8
7511:5
7513:2
7515:14
7517:9,11
7526:20,21
7546:18

exceeds

7557:22

Excel 7469:6
7577:6
7579:13

except
7376:18
7497:20

exception
7428:3

exceptions
7546:10

excess
7384:23,25
7385:3,11
7549:5
7591:8

exchange
7498:16

exclude
7582:24
7583:5

excluding
7581:24

exclusively
7419:1
7428:3
7558:2

excuse
7384:22
7394:20
7476:12
7528:17

execute
7579:16

execution
7434:7

exercise
7422:6
7439:9
7502:6,9
7508:13
7553:1

exhaustive
7597:13

exhibit
7369:2
7370:21
7375:6
7386:16
7387:5
7394:15
7398:2
7400:19
7404:14,21,25
7421:18
7430:17
7434:18
7444:21
7447:7
7469:3,4,12
7493:23,25
7494:7,11,13,22,24
7495:16,25
7501:5
7503:9,11
7504:25
7505:16,24
7506:4,14
7507:14
7509:25
7535:7,12,18 7537:20
7538:6
7563:22
7565:1
7571:20,21,23
7572:14
7581:9
7618:4,9,15,19

exhibits
7368:3
7369:1
7493:18
7501:17
7617:24

exist 7373:8
7517:22
7527:7
7616:22

existed
7566:12

existing
7417:2,7
7479:4
7566:4

exists
7410:25

exp 7401:12
7463:19

expect
7396:4
7490:11
7492:18
7528:2
7593:11,14

expectation
7492:19
7517:7

expected
7385:15,25
7407:8
7427:13,14
7430:6
7435:14,15
7437:17
7438:19,21
7439:3,20
7447:14,18
7467:12
7476:7
7513:6
7515:1
7519:1
7539:18
7553:20
7581:4

expecting
7484:18
7580:16

expeditious
7587:13,16

expended
7402:12
7617:4

expenditure
7571:9
7597:14
7598:4
7599:15
7602:5
7606:1
7617:9

expenditures
7426:4
7483:3
7567:21
7598:3

expenses
7528:18

expensive
7466:5,6

experience
7459:4
7593:23

experienced
7593:22
7605:20

expert
7477:8

expertise
7525:12

experts
7448:11
7556:11

explain
7401:16,18
7454:24
7469:14
7493:4
7565:25
7576:3
7583:24
7603:15
7608:10
7609:11

explained
7496:3

explaining
7503:7

explanation
7463:14
7488:14
7495:14
7503:23
7565:19

explanations
7503:2

explicit
7547:9

exploited
7525:23

explore
7376:3
7410:24
7421:22
7431:16
7442:18
7506:12
7522:2

explored
7440:3
7526:14
7529:12

exploring
7449:17

export
7374:3,4,10 7385:17
7388:1
7392:11,12,18
7393:4,16,22 7394:2
7398:14
7412:22
7413:7,9
7417:2
7424:20
7428:25
7429:1,17
7430:18,20,23
7437:22
7449:25
7452:21
7453:16
7497:4
7498:22
7512:21
7523:21
7525:19
7526:2
7537:17
7538:12
7539:20
7554:16
7570:7,17
7590:11
7606:18
7609:25
7610:2,13,15,20

export-import 7594:11

exports 7378:16 7384:21 7389:23 7390:6,9 7393:18,19 7411:9 7413:2 7468:19 7472:16 7496:20 7605:9

exposed 7385:24 7386:2 7390:8 7392:11,18 7393:15 7394:2 7413:7,13

exposes 7374:4

exposure 7378:10

expressed 7525:6

expressing 7488:24

expression 7536:17 7565:21

extend 7496:22 7548:13

extended 7389:20 7523:23 7593:2 7599:2

extension 7498:16

extensive 7395:18

extensively 7484:15

extent 7378:23 7419:3 7431:5 7433:15 7434:1,6 7485:21 7550:18,23 7554:8 7565:4 7581:14 7595:12

external 7590:8

extra 7436:20 7506:7 7575:9

extreme 7514:21 7597:16

extremely 7390:23 7487:20 7582:20 7590:22 7602:23

eye 7401:24

F

fabulous 7490:6

face 7371:23 7372:2 7478:18 7524:24 7529:20 7606:8 7610:10

facilities 7383:9,11 7385:24 7387:21 7392:11 7399:3 7402:4 7475:24 7542:6 7558:10,11 7598:13,14

facility 7383:15 7384:8,11,14,16,17,20 7385:20,25 7386:12,13 7393:10,12,15,17,19 7412:21,22 7428:14,15,20 7517:13 7575:10 7597:15

facing 7456:20 7459:8 7478:20 7490:8 7602:4

fact 7409:16 7429:4 7431:4 7445:20 7460:1,9 7465:19 7508:24 7512:1,7 7517:21 7519:11 7526:9 7532:1 7551:24 7555:6 7558:9 7561:25 7565:3 7581:4 7600:12 7602:14 7611:19 7614:13 7616:24

factor 7429:19 7434:8 7523:15 7540:4

factors 7407:7 7448:21,25 7500:15 7514:1 7597:8,12

fair 7372:8 7373:24 7388:20 7396:9 7398:7 7400:9 7423:13 7425:25 7434:16 7444:14 7454:8 7465:15 7466:19 7471:1 7474:16 7479:7,9 7481:21 7482:1 7509:4,5 7510:5,17 7511:3 7514:18 7521:13 7522:3 7524:12,18 7542:8,14 7544:5

fairly 7419:4 7424:9 7466:6 7469:5 7547:24 7566:7 7588:1

fairs 7447:9 7608:11

fall 7420:13 7459:20 7571:9

fallen 7478:20,23

Falls 7392:24 7393:5

familiar 7400:23 7401:6 7415:19 7557:17

families 7490:5

fare 7445:23 7584:22

farm 7427:24 7428:9

farms 7427:14,18 7428:2

fashion 7389:14

father 7386:25

fault 7433:7,10

favourable 7409:6 7437:20 7466:22 7482:11 7591:25 7592:1

favourite 7375:9

favouritism 7397:18

features 7422:19,24

fee 7459:11,12 7528:3

feel 7445:11

fees 7522:22,23

fell 7457:20

felt 7409:7 7579:20

Fernandes 7367:10 7493:11,15,16 7494:6,18 7495:4 7504:22

fifteen 7379:10 7380:3,9 7385:6 7426:12 7465:17 7467:4 7476:3 7526:24 7605:23

fifth 7446:18

fifty 7373:6 7458:7 7461:25 7462:2,7 7464:6,11 7470:3 7548:13 7552:3 7574:12 7579:5

Fifty-eight 7565:10

figure 7404:7,15, 23 7406:11 7422:12 7451:14 7543:15 7583:23,25 7603:14

figures 7455:18,25

file 7493:18 7505:7 7617:24

filed 7485:11,12 ,13 7486:4 7492:5 7504:23 7505:4,15 7533:9 7534:22 7595:22

filing 7424:11 7431:21 7554:24 7571:19 7585:12 7596:7

filings 7493:12

final 7526:20 7559:24 7571:15

finally 7467:23 7494:18 7519:1 7575:6

finance 7401:10

finances 7602:9

financial 7407:7,8 7410:2 7419:18 7420:9 7423:6,7 7424:10,23 7448:14 7469:18 7485:12 7516:2 7525:13,18 ,24 7533:22 7536:1,8 7537:6 7542:18 7549:2,4 7550:19,24 7551:19 7552:4 7553:24 7554:5,14, 15 7565:22 7566:1,19, 22 7568:23 7569:7,10 7572:11 7573:12 7574:2,3,4 ,17,20,23 7575:2,14, 16,17,18,2 1,25 7577:4,11 7578:5 7582:22 7583:5,7,1 3,15,17 7584:17 7587:2 7601:6 7604:8,12, 17 7613:3 7614:22 7616:2

financially 7407:18 7511:19 7515:15 7523:18 7601:14

financials 7533:20

financing 7549:10,14 ,17,19

finding 7446:23

findings 7444:19,21

finely 7416:5

finer 7483:6

finger 7524:2

finish 7383:16

finishes 7503:22

finishing 7391:3 7582:23

fired 7380:1,18, 23

firm 7378:7,8,1 7 7379:1,10 7479:15 7481:8

first 7380:8 7384:22 7388:25 7391:3 7403:1 7418:8 7445:2 7452:15 7454:14 7464:4 7493:19 7496:7,8 7497:22 7506:6 7545:22 7547:2 7557:6 7562:25 7596:23,24 7604:18 7605:4 7618:3

firstly 7415:1 7435:14 7509:25

fit 7488:12 7490:9 7519:5 7618:5

fits 7596:18

five 7423:23 7427:19,22 7450:17 7460:4,6 7464:8,9,1 0 7465:10,14 7488:5 7519:1,22 7544:22 7560:4 7570:16 7579:12 7580:4 7584:4 7591:2 7604:19 7611:17,21 7619:5

fixed 7412:25

flag 7566:23

flat 7609:2

flavour 7524:9

flexibility 7466:17

flip 7375:6 7509:24 7558:16 7577:6

flipped 7519:12

flow 7483:4 7527:10 7528:7,12 7529:3,7 7591:14

flowing 7370:7 7527:14 7529:2

flow-related 7576:16

flows 7525:13 7568:14 7575:2 7593:10,11 ,19 7607:20

fly 7580:3

focus 7377:2 7390:19 7403:3 7468:20 7469:13

focussed 7386:23 7470:10

focussing 7388:24,25

folks 7503:1

follow-up 7414:23 7463:20

7612:8
food 7572:9
fool 7420:20
footed 7517:19
footing 7517:18,21 7519:25
forecast 7372:11 7476:3 7544:13 7559:23 7560:12 7584:17
forecasts 7420:2 7451:8,9,10
forego 7523:8 7526:25
foreseeable 7481:10
form 7472:15 7530:17,18 7587:5,7
formas 7523:5
format 7587:12
former 7522:12
forming 7472:13
forms 7598:17
formula 7411:7,8 7417:18 7418:2 7557:1
formulaic 7556:22
formulas 7417:19
formulate 7588:9
formulation 7376:21
forth 7382:11 7474:5 7530:12 7604:10
fortune 7377:19 7572:10
forty 7579:5
forty-eight 7450:16,22 7451:3 7453:13 7463:6 7470:7,11 7574:11 7584:13,14 7607:11
forty-eighth 7606:23
forty-five 7580:6
forty-nine 7438:4
forward 7373:5 7466:3,6 7490:23 7520:15 7542:22 7548:10 7577:22 7615:1 7616:7
fourteen 7488:5 7496:9 7500:22,23 7509:15 7612:1
fourth 7434:20 7502:23
fraction 7472:10,11 7478:14,15 7512:23 7514:21 7515:3 7516:4
fragile 7519:25
fragility 7423:6
frame 7450:23 7471:9
frankly 7456:7 7614:25
freeze 7523:8
frequency 7475:23
Friday 7430:21 7613:2
front 7410:21 7495:18
froze 7466:16
fuel 7496:24 7609:21
full 7384:17 7422:23 7441:16 7444:10 7480:22 7538:3 7539:22 7552:17 7564:3 7573:5,22 7575:23 7578:17 7606:9
fuller 7495:15
fully 7428:4 7435:17 7526:13 7529:12 7548:20
fun 7576:23
functional 7577:10
fund 7518:9
fundamental 7547:23
fundamentally 7372:19 7373:3 7379:17,20,23 7380:20 7385:22 7413:15 7443:17 7468:11 7531:8,13 7613:14 7614:1
funded 7479:5
funding 7549:20
funds 7397:8
future 7410:10 7419:10 7420:11,13,15 7421:1 7423:22,23 7424:5 7425:15 7433:7 7481:10 7484:2 7512:21 7515:25 7548:14 7570:11 7581:18 7583:4 7593:21 7599:9 7600:18 7607:3,5,6 7617:7,14

G

GAC 7367:14
gain 7562:8
gaining 7570:7
Gange 7367:14
gas 7369:4,8,12 7372:21 7378:22 7379:4,15,16,17 7380:1,17,23 7395:19 7396:2,4,21 7398:3 7399:4,11 7402:9,13 7403:8,15,24 7405:21 7409:17 7410:12,14,15,16 7434:24 7435:2 7436:5,7,15,17,21 7437:12 7446:17,19 7451:8 7470:15,17 7471:6,8 7472:5 7473:15,17,24 7474:11 7481:19 7483:13 7493:20 7494:2,10,15,20 7495:2 7496:4,5,12,18 7497:14 7500:21 7502:10 7503:15,17,22 7504:12,15

,16 7508:4,11, 13,20,24 7509:3 7531:19 7584:6,21 7592:1 7598:12 7603:21 7605:3,16 7606:20,21 7607:4,13 7608:11,17 ,23 7609:6 7613:20 7614:23

gather 7476:18

gauged 7517:2

GDP 7507:4 7511:7 7513:3 7520:4,18, 23

gen 7496:2,3,4 7498:24 7499:21,22

gener 7607:1

general 7390:2 7412:11,12 ,15,19 7413:10 7472:13 7497:5 7508:25 7584:25

generally 7427:18 7529:8 7546:9

generate 7591:8 7606:18 7612:14,23

generated 7383:6

generates 7530:8

generating 7508:25

generation 7369:6 7380:5 7480:6 7493:22 7494:4 7496:4,5,6 7500:20 7525:20 7529:17,18 7539:6 7542:6 7558:9,20, 23,25 7559:13,18 7598:14,17 7608:1 7609:20

generational 7607:15

Generation's 7558:25

generic 7376:8 7557:15

gentlemen 7532:18 7535:2 7571:17

geology 7476:20

George 7367:19 7489:7

gets 7408:9 7409:11 7428:14 7435:1 7456:24 7465:22 7522:7 7524:14

getting 7372:14 7380:15,21 7408:9 7418:5 7421:12,14 7487:2 7488:14 7490:20 7500:21

given 7374:16 7382:4 7384:15 7391:15 7398:18 7409:14,16 7410:5 7418:20 7427:21 7446:3,9,2 5 7452:1,2,2 3 7477:6 7484:16 7495:11,13 7502:19 7517:9 7519:11 7521:5 7524:13 7548:8 7562:22 7566:7 7568:22 7572:4 7574:25 7575:15,20 ,23 7582:25 7591:5,6 7592:24 7611:19 7612:4 7614:15,16

gives 7409:18 7460:20

giving 7418:2

glad 7449:8

glance 7402:24

global 7547:23

globally 7548:1

gone 7477:17 7513:4 7556:21 7614:3 7615:8

Gosselin 7366:13

Gov 7465:19

governing 7426:1

government 7388:13 7389:6,9,1 3 7390:1,6,1 0 7393:13,14 ,18,20 7394:5,7 7406:20,23 7407:4,6,1 6,18,22 7411:1,9,1 4 7412:10,16 7426:2 7429:5,6 7440:7 7457:4 7466:12 7468:22 7491:1,3 7512:4 7516:3 7517:5 7518:10 7519:8 7521:21 7522:14 7527:14 7528:23 7529:3 7530:8,21 7535:21 7539:12,18 7548:4 7554:3 7570:1,8 7574:24 7615:5

government-guaranteed 7457:1

governments 7517:6 7531:1

government's 7412:23 7413:10,11

Governor 7465:20

GRA 7498:16

gradations 7483:7 7512:13

Grant 7366:17

granularity 7542:17

graph 7509:15 7608:7 7611:9 7612:14

graphs 7436:14 7603:2 7609:12

great 7386:24 7431:7 7465:13 7525:15 7531:21

greater 7413:5 7416:7 7423:6 7438:16,19 7439:4 7475:20 7526:1 7530:1 7548:7 7595:14

greatly

7587:13,15

grew 7507:9

grid 7373:12

ground
7608:14
7609:7

grounds
7511:20
7570:15
7616:1,4

group
7415:3,8
7453:21
7477:21
7478:23

groups
7477:19

grow
7507:3,10

growing
7378:23
7384:10

grows
7453:19

growth
7507:4,10
7530:9

guar 7554:3

guarantee
7377:13
7459:11,12
7518:11
7522:12,23
7528:3

guaranteed
7429:6
7519:10

guarantees
7522:23

guess 7387:7
7430:1
7435:24
7487:15
7491:23
7510:9
7534:16
7612:22
7616:21

guidance
7435:13

gut 7410:20

H

Hacault
7367:17
7368:10
7408:5
7413:20,22,24
7414:1,9,10,18,21,22
7415:7,13,22
7416:8,21
7417:5,12,25 7418:18
7419:6
7420:23
7421:11
7422:11
7424:7
7425:18
7426:8,19
7427:1
7430:1,14
7431:13
7432:1,11,13,14
7433:9,24
7434:11,17
7435:6,9,21
7436:10,13
7437:1,5,16
7438:1,10
7440:12
7442:16,17
7443:1,7
7444:6,17
7445:13,18
7447:6,13,17,22
7448:10
7449:2,16,23 7450:6
7452:9
7454:1,10,22
7455:5,10,14
7457:15,25
7458:5
7461:15,19
7462:12,23
7463:13,21
7467:21,22
7469:1,11
7470:14
7471:5,8,17,19,25
7472:12,21
7473:1,10,18,23
7474:9,18
7475:1
7476:17
7477:11
7479:2,10
7480:2,12
7482:1,16
7483:9
7484:7
7485:13
7487:13,14
7488:20,22
7492:22
7505:20,21
7506:6,10,11,23
7507:1,8,12,25
7508:7,22
7509:6,10,18,23
7510:11,18,24 7511:6
7514:5
7515:7
7516:8,13
7517:8,17
7519:3
7520:12
7521:10,15,19
7522:1,20
7523:3
7524:12
7525:3
7526:4,18
7527:6
7581:10

half 7486:18
7489:25
7492:23
7496:11
7506:7
7514:8
7522:11
7544:1

hand 7449:5

handed
7495:16,19

happen
7467:12
7473:12
7481:10
7483:20
7512:15
7581:1
7583:4

happened
7467:11,12
7615:11

happens
7393:12
7483:5
7503:11
7516:10

happy
7491:23
7548:3

hard 7487:20
7554:17

harder
7373:7

harm
7449:17,22

hasten
7610:12

haven't
7437:17
7444:15
7523:5
7526:5,13
7551:18

having
7372:13
7400:2
7424:12
7436:19
7438:11
7452:12
7454:22
7456:10
7473:2
7487:22
7488:10
7498:21
7504:14
7548:14

head 7436:7
7527:22
7530:24

heading
7519:9

health
7407:7
7554:5
7569:10
7574:17

hear 7486:1
7499:2
7500:5
7525:14
7592:10

heard
7485:15
7492:15
7540:16
7544:17
7616:12

hearing
7430:21
7437:8
7477:16,17
7492:14
7499:5,24
7501:10
7568:4
7618:25

hearts
7395:3
7486:25
7491:24

Heating/cooling
7372:24

heavily
7406:15

7412:5
heavy 7398:3
hedge 7466:5,6
held 7366:20 7566:16 7583:14
Helga 7367:8
help 7401:17 7438:11 7515:9 7583:5 7600:14
helped 7463:14
helping 7422:12
helps 7582:23,24
hence 7407:11
henceforth 7509:16
he's 7388:18 7432:9
hesitant 7579:20 7585:22
hesitate 7430:10
hesitating 7613:10
hesitations 7579:16
hey 7414:19
hiding 7489:20
high 7380:10,12 7381:9 7428:16 7438:22 7455:24 7457:7 7467:6,8,16,18 7473:2,17,18,25 7474:1,7 7476:5 7477:22 7508:3,10 7526:23 7544:13 7546:7,8,11,12,23 7561:17 7563:17,24 7564:2 7574:20 7575:9 7593:19 7595:5,17 7599:1 7609:13
higher 7371:23 7374:1,13 7407:21 7415:25 7429:2,17 7438:18,19 7439:3,16 7442:7 7446:21 7457:12 7459:8 7462:16 7463:11 7474:4 7477:24 7478:18,21 7483:24 7508:9 7510:21,23 7513:5 7529:20,21 7547:4 7553:5 7559:11 7562:9 7569:2 7594:4,11 7606:12 7607:6,14 7610:15,20
highest 7520:17 7559:5
highly 7390:2
highs 7413:2,8,9 7439:3,16 7594:11
hindsight 7419:11
historic 7591:14
historical 7458:6,10 7459:4 7462:24 7465:7 7544:21 7546:14
historically 7459:14 7460:19 7467:10 7544:8
history 7544:16 7570:5
hit 7462:13 7523:7
Hold 7386:24
Hombach 7367:3
home 7587:10
honest 7433:3 7616:12
honestly 7483:1 7560:18
hooked 7415:14
hope 7370:5 7535:3
hopefully 7525:4
hopes 7572:12
hoping 7417:6 7545:11
horizon 7372:8,11 7374:5 7385:2 7451:4 7476:2
hot 7505:5
hour 7430:3 7492:23,24,25 7493:10 7506:8 7610:24
huge 7497:7,8,12
Hugh 7366:17
human 7486:23 7487:5 7490:3
humble 7405:8
hundred 7402:22 7404:3,16 7420:12,14 7438:3 7460:20,24 7498:8 7500:23 7503:18 7593:14
hundreds 7579:9
hundred-year 7460:25
hurdle 7602:1
hydraulic 7594:12
hydro 7366:7 7367:5 7369:15 7373:21 7374:4,21 7376:2,25 7377:25 7378:10,21 7379:3,12,22 7380:8,20,24 7382:1,6,11,15 7383:4,5,8,13,25 7384:24 7385:7,18 7386:15 7387:4 7389:7,20 7390:11 7393:3 7396:12 7399:8 7400:19 7401:21 7402:14,16 7404:9,14,23 7406:24,25 7407:6,8,10,17,22 7408:9 7409:19 7410:5,8 7411:2,16 7414:19 7415:14 7417:2,17,25 7418:20 7419:2 7425:9 7428:23,24 7429:5,8,11,21 7431:6,18 7432:5,16 7434:18 7435:16 7436:19 7437:6 7440:5,6 7443:13 7444:9 7445:5 7448:4,5 7449:7,13,

19,20
7455:20
7456:24
7457:21
7458:19
7459:8,13,
16,22
7460:2
7461:3
7463:22
7464:5,16
7465:21
7466:2,8,1
0,20
7467:3
7468:17,25
7469:3,12,
20 7474:2
7475:15,19
7479:21
7481:15,23
7483:21
7485:10,18
7486:2
7487:16,19
7489:1
7490:1
7492:7
7493:23
7494:7,11,
22 7495:9
7496:13,15
7497:10
7500:2
7502:9
7504:23,25
7505:13,15
7507:14,16
,22
7511:19
7512:2,9
7514:10,14
,19
7515:14
7516:1,9,2
4
7518:3,9,1
0
7520:16,25
7521:4,5,2
3
7522:6,8,1
9
7523:6,18
7524:4,22
7526:22
7529:16
7530:21
7532:7
7533:5,12
7535:9,12,
25 7536:5
7537:4,5
7538:1,6,1
1 7539:13
7540:19
7541:5
7545:9,16
7548:21
7549:1,17,
20,22,25
7550:11
7551:11,13
,15,21
7552:16,19
,20
7553:3,8,2
5
7554:14,23
7555:11
7560:12
7561:19
7566:16
7567:25
7568:17
7569:2
7570:15
7571:20
7573:25
7574:2,19,
23
7575:5,8,1
1 7576:15
7577:23
7578:19,22
7579:21
7583:15
7584:18
7587:1
7590:7,11,
23 7591:9
7593:10,14
,22
7594:5,20
7597:18
7600:4,10,
11 7601:14
7602:8
7604:8
7605:9
7606:16
7607:21
7609:15,21
7612:4
7613:1
7615:17
7618:4,15

hydroelectric 7371:9
7379:8
7380:11
7399:3

hydrological
7577:14
7578:2,3,1
1,14
7579:8
7600:15
7606:5
7609:23

hydrologies
7574:19,21

hydrology
7371:10
7372:2
7384:22
7422:21
7570:6
7573:20,24
7574:3,6,9
,14,25
7575:4
7576:1,24,
25
7577:7,16,
21,24
7578:6,16
7579:14
7580:21
7588:24
7590:16,17
,19,21,24,
25
7592:7,17,
25
7593:3,15
7594:8
7604:22,24
7605:5,13,
15,20
7608:23
7609:3

hydrology-based
7600:13

Hydro's
7366:9
7381:12
7384:19
7385:23
7389:12
7401:20
7402:5,8
7407:2
7422:16
7426:1
7435:23
7440:24
7449:8
7456:14,22
7462:4
7468:18
7489:22
7511:15,21
7512:5,7,2
3
7514:8,21
7515:3
7516:5
7520:21
7522:2
7525:22
7535:5
7536:15
7537:20
7540:25
7541:13
7542:16,17
7543:10,16
7544:13
7545:4,8
7549:9,15
7551:19
7554:21
7555:20
7556:3
7557:22
7566:4
7567:4,7,1
0
7569:8,10
7574:17
7575:14,16
,18
7580:17
7594:24
7596:6
7601:5
7606:3
7609:19
7610:5
7617:12

I

i.e 7387:22

I-165a
7545:9,16

I-27 7564:18

I'd 7374:13
7415:20
7431:15
7432:8
7434:2
7442:17
7454:13,14
7474:19
7479:12
7484:7
7491:20
7506:6,13
7507:12,25
7563:5
7564:9
7583:22,23

idea 7418:6
7434:9
7435:9
7509:1
7527:15
7577:10
7578:16
7583:4

idealized
7397:12

ideally
7514:16

identical
7388:8
7462:9
7499:19
7500:6,13

identify
7524:8

7588:2

identity 7475:20

Iderstine 7367:8

IEC 7367:24 7368:5 7370:13

IFF 7508:8

ignore 7423:2,4

ignored 7397:13

III 7398:6,19 7399:15

I'll 7370:9,10 7401:16 7418:4,12 7421:12,20 7422:3 7427:3 7432:15 7436:25 7437:3 7444:17 7454:16,17 7455:1 7457:18 7461:21 7467:23 7469:14 7475:3 7480:14 7482:3 7485:5 7495:18,20 7496:16 7507:13 7581:15

illustrate 7469:2

illustrates 7606:25

illustration 7508:23

I'm 7370:21 7374:12 7375:8 7390:14 7394:3,6 7395:23 7396:14 7400:21 7402:21 7407:14 7408:25 7409:15 7411:10 7415:18 7418:5,7,21 7421:2,17 7424:8 7426:9 7433:6,15 7434:22 7435:11 7436:5,9,11,24 7444:18 7453:6 7458:8,17 7465:15 7471:2 7473:20 7474:24 7485:25 7486:23,24,25 7492:16 7493:14 7499:6,14 7501:2 7503:25 7504:1,2 7515:7 7521:11 7522:13 7525:14 7527:17 7528:15 7532:18 7535:2 7541:9 7545:11 7547:19 7548:2,14 7549:12 7552:22 7565:17 7568:11 7572:8 7573:4 7576:5 7587:22 7593:12,13 7603:7 7612:3,12,16 7613:10,11 7616:11 7617:21 7618:4

immediate 7486:8

immediately 7573:8

imminent 7442:1 7615:22

impact 7388:12 7410:17 7416:17 7422:7,20,23 7424:23 7435:10 7440:24 7442:2,14 7452:25 7453:20 7459:12 7467:23 7472:1 7476:16 7477:1,2,9,18 7482:14 7499:20 7513:8 7529:24 7530:6 7539:18 7573:24 7574:18 7601:23 7602:6,16 7603:3 7606:25 7609:12

impacting 7441:3

impacts 7423:3,9,11,15 7468:10 7519:20 7533:10 7554:9 7574:16 7587:22

implementation 7577:4

implications 7400:5

implied 7543:15 7564:20 7565:18

imply 7477:6 7563:3

import 7417:1 7496:20,21 7497:7 7498:12,21 7500:3 7525:19 7526:2 7540:21 7541:5

importance 7400:2 7525:6 7530:20

important 7407:20 7416:3 7421:4,6 7424:3 7439:25 7451:22 7453:18 7465:8 7472:25 7537:2,3 7553:23 7554:2,3,4,7,10 7578:10 7590:22 7602:17,23

import-export 7594:2

imports 7540:10,25

impose 7487:19

imposed 7390:8 7391:25 7518:23

imposes 7389:6

impossible 7524:1

impression 7403:1 7453:24 7497:5

improvement 7405:17

improving 7569:7

imputed 7554:22 7555:24 7561:21 7562:3 7563:21

inaccurate 7420:16

inappropriate 7614:10

Inc 7558:20

inclination 7409:24 7453:8

inclined 7480:8

include 7405:3 7409:25 7445:21 7446:13 7474:4 7480:20

7482:6
7512:25
7538:2
7539:22
7554:15
7573:4
7585:2,4

included
7389:21
7402:5
7405:2
7418:25
7433:1
7452:2
7458:17
7480:3
7532:2
7541:16
7556:10,13
7557:3
7561:7,9
7564:25
7566:14
7575:5

includes
7452:18,20
7468:18
7483:1
7558:19
7613:5

including
7396:5
7398:5
7400:8
7429:11
7430:22
7433:7
7444:10
7485:12
7492:4,10
7500:17
7540:24
7554:21
7575:8
7591:14
7598:12,13

income
7389:15
7415:9,11,19,24
7416:1,9
7549:6
7550:2,7
7566:6
7567:11
7602:10

incorporated
7557:21
7588:24
7589:4

incorporating 7585:23

incorrectly
7424:9

increase
7416:12
7508:17,20,24 7522:3
7531:12
7607:12

increased
7415:16
7496:25
7529:23
7605:19

increases
7389:6
7422:7
7474:12
7529:13,25
7530:1,5
7551:1,2
7569:3
7601:6,10,15
7604:13,25
7605:11,15,22
7606:3,6,8
7608:24,25
7609:1

increasing
7477:21
7602:7
7609:6

increment
7425:16

incremental
7369:3,8
7372:13
7493:20
7494:1,9,14

incrementally 7425:22

increments
7385:5
7466:21

incumbent
7615:17

incur
7510:3,6

incurred
7398:5
7528:8

indefinite
7593:21

independent
7422:6

indicate
7479:16
7493:2
7505:3
7566:21
7585:18
7589:24
7598:7,20

indicated
7409:6
7411:4
7463:22
7493:17
7498:6
7502:17
7527:12
7528:4
7592:6
7612:9

indicates
7588:7
7601:5

indicating
7461:23
7497:12
7498:10
7507:17

indication
7502:18
7505:6

indicative
7419:17
7420:9
7439:9
7466:14
7467:16
7542:9

indicator
7465:8
7497:6

indifferent
7415:25

individual
7413:16
7455:18
7478:1
7574:25
7599:7
7610:7

individuals
7390:3
7412:13

industrial
7389:25
7412:8
7416:18
7423:14,16
7472:9

industrials
7415:4
7471:11
7472:2
7526:22

industry
7516:10

inevitable
7432:22

inevitably
7602:7

inferred
7508:19

inflation
7543:11
7546:8,11,15
7547:10,25
7548:3
7555:2
7561:25
7563:11
7601:7,16
7604:7,14,21 7605:6
7606:9
7607:9,13,14

inflows
7591:8

inform
7444:23
7539:25

information
7374:23
7418:23,25
7419:2,3
7420:19
7440:4
7446:3,9,10,23,25
7447:4
7448:19
7452:13,24
7453:7,22
7460:21
7472:1
7475:19
7481:23
7482:17
7485:19,23
7486:4,19
7487:10,21
7488:11
7489:23,25
7490:21
7491:6,10
7492:4,7
7495:12
7501:9,17,25 7504:11
7505:4
7530:25
7531:22
7537:16
7538:13
7541:10,12,16,24
7575:25
7580:5
7584:20
7585:15,19
7586:7,9,15 7600:25

7601:1
7611:12,13
,23,25
7612:1,2,5
7613:6,13
7615:7,10
7616:8,9,1
3

informative
7542:10

infrastructu re 7408:14
7432:21
7539:22
7579:6,7,1
1,13
7580:20

infusions
7383:7

ingredients
7523:25

inherent
7561:21

initial
7370:22
7554:24

initiate
7507:15

initiative
7479:5

initiatives
7477:18

ink 7523:7

input 7587:7

insert
7588:15

In-service
7369:18
7572:1

insight
7419:19
7424:1

instances
7544:23
7605:22

instead
7372:12
7449:8
7483:18
7488:8
7522:15

instincts
7410:20

insulated
7393:21

inte 7599:14

integrated
7501:24
7502:6,8

intended
7572:23

intensive
7371:23
7372:2
7416:19
7594:12

intention
7505:7
7597:21

inter
7501:23

interaction
7575:3

interconnect ion
7442:19
7445:22
7447:2,3
7540:9

interconnect ions
7417:1

interest
7371:7,21
7380:12
7409:8,14
7445:14,16
7451:10
7458:6,10
7460:3,6,1
0 7461:1
7462:6,9
7464:17
7465:25
7481:9
7502:15,18
7518:22
7542:1
7544:3
7546:1,7,1
0,12,23
7547:3,6
7549:18,22
,25
7563:12
7566:4,6,7
7567:1,10,
18,23
7568:5
7588:9
7599:10
7604:9

interested
7409:15
7423:22,24
7456:13
7457:4
7470:2
7574:15

interesting
7446:7

interests
7535:20
7588:1

interfere
7534:1

intergenerat ional
7602:23
7607:1,19,
24

InterGroup
7440:14

interie
7612:20

interleaf
7608:6

intermingle
7501:23
7502:3

interpretati on 7596:16

interpreted
7480:7

interpreting
7579:19
7601:24

interrogator ies
7517:10

Interrogator y 7426:11
7477:13
7479:13

interrupted
7450:7

intertie
7424:20
7445:25
7526:1
7608:20
7612:12,20
7613:17

interties
7410:10
7525:16,19
,23

intervene
7448:22

Intervenors
7485:9
7486:1,7
7532:19

intervention
7568:13

intrigued
7503:25
7504:2

introduces
7503:6

introduction
7495:19

intuitively
7501:7

invest
7409:19
7412:21
7413:4
7430:5
7431:19
7432:18

invested
7550:13

investigate
7574:18

investigated
7438:13

investigatio n 7402:23

investing
7383:11
7410:3

investment
7376:16
7391:7,15
7399:7,16
7410:1
7423:19
7425:22
7427:7,8
7429:3
7432:2
7433:1
7438:18,20
7442:7
7443:9
7456:20
7475:22
7476:1,8
7478:10
7499:14
7500:17
7572:11

investments
7398:5
7422:23
7423:25
7475:24

investor
7375:22
7381:6
7382:17
7384:1
7391:6
7439:14,15
,17,18,24
7440:1,3
7456:23

investors
7383:1

7387:19
7391:8
7443:2
7456:17,20
7465:13

investor's
7456:19

involve
7411:5

involves
7409:17

IR 7427:18
7455:2,17
7456:5
7457:17
7460:13
7463:4
7474:19
7479:1
7598:10

IR-15
7427:12

IR-29
7458:11

IR-6 7517:12

IRP 7503:4,9

irrelevant
7412:3
7447:5

irrespective
7415:16

IRs 7438:15
7467:24,25
7470:12
7523:13
7546:5
7563:17
7596:4
7598:23

isn't
7411:18
7441:6
7609:21
7616:4

isolate
7435:10
7444:18

isolation
7429:13
7516:17

issue
7383:20
7397:18
7410:25
7411:15,23
7412:2,3
7414:25
7416:23
7422:3
7427:5
7429:1
7431:15
7433:11
7442:2
7444:1,16
7449:3,15,24,25
7455:3
7461:12
7463:10
7464:23
7466:23,25
7467:23
7468:3,15
7475:7
7479:1,12,21 7480:19
7489:22
7490:18
7497:7
7511:25
7515:12
7519:14,15
7540:5
7551:9
7562:6
7563:10
7609:24
7615:21

issues
7416:4
7419:12,23
7424:2
7448:23,24
7458:11
7488:7,15
7492:9,15
7499:12
7501:21
7519:7
7539:17
7554:4
7589:19

item 7468:24
7469:24
7576:16
7602:21

items 7537:1
7542:7
7567:11,14

it'll 7487:9
7545:12

it's
7373:22,25
7374:1,6,13,15
7379:24
7380:4,15
7382:5
7383:10
7384:14,17,22 7385:8
7392:4,8,12,13
7393:14,19
7397:18,19
7398:13,14,15,25
7399:6,7,12,14,20,21
7400:21
7401:8
7405:12
7406:25
7408:12
7409:13
7410:7,12,19,21
7413:14,15
7420:7,21
7421:4,5,21
7423:13,21
7424:3
7426:12
7427:5
7428:20
7434:8,9,19,20
7435:13,17
7436:4,9
7437:7,8,9
7439:11
7440:9
7441:14
7446:4,24
7447:14
7448:9
7449:20
7453:15,19
7454:12,16
7456:10
7457:1
7459:25
7461:8,13
7462:10,13
7464:9,10
7465:15
7466:19
7467:4
7468:23
7471:3,20
7477:13
7479:9
7481:17,24
7483:11
7484:13
7488:17
7492:7
7493:1,5
7495:19
7496:13
7497:19
7499:15
7503:10,25
7504:17,18
7505:23
7509:18
7511:21
7513:4,11
7514:3,8,9,24 7517:6
7518:24,25
7519:19,24
7520:10,16
7521:8,12,15 7522:4
7523:15
7524:1,5
7525:13
7526:7
7528:24
7529:22,23
7530:24
7531:17,20,21 7532:3
7536:11,12
7537:3,7
7538:1,12
7539:21
7544:10,15,21
7545:23
7547:4,5
7551:2,13,22
7552:5,15,20
7554:10,17
7555:9
7557:1
7558:13,24
7559:8,10
7560:20
7561:14
7562:1
7566:7,17,18,20
7567:6,7
7570:4
7571:2,12
7574:9,12
7578:10
7579:4
7581:4
7582:22
7583:6
7587:6,7,12 7588:18
7589:6
7592:24
7596:15
7597:13,17
7599:13,16
7600:13
7603:17
7605:8
7607:4,14,16 7608:3
7609:7,22
7612:11
7614:21
7615:8,12,14,16,21,22,23
7616:13,25
7617:10,13
7618:4,5,13,16,17

I've 7395:21 7426:21 7450:9 7453:7,24 7484:16 7540:16 7570:20 7582:7 7616:12,13

IX 7369:14 7505:24 7506:4

J

Jennifer 7367:9

Jessica 7367:22 7489:12

job 7466:11

jobs 7476:22 7530:11 7607:23,25

judge 7495:12

judgement 7565:22

judgment 7451:17,24 7490:22 7539:9,13 7566:19 7571:4,10,13 7582:6,12,15,19 7607:21 7615:24 7616:11

judgments 7419:20 7420:20 7452:5 7513:23

June 7483:24

jurisdiction 7384:9 7522:25

jurisdictions 7384:5 7423:18 7476:10 7527:13 7530:2

justification 7391:25 7425:12 7524:22 7527:25 7528:3

justified 7478:9 7571:6

justify 7615:19

justifying 7524:20 7528:11

K

Kapitany 7366:14 7395:1

Keeyask 7386:10,23 7387:9,14 7395:14 7396:11,13,20 7397:8 7399:9,17,25 7409:11 7424:19 7425:1,3 7434:24 7440:25 7441:22 7442:6,8 7445:21 7480:5,20,23 7482:6,11,18 7483:13 7502:25 7503:17 7531:8,17,18 7533:21 7537:16,21 7538:12,15 7539:3 7584:21 7594:3,21,25 7595:15,17 7608:17 7612:19 7613:5,17,22 7614:11,14,16,17,24 7615:1,4,8,16,22 7616:7,18 7617:17

Keeyask/750 7531:12

Keeyask/Gas 7447:10,18 7502:22,25 7503:6,12,21 7611:7

Keeyask19 7612:12

Keeyask22 7482:24 7612:11

kilowatt 7610:24

Kinder 7368:7 7370:15 7572:20 7576:7,9,12 7577:19 7578:9,20,24 7579:2 7580:2,11,14,18 7581:7,14,20 7582:8,14,21 7583:13,16,21 7584:1,16,24 7585:5,12,13,16,21 7586:2,6,13 7587:3,8,18 7589:11,23 7590:3,14,20 7591:15,20,23 7592:3,9,12,20,23 7593:12,20 7594:6,9,13,18,22 7595:2,7,19 7596:1,8 7611:2

kinds 7379:25 7380:23 7416:18,20 7424:1 7427:23 7432:21 7439:10,13 7467:13 7482:22 7483:6 7513:23 7522:24 7528:11 7542:6 7566:24

knowledge 7564:23

KURT 7506:1 7535:8

L

La 7395:19 7398:17 7422:1 7496:1 7526:15

label 7499:11

labelled 7547:3,5

labelling 7499:15,18

labour 7474:4

Labrador 7392:24 7394:6,7 7527:20

lack 7491:5 7541:24

lags 7546:12

laid 7554:25

land 7514:19,22

language 7398:18 7440:1

large 7380:10 7393:3 7412:21 7423:14 7433:15 7434:1 7448:7 7451:25 7468:4 7472:13 7498:11,22,23 7500:20 7562:14 7575:10 7604:15

largely 7385:17 7411:3,24

larger 7373:25 7402:17 7407:11 7481:12 7512:10 7537:9 7594:8

largest 7475:21

Larry 7366:15

last 7370:6 7374:19 7377:24 7386:22 7400:18

7417:12
7427:15,18
7430:25
7446:4
7450:7
7453:9
7460:4,5,6
7465:10,14
7469:18,24
7477:22
7479:14
7495:25
7496:11
7499:24
7519:22
7520:2
7525:3
7544:1,19,
22 7548:11
7559:15
7592:7,12
7602:21
7608:25
7609:9
7613:13

lasting
7602:16

late 7491:20

later 7421:2
7452:20
7453:3
7486:20
7487:8,25
7492:9,20,
22 7495:15
7612:21
7613:25
7616:19
7617:2,3

latest
7517:23
7586:9

Lavigne
7619:18

lawyer
7405:8

lawyers
7487:1

lay 7432:9

layer
7451:12

LCA 7369:4,5
7493:21
7494:2,4
7496:6,16
7497:21
7500:1,20

lead 7606:5

leading
7486:11
7617:5

least 7385:8
7398:14
7399:11
7441:13
7472:1
7500:12,23
7508:12,25
7524:24
7530:3
7612:11

leave 7534:7
7572:14

leaving
7376:24
7411:23
7412:2
7613:17

led 7512:9

LEDs 7372:22

left-hand
7470:21

legislation
7383:13
7425:25
7426:1
7429:22

legislative
7382:8
7516:18

legitimate
7398:25
7410:23
7425:5
7524:21
7536:12
7567:7
7614:13
7615:8

lengthy
7469:5

less 7371:10
7393:7
7396:3
7398:15
7402:12
7453:18
7478:16
7487:19
7492:24
7497:3
7502:21
7503:21
7514:15
7544:16
7551:6
7552:2
7555:2
7567:21,24
7592:1
7607:13
7610:7

lesser
7378:23

let's
7388:24
7403:3
7405:7
7454:4
7476:6
7491:8,12
7492:17
7496:19
7527:24
7532:20

letter
7558:18

level 7369:9
7376:3,9
7377:1,4
7403:6
7415:25
7416:13
7425:1
7471:13,20
7473:5
7481:18
7491:2
7494:8,10,
16
7498:5,7
7501:15,19
7502:21,24
7503:10,17
,19,20
7504:3,9,1
0,24
7505:14
7515:10
7522:16
7533:11
7538:2,3
7542:15
7544:3,8,1
1 7571:8
7584:21
7609:17
7610:7

levels
7446:25
7501:18
7502:10
7513:17
7522:24
7528:25
7569:2

liability
7511:16
7518:12
7521:1

liable
7511:15

licensed
7558:18

lies 7614:25

life 7422:23
7423:6,11,
24 7465:11

lifted
7522:19

light 7404:7
7410:6
7419:23
7446:4
7597:4

lighting
7372:23

likelihood
7462:5

likely
7371:11
7372:12
7420:16
7450:17
7452:24
7453:5
7483:20
7484:2
7513:10
7526:17
7537:21
7538:11,15

likewise
7404:2
7492:1

limit
7496:22
7540:10,14
,17
7566:15,18

limitations
7418:9

limited
7453:20
7487:23
7488:6
7540:25

limiting
7480:23
7481:24
7482:9,12
7484:5
7514:24

lin 7470:9

line
7391:3,11
7398:1
7420:24
7431:20
7434:25
7438:3
7440:16
7442:21
7443:2,8,1
0,16,18,20
,24,25
7444:4,9,1
1,22

7446:19
7447:11,19
7449:7,10,
13 7468:24
7470:16
7473:4,5
7480:6
7498:20,21
,22
7515:11
7519:9
7525:10,11
7526:21
7538:14
7539:4
7541:1,6
7569:8
7576:16
7581:9,14
7582:17
7587:23,24
7588:6
7603:18
7607:9

lines 7388:6
7394:20,25
7417:2
7418:12
7419:7
7420:24
7421:17
7427:2
7433:8
7450:1,2
7454:16
7468:2
7474:20
7475:5
7477:14
7479:13,16
7500:5
7506:15
7507:2
7515:13
7517:12
7565:17
7581:22
7605:13

list 7368:3
7369:1
7597:13

listed
7561:5
7597:8,11

Listing
7369:16
7571:23

literally
7505:5
7579:9

literature
7439:12
7563:18

little
7385:6
7390:18
7400:21
7403:13
7414:23
7415:10
7421:2
7461:19
7480:14
7481:7
7492:20
7498:19
7509:18,21
7510:22
7576:22
7579:20
7616:25

live 7591:5

load 7369:5
7493:21
7494:2
7496:23
7497:21,24
7498:5,15
7499:22
7503:20
7534:2
7538:16
7540:19,21
7609:11,13

lock 7466:2
7579:3

locked
7525:21
7579:1,2

locking
7437:21
7438:6
7466:4
7579:21

long 7385:3
7393:11
7444:9
7463:1
7464:15
7475:17
7483:12
7512:6
7522:25
7543:16
7555:8
7556:14
7559:22
7560:6,11
7593:13
7608:25

longer
7372:10
7374:5
7385:6
7441:15
7443:8
7444:19
7445:25
7446:1
7463:24
7512:16
7606:10
7608:23

longer-term
7378:8

long-lived
7536:20

long-term
7378:6
7379:10
7428:4
7463:23
7465:3,11,
12 7467:1
7521:21
7542:1
7554:22
7555:1
7561:1,4
7590:23

loop 7384:18

lose
7430:7,10

lot 7380:11
7402:12
7422:21
7423:2
7437:9
7442:20
7467:25
7468:1
7487:2
7497:8
7548:12
7590:17
7606:1

lots
7393:17,19
7409:23
7442:13
7524:4
7605:9

low 7381:11
7415:8,19
7438:20,23
7455:24
7459:15,20
,21
7460:3,7,1
1
7461:1,3,5
,9,25
7462:6,11,
18
7463:8,9,1
0
7467:17,18
7546:20
7556:4
7563:24
7568:6,14
7599:1
7608:4
7609:13

lower
7405:17
7406:5
7416:9,11
7428:16
7438:20,21
,22 7439:4
7446:20
7452:6
7457:8
7477:20
7504:2
7548:3
7550:8
7559:6
7562:10
7594:12
7607:4,5
7610:2,8

lowest
7450:20
7588:4,11

low-impact
7574:21

lows
7413:2,8,9
7439:4
7594:12

luck 7377:19
7419:12

lunch
7485:3,5
7491:9
7533:5
7572:9

lunchtime
7484:13

luxury
7616:21

M

macroeconomi
c 7530:4

magnitude
7530:5

magnitudes
7528:20

main 7371:1

maintain
7401:21

maintained
7462:17

maintains
7537:5

maintenance
7376:13
7444:12

major
7373:21
7569:20

majority
7387:23
7577:25

maker
7419:19

man 7395:9
7411:8
7530:20

manageable
7512:24
7520:5,6,8

managed
7606:16

manager
7379:18

managerial
7568:13

managing
7570:5

manami
7570:8

Manitoba
7366:3,7,9
,23 7367:5
7369:15
7372:18
7374:4,21
7376:2,25
7377:25
7378:10
7379:3,7,1
2,22
7380:8,20,
24
7382:1,3,5
,7,11,13,1
5,25
7383:3,5,8
,13,25
7384:19,24
7385:7,18,
23 7387:4
7389:7,12,
13,20
7390:11
7392:14,16
7393:13
7394:6
7396:12
7397:4
7398:18
7399:3,8
7400:19
7401:13,19
,21,24
7402:5,8,1
4,16
7404:14,23
7406:24,25
7407:2,6,8
,10,17,22
7408:9
7409:18
7410:4,8
7411:1,2,1
6 7412:5,6
7413:4
7415:15,19
7417:2,17
7418:20
7419:2
7422:15
7423:17
7425:9,10
7426:1,2
7428:23,24
7429:5,8,1
1,21
7430:4,11
7431:6,18
7432:5,16
7434:18
7435:16,23
7436:19
7437:6
7440:5,6,7
,24
7443:13
7444:9
7445:5
7448:4,5
7449:7,8,1
3,19,20
7453:11,16
,17,19
7455:20
7456:14,22
,24
7457:21
7458:19
7459:8,11,
13,16,22
7460:1
7461:2
7462:4
7463:22
7464:5,16
7465:21
7466:2,8,1
0,12,20
7467:3
7468:17,18
,25
7469:3,12,
20 7473:13
7474:2
7475:14,15
,19
7481:15,23
7483:21
7485:18
7486:2
7487:16
7489:1,22
7490:1
7492:7
7493:23
7494:7,11,
22 7495:9
7496:14
7497:10
7500:1
7504:25
7505:13,15
7506:16
7507:14,16
,22
7511:8,15,
19,21
7512:2,5,6
,9,11,23
7513:6
7514:9,14,
19,21
7515:3,14
7516:1,5,9
,21,24
7518:9
7519:16
7520:25
7521:4,5,2
3
7522:5,8,1
9
7523:6,18
7524:4,21
7525:22
7526:22
7529:16
7530:21
7532:7
7533:5,12
7535:5,8,1
2,25
7536:5,15
7537:4,5,2
0
7538:1,6,1
1 7539:13
7541:13
7542:16,17
7543:10
7545:4,8
7549:1,15,
17,20,22,2
5 7550:11
7551:11,12
,15,19,21
7552:16,19
,20
7553:2,8,2
5
7554:14,20
,23
7555:7,11,
20 7560:12
7561:19
7566:3,16
7568:17
7569:2,8,9
7570:2,6,8
,15
7571:19
7573:25
7574:2,17,
19,23
7575:5,8,1
1,14,16,18
7576:15
7577:23
7578:19,22
7579:21
7580:17,23
7583:15
7584:3,17
7590:7,9,1
1,23
7591:4,9
7592:7
7593:10,14
,22
7594:5,20,
24 7596:6
7597:18
7600:4,10,
11
7601:5,13
7602:8
7604:8
7605:8
7606:2,16
7607:21
7609:13,15
,16,19,21,
24,25
7610:3,4,5
,6,19,22
7612:4
7613:1
7615:5,17
7617:12
7618:4,15

Manitobans
7524:16

Manitoba's
7390:1,5
7394:1
7412:11
7506:21
7507:2
7513:5
7514:7
7569:20

March
7440:15

margin
7513:15

marginal
7378:25

marginally
7410:15

margins
7581:2

Marilyn
7366:14

maritime
7527:18,21

mark 7535:5

marked
7493:23
7494:11,21

market
7377:5,8,15,16
7378:1,9,12,18,19,20,22,24
7379:2,15
7380:5,15,16 7381:2
7382:5,12
7385:4
7392:12
7428:8
7451:7
7463:25
7464:12,18,20
7466:17
7467:11
7479:4
7515:5
7526:2
7556:15

marketplace
7463:25

markets
7384:5
7385:17
7465:5,11
7466:16
7467:6,14
7515:18,21
7516:2
7521:23
7522:13,16
7523:18
7539:20

market's
7429:7

marks 7468:8

Marla 7367:6
7368:11
7489:19
7505:3
7532:16
7533:17
7534:15,19,25
7535:1,10,15,16,24
7536:4,14,19,25
7537:8,14,19,25
7538:5,10,19,22
7539:2,8,11,24
7540:6,13,18,23
7541:4,8,19,25
7542:8,14,21
7543:1,9,14,19,23
7544:12,17,25
7545:3,7,11,14,20,25
7546:6,17,22
7547:1,8,13,16
7548:5,16,25
7549:4,8,21
7550:2,6,18
7551:4,17
7552:1,8,12 7553:15
7554:8,19
7555:10,15,19,23
7556:2,18,24
7557:3,10,14,17,20
7558:16
7559:2,19
7560:10,20,25
7561:13,16
7563:1,7
7564:6,12,16,25
7565:3,9,15,25
7566:25
7567:3,9,13,23
7568:2,11,18,22
7569:12,17,25
7570:13
7571:8,14
7572:4
7617:22
7618:3,13

marry
7576:20

massive
7419:11

match 7528:9

matched
7580:22

matching
7589:3

mate 7387:18

material
7395:22
7417:21

math 7400:15
7401:18
7461:20
7472:3,20
7520:18

mathematical
7396:19,20
7400:15
7439:8
7477:18
7565:20
7566:2,8,17 7581:23

mathematically 7400:14
7408:23
7473:11
7482:2

matter
7381:19,23
7391:20
7407:13
7411:20,21
7463:17
7477:13
7484:10
7490:2
7506:13
7513:14,15
7605:5

mattered
7512:1

matters
7397:1
7419:19
7534:18

maximization
7551:23

maximize
7551:22
7570:9

maximum
7604:6

may 7372:2
7379:18,19
7381:9,10
7397:15,24
7415:20
7419:9,10
7420:3
7422:22
7423:2
7431:3
7438:21
7444:19,23
7452:14
7458:11
7469:19,21
7473:21
7475:2
7477:19
7478:18,22
7479:16,23
7484:3
7485:25
7488:7
7490:11
7493:8
7496:17
7513:8
7514:15
7516:18
7519:8
7520:8
7553:25
7554:2,3,4
7558:5
7570:23
7571:4
7591:6,7
7598:14
7600:17
7602:15
7610:15

maybe
7386:15
7399:19
7400:1
7424:8
7426:21
7447:6
7455:6
7475:1
7493:11
7495:13
7515:9
7569:13
7603:13

mean 7400:13
7411:21
7427:17
7446:6
7447:8
7455:3
7467:9
7492:8
7508:16
7513:13
7517:1
7528:10
7590:25
7592:22,23
7593:1,3,4,6,7,21
7616:22

meaning
7388:21
7396:9
7584:11

means 7409:1
7413:3
7448:18
7503:19
7566:19
7581:23
7593:4

meant 7394:7
7548:21

7566:1

meantime
7617:5

measure
7433:4
7551:11,25
7552:6
7554:12,13
7562:14

measured
7551:6
7569:8

measurement
7553:10
7566:20

measuring
7551:14

mechanism
7518:2

medium
7472:13
7475:17
7476:8

meet 7540:19
7567:16
7601:6

megawatt
7424:19
7433:15
7440:16
7442:21
7443:2,16,24,25
7444:4
7445:22,25
7447:2,3,11,19
7449:7,10,13 7474:13
7525:10
7526:1
7540:8

megawatts
7527:1

Meghan
7367:12

member
7366:14,15
,16,17
7395:1

members
7370:19
7414:11
7527:8

memory
7545:15

mention
7376:18
7540:7

mentioned
7422:4
7430:16
7533:8
7594:16

Menzies
7367:12

merchant
7375:2,22
7376:5
7377:2
7381:6
7382:17,18,19 7384:1
7386:2
7387:19
7426:9
7427:5,6
7429:9,17
7430:5
7524:14

Merci
7413:22
7414:10
7505:21

merely
7378:11

merit
7485:25

mess 7605:13

messaging
7497:5

met 7388:3
7540:21

method
7422:16
7598:24

methodology
7462:4
7536:13

metric
7434:14
7435:12,13,16 7437:6
7438:11
7447:23
7450:22,23
7460:14,22
7461:23
7470:2,6
7523:16

metrics
7428:22
7437:17
7447:24
7554:1
7567:22
7583:19

MH-104-1-1
7369:16
7571:23

MH-104-14
7369:3
7493:25

MH-104-15
7369:7
7494:13

MH-104-16
7369:10
7494:24

MH-104-3-1
7369:20
7618:9

MH-150-REVISED
7369:22
7618:19

MH-179
7369:15
7535:12

M-hm 7403:10

Michael
7367:20,25

micro 7370:9

microphone
7370:11
7408:5
7414:8
7485:6
7491:20
7505:20
7532:15
7533:3

middle
7454:5
7608:7,14
7609:7

midpoint
7605:18

midst 7602:5

Miller
7367:15

million
7403:14,24
7404:16
7405:11
7406:9
7435:18,25
7437:11,13,23 7438:4
7447:15,19
7472:18
7482:20
7483:17,23
7497:2,3
7498:2
7500:12
7503:14,16
7504:14,19

mimicked
7580:16

mind 7486:11
7507:13
7534:14
7553:19
7608:6

mindful
7586:18

minds 7564:1

mine 7426:21
7572:23

mini 7467:10

minimal
7518:16

minimize
7519:9
7569:1
7600:16

Minister
7426:2,6

Minnesota
7442:22
7443:3
7444:8,10
7449:6,12,20

minor 7542:7

minus
7405:12,22
7503:18
7547:10

minute
7376:2
7377:25
7386:16
7475:2
7561:17

minutes
7394:13
7492:5
7532:17
7564:17
7580:7

MIPUG
7367:17
7369:14
7426:10
7427:13
7477:13
7479:13
7485:16
7489:14
7505:25
7506:4
7527:8

MIPUG-1
7515:11

MIPUG's
7421:22

mirror
7592:15

MISO 7378:1,18, 20,21 7379:15 7380:5,15, 16 7381:1 7385:4 7451:7

missed 7505:9,11

mistake 7419:11 7503:2

mistakes 7582:24

mitigating 7378:9

mix 7502:4 7608:7

mixing 7500:14

MKO 7367:19

MMF 7367:22 7457:16

mobile 7475:17

model 7419:23 7420:1,7 7423:11 7446:7 7448:17 7456:7 7493:3,9 7540:3,4 7541:9,11 7542:9,21 7573:12,13 ,18,23 7574:5,21 7575:6,18, 21,22,23 7576:4 7577:4,18, 22 7578:19,25 7579:23,24 7580:12,22 ,24 7581:5,13 7582:11,22 7583:5,14, 15,17 7584:17 7585:24 7600:5 7603:24 7604:4,11 7605:18 7606:11,13 ,23 7607:11 7611:6

modelling 7419:17,18 ,25 7439:8 7542:17 7574:1,2 7581:6 7598:21,24 7599:3,4,8 ,13,17,21, 23 7600:7,8,1 2,14,19 7614:22 7616:2

models 7419:21 7420:9,18 7479:22 7539:24 7548:13 7574:20 7575:14,16 ,17 7581:16,23 7583:7 7611:14

moderate 7605:10 7606:3,6

moderated 7605:23 7608:24

modified 7452:13,14 7538:2

moment 7390:17 7442:18 7443:25 7467:9 7539:3 7601:14

Monday 7485:8 7486:3,15 7487:23 7490:5,19 7491:25 7495:10,13

money 7370:6 7390:11,12 ,23 7391:23 7393:19 7397:11 7408:10,12 7430:7,10 7446:21 7449:8,9 7457:7,8,1 3 7464:18,19 ,20,23 7465:2,22 7466:21 7467:3 7520:16 7524:23 7562:3,9,1 0,12,19 7563:12,14 ,17,22,23 7564:4 7614:15

Monnin 7367:24 7388:17,21 7396:14 7432:8

monopoly 7382:5 7391:16 7392:20

Monte 7598:21 7599:4,21, 23 7600:7,14

month 7587:17

months 7459:19,24 7460:5,6,1 0 7559:15

Moody's 7506:22

Moreover 7385:13

morning 7370:3,10, 18,20 7414:13 7449:4 7499:5 7502:14 7504:16 7505:22 7508:2 7537:15 7548:16

Moroz 7367:9

morphed 7443:1

morphing 7469:3

Morrison 7368:5 7370:13,19 ,20 7375:7 7388:5,7 7394:14 7438:11 7475:7 7493:3 7568:12 7573:3,12, 14,17 7580:10,13 7582:10 7586:8,11 7587:24 7588:17 7589:10 7590:18 7591:13 7596:18,23 7597:1,4 7600:23 7601:5

mortar 7521:17

mostly 7609:22

mothballed 7384:11

move 7416:8 7436:17 7444:17,20 7445:14 7452:10 7501:3 7533:21 7571:16 7586:19,20

moved 7436:15 7546:11

moving 7372:13 7382:4

MPA 7375:6 7398:2 7427:13 7502:17 7535:18 7541:19 7542:9,15 7575:13 7576:4 7583:14,17 ,19 7588:6 7589:20

MPA-3 7388:6

MPA's 7581:8

multiple 7536:1,8 7584:7 7597:14 7599:15

multiplicati on 7462:1

multiplier 7477:2

Muskrat 7392:24 7393:5

myself 7373:12

N

namely 7612:10,11
narrow 7614:24
narrowed 7531:6
narrowly 7450:18
natural 7378:22 7569:20 7570:6,10 7579:16
nature 7391:16 7440:5 7442:10
nearer 7607:5
nearly 7437:9 7559:25
necess 7520:9
necessarily 7480:8 7481:21 7490:11 7515:18 7520:9 7579:22
necessary 7410:10 7541:5
nected 7376:18
negative 7514:1,14 7546:23 7592:15
negatively 7523:9
neglected 7376:18 7505:22
negotiated 7424:21
neither 7500:1
net 7402:20 7403:7,14 7405:10 7406:6 7432:4 7451:5,14,17 7456:18 7459:13 7506:16 7507:17 7508:13 7509:13 7520:17 7528:23 7549:6 7550:2,6 7566:6 7567:11 7574:12 7576:16 7602:9
netted 7511:22
neutral 7439:15,18
newer 7388:1
Newfoundland 7392:23 7393:13 7394:1,9,11 7411:3,4,8,14,17 7412:18,20,23 7413:4,6 7527:20
Newfoundland's 7393:22 7412:4
newly 7430:19
news 7492:13
NFAT 7397:7 7430:25 7541:17 7555:13 7597:7 7600:19 7615:6
nicely 7580:23
night 7370:6
nine 7459:19,24 7498:8 7500:22
nineteen 7404:16
ninety-four 7498:1
ninety-nine 7574:6 7576:1 7577:13,16 7578:3,17 7579:8 7605:12
ninety-seven 7503:18
ninety-six 7497:25
Nobody 7372:21
nominal 7428:1 7456:1 7458:1,6 7543:3,7,20 7545:1,2,5 7546:12,15 7547:3 7555:2,21 7561:18 7609:5
nominally 7551:12
nominals 7458:4
non-cash 7567:11,14
none 7380:14 7463:7
nor 7500:1
normal 7426:6 7597:18
Norman 7470:19 7471:21 7473:7
north 7372:18 7398:21 7556:13
northern 7399:3
notch 7519:22
note 7391:7 7398:2 7436:3 7459:7 7507:1 7534:20 7559:22
noted 7488:22 7520:2 7530:3 7537:1,8 7562:2 7565:19
notes 7475:3
nothing 7482:21
noting 7489:3
notion 7549:13
notional 7458:24 7549:19
np 7367:3,7,8,9,14,15,20,23
NPV 7369:4,8 7403:24 7406:9,10 7422:18,20 7423:1 7470:15,19 7471:22 7472:17 7473:7 7493:20 7494:1,9,14 7497:1,24 7585:6
nuclear 7517:12 7558:10 7559:5,10,11
numerical 7482:5

O

OAB 7557:8
OBJ 7396:14
object 7396:15 7432:9 7486:15
objective 7551:21,24
obligations 7591:10
obliged 7376:12
observation 7585:2
observer 7442:12
obtain 7530:25 7541:9
obtained 7485:19 7497:1 7541:12
obvious

7501:7

obviously
7371:20
7386:15
7446:2
7612:6

occasionally
7476:6
7541:16
7546:13

occasions
7522:6

occur
7515:1,24
7516:7
7544:11
7566:23
7574:14
7575:10
7606:20
7614:18

occurred
7397:7
7466:15
7544:8
7568:4

occurrence
7544:16

occurring
7509:14
7530:1

occurs
7523:23
7602:14
7605:5
7608:4

o'clock
7491:13

odd 7547:21

Odette
7367:10
7493:16
7494:6,18
7495:4

offer 7395:6
7458:25
7486:25
7513:21

offered
7379:3
7380:6
7464:12
7607:17

off-taker
7428:7

oh 7413:22
7426:12
7450:7
7458:18
7493:14
7502:13
7515:23
7522:17
7569:13
7612:12
7617:21

oil 7547:24

okay 7373:10
7376:6,23
7387:3
7388:16
7390:13
7394:4,12
7403:2
7404:6
7405:6
7414:1
7415:23
7419:6
7426:13
7427:1
7430:14
7432:11
7434:11
7435:8
7436:10
7437:5
7445:18
7447:6
7449:2,23
7454:10
7455:14
7458:8
7462:15
7463:13
7469:1
7474:25
7479:10
7509:6
7510:18
7515:7
7517:8,17
7520:12
7522:20
7545:23
7564:16
7565:2,15
7586:2
7589:13

old 7384:10

one-five
7561:5

ones 7381:1
7409:5,7
7420:10
7444:23

ongoing
7392:23

Ontario
7370:7
7513:2
7517:11,13
7518:3,9,1
5
7519:11,18
,20,24
7527:18
7556:4
7557:23,25
7558:2,6,9
,15,19,22,
25
7559:8,13,
23 7560:13

Ontario's
7518:14,19
7519:21
7520:3

onto 7435:1
7572:24

oops 7532:8

open 7445:11
7483:10
7587:11

opened
7513:14

opening
7572:9

operate
7379:7

operates
7429:22

operating
7496:22
7542:5

operation
7376:13
7380:9
7525:14

operational
7540:24
7568:19

operations
7525:17
7542:16
7567:20,21

OPG's
7558:10

opinion
7583:14,17
,19

opportunitie
s 7398:15
7410:5
7425:8,13
7524:19
7526:16

opportunity
7384:21
7385:15,16
7390:9
7410:9
7421:15
7424:18
7425:6,7,1
2
7441:9,10
7449:25
7475:18
7486:13
7487:24
7524:14,21
7525:20,21
7526:21,23
,24 7545:8
7546:1
7570:22,23
,24
7571:1,6
7605:10
7615:14,19

opposed
7390:11
7413:11
7415:24
7427:9
7434:4
7448:4,15
7450:23
7461:1,6,1
1
7482:3,20
7519:19
7522:12
7524:24
7525:10
7527:21
7545:14

opt 7382:3
7399:1
7430:4
7475:14
7476:13

optimal
7399:7

optimization
7526:15,16

optimize
7398:23
7399:2

optimized
7395:20

optimum
7502:4

opting
7382:1

option
7399:4
7410:9,14
7425:23
7435:1
7438:18,20
7439:16,17
7440:10
7442:23
7444:1,4
7446:2
7448:10

7475:14
7480:20,21
7481:19
7483:10,12
7484:1
7524:23
7525:11
7562:13
7613:21
7615:4
7617:14

options
7373:8
7382:15
7397:2
7406:22,25
7410:15
7422:2
7430:17
7445:24
7448:8,18
7451:18,19
7467:5
7480:6
7481:17
7482:15,23
7483:7
7501:23
7502:9,10
7524:8,24
7525:1,20
7526:11
7531:7
7536:6
7562:11
7581:25
7582:24
7584:22
7597:25
7598:5,7,10,12
7601:21
7608:15
7609:8
7615:2,3
7616:20,22
7617:12

opt-out
7382:12

oral 7419:8

order 7383:8
7407:21
7451:16
7478:10
7503:8
7569:1,3

ordering
7446:5,8
7562:15,18

orderings
7562:24

ore 7476:23

org 7553:7

organization
7553:8

organized
7552:20

orientated
7398:14

original
7410:11
7496:14
7611:12

originally
7387:21
7443:9

Orle 7367:19
7489:5,7

others
7371:7
7416:11
7429:25
7431:2
7433:8
7477:4
7478:24
7481:24
7484:21
7526:12
7608:1

otherwise
7398:21
7408:13
7500:14

ourselves
7447:8
7588:23
7589:4
7591:5

outcome
7438:19,21
7582:3

outcomes
7439:20
7576:19
7599:12

output
7385:19,25
7392:10
7399:2
7412:22
7428:7
7609:20,22

outputs
7575:16,17,23
7576:14
7580:17,22
7603:24

outset
7529:15
7531:5
7612:10

outside
7442:12
7569:23

outstanding
7490:2
7518:4

overall
7372:6
7477:20
7478:4,19
7570:9
7599:24

overcome
7531:21

overrun
7531:24
7532:1,5
7595:8

overruns
7517:14,16
7523:22
7575:9
7577:1,9
7594:17
7595:13,20

over-time
7588:12

overwhelms
7390:24

owned
7383:15
7429:5,9
7440:7

owner
7393:12
7428:19

owners
7382:18

owns 7393:15
7521:17

P

p.m
7491:15,16
7532:23,24
7619:9

package
7589:6,8

page 7368:2
7369:2
7371:15
7373:16
7375:6,10,12,15
7377:24
7381:5
7388:5
7390:16
7394:14,20
7398:1,2
7401:2
7404:21
7418:12
7419:7
7421:16
7431:9
7434:19
7440:15
7447:8
7450:1
7452:11,14,17
7454:15
7475:4
7494:7
7506:14
7507:15
7509:24
7517:12
7535:18
7543:14
7545:21
7554:20
7556:2
7557:5,6
7558:17
7559:22
7560:21
7564:19
7565:17
7568:25
7579:25
7580:8
7581:8,11
7583:23
7587:20,23,24
7589:18
7598:19
7600:21
7603:14,16
7605:3,14
7608:6
7609:10
7618:17

pages
7366:25
7375:6
7444:21
7485:15
7519:4
7557:11
7568:4

paid 7380:13
7517:24
7518:25
7519:1

Painfully
7545:7

pan 7568:24

panel 7368:5
7370:13,19
7373:12
7375:3
7400:22
7408:6
7414:11,23
7416:23

7485:15,21,23 7486:1,13 7490:22 7491:1,25 7492:6 7493:4 7533:4,9,13 7573:5,12 7576:4 7581:12 7582:12 7583:24 7585:18 7586:8,10,20 7589:25 7594:23 7597:1 7600:22 7601:23 7603:2,15,20 7609:12 7613:19 7619:7

panel's 7586:18

paper 7426:20

par 7427:14 7589:21

paradigm 7547:18,20

paragraph 7375:9 7377:24 7381:5,6 7383:17 7397:25 7454:23 7476:12 7587:24

parameters 7454:4,6,13

pardon 7619:2

parity 7373:12

Park 7368:5 7370:13,19,21 7375:8 7388:5,7 7394:15 7438:11 7493:4 7568:12 7573:3,13,14,18 7580:10,13 7586:8,11 7587:24 7588:17 7589:10 7590:18 7591:13 7596:23,24 7597:4 7600:23 7601:5

Park's 7475:7 7582:10 7596:18 7597:1

parse 7416:5

participants 7380:16 7478:14,15

participate 7443:9,19 7526:22

participated 7396:23

participation 7478:25

particular 7402:5,24 7410:4 7421:24 7425:11 7435:16 7438:25 7440:5 7450:6 7455:17 7460:21 7464:16 7477:20 7506:15 7558:13 7566:14 7574:18 7600:10,11 7603:18

particularly 7372:15 7407:12 7410:5 7423:14 7424:24 7455:17 7478:1 7502:19 7529:25 7574:1

parties 7441:21 7442:5 7443:17 7449:19 7469:21 7490:12,17 7492:3 7505:23 7506:7

partly 7429:14,15 7610:20,21

partner 7396:22

party 7443:23 7444:2 7579:18 7590:8

pass 7565:3 7593:5,7

passed 7389:8 7564:24

passes 7389:8

past 7427:22 7501:13 7544:4 7593:22

path 7490:23 7603:25 7606:14

paths 7583:5

pathways 7507:19

pattern 7523:23,24 7577:21 7604:23 7605:5

patterns 7475:22 7477:7,8,10 7563:20,21 7574:25 7577:14 7605:13

Patti 7367:5

PAUSE 7375:19 7386:18 7394:17,22 7398:10 7414:16 7418:16 7426:24 7440:19 7450:4 7454:20 7455:8 7458:14 7461:17 7469:9 7474:22 7495:22 7505:1 7532:11 7533:15 7534:11 7538:8 7545:18 7550:16 7553:13 7560:8,15,23 7561:11 7565:7,13 7569:15 7583:10 7585:9 7586:4,22 7589:15 7593:25 7595:24 7596:10 7600:1 7602:19 7603:11 7613:8 7618:1

pay 7376:12 7407:21 7415:16,17 7444:9,11 7468:24 7471:12 7478:16,21 7497:8,11 7518:23 7554:9 7606:16

payable 7470:3

paying 7393:11 7398:3 7415:9 7468:15 7472:3 7478:24 7554:17 7607:6 7613:25

payments 7542:2

peak 7507:17 7508:13 7509:13

peculiar 7400:21 7465:10

pejorative 7396:9

Pelino 7368:6 7370:14 7371:3,18,25 7372:4,9,15 7373:14,19,25 7374:12,18

7375:1,4,14,25
7376:7,15,20
7377:6,11,14,22
7378:3,15
7381:7,14,21,25
7382:21
7383:2,21
7384:3
7386:9,12
7387:2,6,11,16,20
7388:10,15
7389:4
7390:25
7391:9,18,21 7393:2
7394:8,10
7395:4,7,16,21
7396:7,22
7398:8,17
7400:10,17,25
7401:4,8,19
7403:10,12,17,21
7404:1,5,11,19,24
7405:15,19,24
7406:2,7,13,18
7408:11,16
7409:21
7411:10,19
7412:1
7415:6,12,18
7416:2,15
7417:4,9,20 7418:24
7419:16
7421:9
7422:9,15
7424:16
7425:24
7426:16
7427:11
7430:9,24
7431:25
7432:19
7433:20
7434:5,15
7435:4,7,20
7436:2,11,24
7437:2,15,24
7438:9,14
7441:7
7442:25
7443:6,15
7444:15
7445:1,16,19
7447:12,16,21
7448:2,16
7449:14,18
7450:25
7452:16
7454:9
7455:2,12,15 7457:24
7458:3,8,16
7462:3,21
7463:3
7464:3
7466:4
7468:14
7470:5
7471:2,7,16,18,24
7472:8,19,24
7473:9,16,20
7474:1,14,24 7475:12
7476:24
7478:6
7479:8,25
7480:11,18
7482:8,21
7483:19
7506:20,24
7507:6,11,24
7508:6,15
7509:5,9,17,22
7510:4,16,22
7511:4,11
7514:12
7515:23
7516:12,15
7517:15,20
7519:17
7520:24
7521:14,18,25
7522:17,21
7523:11
7524:17
7525:12
7526:8
7527:4,17
7528:14
7529:5,10
7530:23
7531:15
7535:23
7536:3,10,18,24
7537:7,13,18,24
7538:4,17,21
7539:1,7,10,15
7540:2,12,16,22
7541:2,7,15,22
7542:3,13,19,25
7543:8,13,18,22
7544:6,15,20
7545:2,6,10,13,23
7546:3,9,21,24
7547:7,12,15,19
7548:9,24
7549:3,7,12,24
7550:4,10,23
7551:8,20
7552:5,11,14 7553:19
7554:11
7555:4,14,18,22
7556:1,7,20
7557:2,9,13,16,19,24
7558:24
7559:4,20
7560:17
7561:3,15,23
7563:5,9
7564:9,15,21
7565:2,24
7566:3
7567:2,6,12,17
7568:1,9,15,21
7569:5,22
7570:4,20
7571:12
7573:1,10,16,19
7575:15
7576:5,20
7588:14,18
7596:19
7597:11
7598:9,22
7599:20
7600:6
7601:3,12
7602:3
7603:6,23
7608:9,13,18,21
7609:14
7611:11
7612:16,25
7614:7
7616:23

people
7418:13
7420:3
7478:17,23
7484:14
7495:11
7527:3
7608:1
7610:7
7614:25
7619:3

people's
7432:23

per 7426:1
7474:13
7477:24
7507:4
7617:11

perceive
7490:21
7553:22
7562:11

perceived
7477:25
7515:15
7520:25
7521:23
7523:1

percent
7401:22,23
7402:22
7403:20
7405:2,3,5,13,14,22
7406:1,10
7408:19,20,22
7417:17
7420:12,16
7427:21
7428:1,6,11,17,18
7452:6
7454:12
7455:1,18,25
7456:4,6
7457:22,23
7458:7
7459:12,25
7460:2,5
7461:4,6,7,9,11,23,24
7462:5,14,25 7470:20
7472:14,15,17
7482:13
7496:21
7503:22

7507:4,9
7513:3,7
7520:3,19,23
7522:11,13,15
7540:14,20
7541:5
7543:6,11,12,20
7544:13,19,21
7547:10,11
7549:9,14
7551:7
7552:3
7553:4
7554:24
7555:2,3,16,21,23,25
7557:8,15,21
7559:8,24,25
7560:1,5
7561:18,20,22,24
7562:1,7,21
7563:2,4,10,16,24,25
7564:2,8,13
7584:6,8,10 7591:13
7592:13,15,16,19
7593:1,10,11,14
7595:20
7605:20
7606:12
7607:9

percentage
7595:9

percentages
7412:9

percentile
7437:21

percentiles
7439:7

perception
7515:17,18,21 7523:2
7562:5
7597:19

perceptions
7523:17

perfect
7375:17
7390:18
7490:25

perform
7535:19

performance
7551:11
7574:23
7575:3

performed
7369:3
7457:21
7485:22
7493:19,25
7535:25

perhaps
7409:12
7415:10
7423:23
7469:2
7481:6
7484:15
7486:6,8
7487:5
7490:16
7491:24
7503:25
7523:7
7525:9
7526:19
7532:17
7570:16
7581:14
7594:12

period
7389:20
7446:4
7458:7
7459:16
7462:18
7463:2
7464:15,21
7516:24
7519:19
7523:23
7536:16
7548:8
7556:14
7570:16
7571:10
7573:22
7593:2
7605:16,17,21

periodic
7423:19

periods
7463:5,6
7470:4
7546:7,8,18 7573:23
7591:2
7599:2
7603:4

permission
7384:7,15
7385:10

permitting
7441:22

person
7415:9,14,15 7416:1

personal
7415:24
7416:9

person's
7415:24

perspective
7370:23
7390:7
7406:19
7409:6,8
7415:11
7417:8
7423:18
7427:9
7429:7
7448:15
7454:24
7458:6
7464:1
7465:25
7466:1
7481:17
7483:15
7486:14,22,23 7487:6
7488:13
7489:22
7516:23
7525:17,18,24,25
7528:24
7537:5
7562:6
7574:20
7599:9
7607:2,16
7608:2

perspectives
7421:23

pertain
7464:15
7465:16

Peter
7367:15

Peters
7367:2
7368:12
7485:6,7
7491:21,22
7492:18,21
7493:17
7504:20,21
7505:9,10,12 7533:8
7572:16,18,19
7573:2,11,17 7575:12
7576:3,7,11 7577:15
7578:7,18,21 7579:1
7580:1,9,12,15
7581:7,21
7582:9,16
7583:12,18,22
7584:14,19
7585:1,11,14,17,25
7586:6,24
7587:5,15,20 7588:15
7589:8,12,17,24
7590:10,16
7591:12,17,22,24
7592:5,10,18,21
7593:8,17
7594:1,7,10,14,19,23
7595:4,16,21
7596:5,12,20
7598:6,19
7599:18
7600:3,20
7601:4,22
7602:21
7603:7,13
7608:5,10,16,19
7609:9
7610:25
7611:5

Peters's
7565:1

phrase
7471:9

physical
7525:14
7541:1

pick 7578:7

picked
7592:19

picking
7399:25
7400:1
7411:15

picture
7591:25
7592:1

piece
7439:11

pieces
7405:7
7580:5

pipeline
7503:20

7534:2
7538:16

placed
7548:7

plait 7414:9
7487:13

plan 7366:10
7369:6,17,
21 7372:6
7374:2,19,
22 7385:11
7386:25
7387:22
7390:21
7392:10,17
7393:24
7395:11,20
7396:2
7400:6,8
7402:5,9,1
1,13,19
7403:4,15,
24 7404:3
7405:9,21
7407:10
7409:7,10,
16
7410:11,13
,18
7416:24
7432:3
7434:23
7435:5,6,7
,15
7436:3,7,8
7437:10,11
,20
7438:3,5
7439:1,2,2
3 7445:24
7446:5,8,1
6,17,19
7447:1,3,4
,9,10,14,2
5
7448:14,18
7452:17,19
,21,22
7453:1,3
7457:13
7465:22
7466:9
7467:2
7471:12,20
7482:24
7483:1
7492:21
7493:21,22
7494:4,8
7496:11,12
,13,14,19
7497:3,18,
19,20,22
7498:9,14,
24
7499:19,21
,22
7500:6,10,
16,20
7502:15,16
,19,22,24
7503:5,9,1
0,12,14,16
,17
7504:3,8,9
,11,13,24
7505:14
7508:5,17
7509:3,14
7513:21,24
7528:9,13,
21 7529:4
7531:8,11
7533:6,10
7534:22
7552:2
7553:6,25
7554:1
7571:25
7577:12
7579:13
7580:20
7584:5
7592:2
7596:17
7597:20
7602:5,24
7603:21,22
7604:21
7605:3,25
7606:1,4,1
5,20,21
7607:4,12,
14
7608:3,7,1
1,12,13,17
,22
7609:1,5,7
7611:7,23
7612:2,6
7613:2,3,4
7618:6,11

planned
7402:17
7597:14

planner
7525:15

planning
7426:3,5
7495:9
7496:22
7501:24
7502:6,9
7538:1
7540:14,17
,19

plans
7369:18
7371:1,4,6
,9,17,22
7372:2
7387:24
7397:10,15
7402:2,3,6
,14,21
7406:19
7422:17
7433:4
7437:7
7445:21
7446:13,14
7450:12,17
7452:25
7454:7
7457:10
7471:6
7477:6
7482:6
7488:2,4,1
0 7496:8
7497:17
7501:16,18
,20
7507:18,20
7513:22
7524:9,10
7528:17,22
7529:14
7533:22
7534:3
7542:11
7552:23
7553:2,9,1
6
7562:16,18
7568:24
7572:2
7573:21
7577:25
7579:7
7584:4,12,
20
7585:2,3
7589:22
7594:12
7595:6
7599:24
7601:8
7604:12,19
,23
7606:24
7607:17
7609:23
7610:13
7611:14,17
,20

Plan's
7607:2

plant 7374:1
7376:5,10,
11,16,24
7377:2
7380:11
7382:18,19
7393:3
7427:6,9
7430:5
7436:5,7
7524:14

plants
7373:21
7379:8,15,
16,17
7584:22

plant's
7376:12

play 7516:6

playing
7521:11

Pleasant
7414:19

please
7375:16,17
7390:18
7413:25
7418:11
7434:18
7485:6
7488:20
7489:6,11
7491:21
7495:7
7504:20
7534:14
7538:6
7545:21
7572:16,22
7573:5
7581:9
7583:23,25
7589:18

pleased
7572:8

plus 7520:15
7547:10

PO 7401:24

point
7370:25
7371:13
7372:6
7385:9
7390:22
7394:3,5
7395:12,24
7396:24
7399:24
7407:2
7409:19
7419:10
7424:4,15
7425:17
7431:8
7441:9
7442:19
7445:2,12,
14,20
7446:12,16
,18 7447:1
7453:10
7455:16

7456:16
7458:19
7461:13
7465:10
7470:24
7471:4
7472:4,6
7473:14
7474:7
7475:13
7476:11
7482:9
7483:9
7492:9
7500:19
7503:24
7511:9
7523:16
7524:13,14
,18 7526:5
7539:4
7544:7
7559:21
7561:2,5
7564:13,14
7566:5
7567:1,4,8
7580:23
7581:5
7582:2,22,
23 7595:1
7606:16
7614:4,15
7617:7

pointed
7448:22

point-eight
7568:7

points
7407:4
7425:15,21
7456:8
7513:1
7523:12

poli 7547:9

policy
7516:22
7517:2
7522:16
7527:25
7547:9,17,
22 7548:4
7556:9
7566:4
7567:7

ponder
7534:13

pool 7475:16

poorly
7446:20
7512:20

pop 7545:12

population
7411:25

Portage
7366:22

portfolio
7395:20

portion
7373:1
7385:25
7389:22,23
,24
7392:10
7444:10
7454:18
7480:1
7481:12
7515:5
7521:7
7559:6

posing
7596:25

position
7370:4
7397:2,4
7414:7
7486:9
7489:13
7530:19
7533:2
7585:17
7591:9
7600:23

positional
7397:1
7399:14

positive
7465:24
7504:18
7567:25

possibilitie
s 7465:6
7526:12
7574:4,7

possibility
7420:4

possible
7385:1
7441:12
7457:5
7464:10
7492:10
7519:20
7524:8,19
7531:17
7552:6
7560:18
7564:4
7570:3
7586:20
7588:4,11
7593:17,20

possibly
7481:11
7513:7

post-1991
7548:7

posted
7564:22

postponing
7482:18

postulated
7548:18

potential
7374:7
7433:7
7536:6
7539:23
7548:6
7569:21
7573:24
7594:4
7599:11

potentially
7379:4
7385:6
7475:16
7481:1
7566:16
7598:13

power
7372:23
7376:10
7377:2,5,8
,15,16
7378:18
7379:1,13
7382:6,10,
18,19
7391:23
7392:16
7393:4,6,1
0 7423:14
7430:20
7431:17,19
7432:2
7433:15
7442:22
7443:3
7444:8,10
7449:6,12,
20 7453:16
7476:6
7558:9,11,
20,22,25
7559:13
7610:7

powered
7378:22

powerful
7390:23

practical
7480:17
7518:2

precise
7420:14,18

precision
7420:8
7451:2
7582:10

predicable
7372:20

predict
7373:7
7467:13
7474:8

predicted
7372:21

prediction
7420:11
7465:1

prefer
7534:8

preferable
7438:22
7488:15
7614:23

preferred
7366:10
7374:2,19,
22 7385:11
7387:22
7392:9,17
7393:24
7395:11
7396:2
7400:6
7402:11,13
,17
7403:15
7407:9
7432:3
7446:16
7452:18
7453:1
7467:2
7482:5
7508:5,17
7509:3,13
7531:8
7582:3
7584:5
7592:2
7596:16
7597:19
7603:21
7605:25
7606:1,4,1
5
7607:2,12
7608:11
7609:1,5

pre-filed
7375:23
7388:6
7394:15

premise
7403:9

7592:21
7596:6

premium
7405:3,4
7408:21
7429:12,18
7555:24

premiums
7556:12

prepare
7611:22
7613:4

prepared
7413:20
7418:21
7419:5
7436:22
7469:20
7484:15
7507:16
7534:17
7556:9

preparing
7396:23
7589:10
7611:21

present
7391:5
7400:3
7402:20
7403:7,14
7405:10
7406:6
7432:4
7450:15
7451:5,14,18 7456:18
7469:25
7470:7
7473:6
7499:4
7512:18
7513:18
7548:19
7574:12
7584:2,10
7585:6

presentation
7423:16
7444:25
7476:25
7493:9
7527:7
7531:5
7612:11

presentations 7499:4

presented
7374:19,24
7382:15
7417:22
7440:10
7443:22
7459:21
7463:12
7482:23
7483:8
7501:13,14
7584:4
7587:12
7597:5

presenters
7476:21

presenting
7439:23
7452:3

presents
7512:3
7513:23

President
7414:11
7505:22

press 7505:5

pressure
7397:19
7604:16

presumably
7404:8
7453:3
7472:9

presumed
7432:25
7512:20

presuming
7480:25

presumption
7462:8

presuppose
7617:10

pretty
7444:7
7465:4
7614:5

prev 7540:4

prevented
7578:25

previous
7421:25
7450:11
7454:17,23
7509:20

previously
7368:6,7
7370:14,15
7399:13
7501:10
7587:13

price 7374:5
7377:16
7378:1,24
7392:12,18
7393:5,15
7413:5
7419:13
7428:8
7453:16,18
7459:19
7599:1

prices
7378:17
7379:5,9
7380:4,22
7381:9
7382:6,14
7385:21
7386:3
7451:7,8
7466:15
7475:8
7497:4
7512:21
7523:21
7547:24
7594:2,11
7598:16
7599:5,9
7610:13,15

primarily
7493:2
7541:12,17
7600:13

primary
7487:9

principal
7380:13

principally
7378:22

principle
7371:16
7422:16
7606:17

prior 7460:9
7600:25

private
7383:22
7480:15

privately
7383:15
7429:9

pro 7523:5

probabilistic 7600:18

probabilities 7461:21

probability
7445:2,4,6,8 7450:14
7460:2
7461:9
7462:14,19,25
7464:14
7532:3,4
7599:7

probable
7421:7
7482:4
7593:18

probably
7415:15
7480:23
7489:2
7499:1
7502:11
7521:2
7564:15
7579:12
7613:23

problem
7414:14
7422:25
7438:17
7439:22
7440:9
7487:7
7488:16
7532:9
7533:25
7579:4

proceed
7440:25
7442:8
7466:20
7539:21
7596:22
7597:3,9,21 7612:24
7613:16
7614:10,11,14,17
7615:24
7616:18

proceeding
7425:23
7434:25
7441:2
7449:19
7598:2
7614:19
7618:24

proceedings
7370:5
7414:8
7449:11
7470:25
7533:2
7587:9
7618:24
7619:2

proceeds
7539:4

process
7430:25
7431:17
7439:25
7441:23
7518:20
7525:1
7526:10

7530:13
7533:8
7539:17
7541:17
7556:9,13,21
7559:13,14
7588:22
7597:7
7615:6
7616:3

produce
7382:10
7384:20,23
7393:4
7514:15
7521:12
7605:9

produced
7387:24
7479:22
7575:24

producing
7379:12
7380:21
7514:15,17

product
7380:21

productive
7570:2

profile
7591:3

profit
7569:20
7570:3

profit-making
7552:21

profits
7527:2
7549:6
7552:18

profit-wise
7570:3

program
7415:25
7478:9,13,25

programs
7415:19
7478:6
7600:7

progressively 7465:22

project
7406:21
7424:22
7429:13,14,16,20
7430:12
7441:10,24
7442:1
7456:21,23
7468:18
7481:5,9
7604:15
7615:14
7616:7

projected
7374:1
7510:19
7513:18
7521:3
7554:21

projecting
7601:15

projections
7418:19
7420:2
7507:2
7511:7
7551:19

projects
7374:17
7602:12,13
7617:8

prolonged
7515:16,20
7516:1
7517:5

proof
7614:25
7615:15,21

proper
7429:11
7488:14
7570:11

properly
7419:4

proportion
7498:11

proportional
7453:6
7508:16,20

proposals
7433:3

propose
7493:22
7494:10

proposed
7393:23,25
7461:2
7463:8

proposition
7466:7
7487:1

prospects
7465:24

protect
7492:25

protected
7411:7,18

prove 7410:6
7600:17

proves
7452:22

provide
7419:19
7425:20
7431:5
7469:15
7487:20
7506:25
7522:23
7530:24
7533:13
7573:6
7574:19
7578:18
7594:4

provided
7419:2
7420:3
7440:4
7445:5
7446:11
7458:10
7469:18
7474:15
7475:19,20
7481:23
7482:17
7488:11
7496:10
7497:17
7498:6
7501:8,10
7533:5
7555:11
7575:13
7578:2
7591:13
7601:1
7603:1
7613:1,3,13 7616:15

provider
7382:14
7392:21

provides
7382:6
7422:22
7426:7
7540:4
7594:7

providing
7380:17
7391:23
7429:7,8
7452:8
7542:10
7549:20
7550:14
7578:22

province
7398:20
7425:9
7428:8
7510:2
7511:15,17,21
7512:8,11,18,24
7513:9,10,19
7514:20,22
7516:23
7517:18
7518:13,17
7519:15,24
7520:16
7522:11
7523:4
7527:11
7528:7,8,12,15,18,19
7529:9,17,20 7614:6

provinces
7522:22
7527:19,20,21,23
7530:16,17,22

province's
7398:24
7515:22
7529:13

provincial
7417:7
7518:10,16
7527:14
7531:1

proxy
7460:17

prudence
7377:18

prudency
7520:7

prudent
7384:14
7395:9
7410:16
7520:11

PUB 7401:24
7469:22
7470:12
7474:19
7565:1,10

PUB/Manitoba
7545:9,16

PUB/Morrison
7596:23,24

PUB/MPA
7458:11
7564:18

public
7366:3,21
7392:6,8,13,15
7431:21
7492:24
7510:6
7516:22
7517:2
7572:24
7576:13
7617:23
7618:24

publically
7531:1
7575:19

pull 7370:20
7386:15
7565:9
7603:8

pulled
7440:14

punt 7613:21

purchased
7428:7

pure 7377:19
7585:5

purely
7566:17

purpose
7389:4
7419:17
7493:2
7511:24
7549:21,24
7562:16,25

purposes
7387:10
7391:6
7399:23
7403:23
7433:25
7458:22
7467:15
7474:15
7508:12,23
7511:1,22
7526:2,3
7536:12
7540:15,24
7542:23
7574:10
7600:19

pursue
7385:10
7402:9
7536:7

pursued
7402:11
7553:6

pursuing
7407:9
7425:23
7441:10
7604:15

push 7448:13

pushing
7452:25

puts 7604:16

putting
7456:23
7479:14

Q

qua 7571:9

Qual
7368:6,7
7370:14,15

qualification 7444:24

qualifier
7479:15

qualitative
7538:23
7539:9
7570:14
7571:10,13
7588:19
7589:7,9

quantified
7529:8

quantify
7582:20

quantitative
7538:23
7570:14
7588:19
7589:6,9

quantum
7588:20

quarter
7414:13

question
7370:23
7386:22
7387:8
7396:15
7399:23
7413:14
7425:5
7427:11,12
7429:10,23
7432:9,15
7435:11
7439:24
7443:15
7445:12
7446:7
7463:20
7467:17
7471:9
7472:25
7474:25
7489:9
7491:1,6
7499:8
7501:1
7504:1,22
7505:10,11
7512:19
7513:13
7514:4
7520:6
7523:14
7524:21
7525:4
7529:18,21
7531:22
7540:8
7543:2
7556:25
7570:25
7571:2,3
7573:7
7576:6
7596:24,25
7600:14
7601:19
7611:5
7612:9,17,22 7613:17
7614:13,25
7617:16

questioned
7445:8

questioning
7484:15
7506:8
7526:20

questions
7403:3
7408:3,6
7413:20
7414:23,24
7421:25
7442:13
7479:20
7485:10
7493:8
7505:19
7527:10
7532:14,18
7535:17
7569:13
7571:15
7572:23
7580:6
7589:4
7611:1
7614:8

quick
7413:24
7504:21

quickly
7404:14
7444:22
7465:4
7489:20
7546:5
7586:19
7603:9
7616:14

quilt
7434:20,21

quite
7380:10
7385:3
7396:5
7448:7
7449:7
7464:10
7496:1
7513:4
7519:20
7531:7
7546:20
7552:5
7564:15
7579:15
7580:22
7587:19
7592:24
7593:20
7601:14

quitting
7484:23

quotation
7468:8

quote
7390:20

quote/unquote
7517:24

quoted
7556:17

quoting
7560:5

R

raging
7510:14

rain
7591:6,7

Rainkie
7479:20
7480:4
7482:4
7522:7
7568:3

raise
7390:10,12
7395:12
7466:21
7516:9,16,19

raised
7421:3

raises

7459:12
7606:2

raising
7516:20
7617:16

Ramage
7367:5
7618:14

ran 7517:13

range
7420:4,12
7427:21
7428:1,18
7455:19
7456:3
7457:5,11,
20 7459:21
7509:7
7510:13
7520:22
7537:22
7538:20
7539:16,17
7544:19,21
7561:17,25
7562:15,20
7563:10
7564:4
7580:19
7582:25
7599:11
7605:15
7616:20

ranges
7420:6
7538:15
7548:6
7598:25

ranging
7543:20
7563:23

rank
7446:5,8
7562:15,17
,24 7585:3

ranks
7446:19
7447:2

rare 7544:21

rate 7374:14
7376:4,19
7377:13
7389:2
7390:22
7391:22
7393:10
7401:23
7403:20
7405:14,18
,22
7406:1,5
7408:18,19
7413:11,12
,17
7423:9,15,
18,22,23
7427:5
7428:21
7430:6
7446:20,21
7451:5
7456:8,17
7458:7,10
7461:24
7462:17,18
7465:25
7476:2,3
7477:7,8,1
0 7483:4
7522:12
7529:13,25
7530:1,5
7533:10
7537:4
7542:22
7543:11,16
,24
7547:3,6
7550:25
7551:2,5
7552:13
7553:21
7555:1
7558:6,7,1
3,22
7559:1,3,5
,10,14
7560:6
7561:2,4,7
,14,17,22,
24
7562:2,8
7564:2
7569:2
7584:6,10
7601:7,10,
15,16
7604:7,13,
14,21,25
7605:6,10,
15,22
7606:3,6,8
7607:12
7608:3,24,
25 7609:1

rate-based
7376:10
7384:4
7411:7

ratepayer
7383:19
7391:25
7392:1,20
7393:7,21
7394:1
7406:20,23
7407:4
7411:6,17
7412:4
7417:8
7423:11
7424:23
7429:15
7450:15
7457:12
7466:23
7468:7
7537:10
7584:3
7588:9
7590:12
7614:20

ratepayers
7381:10,11
,17,25
7382:3,6,1
3,25
7383:12
7384:9,16
7385:20,22
,24
7387:25
7388:2,7,2
5
7389:2,8,9
,24,25
7391:7,24
7392:3,5,8
,13,16
7393:6,9
7397:21
7407:12,14
,15,21
7411:5
7412:8,24
7415:1,4
7416:5
7425:10
7430:4,11
7440:8
7446:14
7448:3
7453:12,21
7456:25
7457:3,6,7
,9 7463:18
7468:10,21
7471:10
7472:11,25
7478:1,2
7517:19,21
7518:23
7519:13
7549:16,19
7550:14
7551:3
7552:10,13
,15,25
7553:22
7554:2,5,1
6 7569:9
7574:24
7585:3
7591:10
7602:25
7603:3
7604:1
7607:16
7609:16,17
7610:6

ratepayer's
7370:23
7392:2

Ratepayers
7391:13
7588:1

rate-

regulated
7552:17,21
7553:3

rates
7371:7,22
7376:14
7377:8,9
7390:14
7405:1,4,1
0 7407:21
7415:16,17
,25
7416:12
7422:7
7427:3,20
7445:14,17
7451:10
7454:25
7456:12
7457:6,11,
22 7458:2
7460:3,6,1
0 7461:1
7462:6,9
7463:1,17
7464:17
7465:20
7466:2,5
7467:23
7468:12
7470:1
7475:7,15
7476:2,7,2
2
7477:1,12,
21,24
7478:18,21
7479:4
7497:4
7516:9,17,
19,20
7520:21
7522:3
7529:20,23
7539:18
7543:3,6,7
,10,11,20
7544:3,8,1
1,18,25
7546:1,7,1
0,12,15,18
,20
7547:17

7548:3,6
7549:1
7550:8,20
7553:5
7554:9
7556:23
7558:2,3,10,12
7559:6,16,18 7562:15
7566:13
7574:16
7589:1,3
7595:12,14
7599:10
7603:25
7604:5,20
7605:5,18
7606:11,19,21,23
7607:4,5,7
7608:2,4,22 7609:25
7610:2,3,5,10,17,19,20,22

rate's 7561:5

rather 7377:4
7411:8
7418:13
7600:18
7613:21,25

rating 7484:12
7506:16,21,22
7510:15
7511:12,18,22
7512:12
7513:8
7515:4
7518:15,19
7519:14,21,25
7523:10

ratings 7506:25
7515:22

ratio 7401:22,25
7402:2,15
7513:7
7550:24
7566:5,10
7567:1,10,19,24
7568:6
7604:9,10

rational 7442:12

ratios 7510:20
7604:12,17

Re 7366:7

reach 7507:4
7606:10

reached 7573:14

react 7457:9
7524:6

reaction 7509:24

readily 7503:11

reading 7418:13
7618:14

ready 7487:3
7490:6
7491:19

real 7407:25
7428:1
7449:15
7458:1,25
7470:20
7480:7,17
7514:2
7543:3,10
7545:1,5
7546:10,18,19 7547:5
7552:13
7554:23
7555:17
7591:6
7615:4

realistic 7599:9

realistically 7516:21

reality 7376:2
7396:19
7397:14,19
7402:3
7419:22
7431:3
7432:24
7439:10
7479:23
7481:22
7483:20

realized 7501:8

really 7386:1
7422:2
7434:3
7440:3
7466:23
7479:9
7491:4
7517:3
7522:4
7526:5
7551:1,16
7583:7
7601:19
7613:24

realm 7372:14
7461:13
7555:9
7582:1

realpolitik 7395:25

reap 7377:20

reaping 7382:19

reason 7436:15
7474:9
7487:9
7515:3
7523:1
7579:3

reasonable 7376:19
7377:9,13
7419:9
7442:12
7467:17
7517:1
7523:1
7536:5
7548:15
7562:21
7570:15
7574:9
7582:1
7592:25

reasonableness 7480:14
7548:6

reasonably 7421:7
7513:6
7514:25

reasons 7374:23
7396:3
7400:1
7442:9
7488:12
7573:20
7614:11

recalculate 7615:9

recalculated 7456:6

recall 7371:2
7373:13,18
7375:1
7378:2
7386:8
7395:1
7404:15,18
7483:1
7514:13
7537:14,23
7538:25
7540:11
7546:3
7556:6
7568:9
7595:16

receive 7377:15
7429:14,16

received 7412:12
7576:15
7577:20
7584:17
7586:15
7587:4

receiving 7440:7

recent 7392:23
7464:6
7465:18
7585:15
7587:2

recently 7446:11
7459:25
7464:7
7485:10,11
7486:3
7513:3

recess 7619:2

recessing 7414:3
7491:15
7532:23

recognition 7397:19

recognize 7490:24
7511:19

recognizing 7524:3

recollection 7458:1
7559:4,9

recommend 7422:13
7598:2

recommendation 7491:3

reconcile 7440:23

record
7418:14
7433:14
7440:15
7442:20
7443:23
7444:16
7465:7
7482:22
7485:17
7486:16
7493:13
7517:11
7526:6
7530:4
7544:22
7546:4
7572:14,24
7576:13
7617:23

record's
7444:7

recoup
7398:15

recourse
7554:13

recover
7549:1
7590:7,11

recovered
7428:21
7590:8

recovery
7590:5

recurring
7390:15

red 7523:7

redoing
7533:20

reduce
7437:22
7478:10,16
7551:24
7602:7

reduced
7432:4
7438:7,22
7478:11
7497:24
7602:15

reduces
7437:12

reducing
7602:6,9,10

reduction
7369:5
7493:21
7494:3
7496:23
7497:21
7498:5,15
7499:23

redundant
7611:19

ref 7508:10

ref/ref/ref
7437:8,18
7501:3
7580:25
7610:18

refer
7419:12
7455:4
7474:19
7476:20
7507:13
7563:18

reference
7371:11
7401:2,12
7403:6
7421:18
7440:14
7454:2
7467:16
7470:15,24
7471:3,13
7474:6
7511:12
7513:1
7540:17
7556:4
7564:20
7565:16
7572:7
7580:21
7599:1

referenced
7394:5
7473:3
7540:14

references
7515:8
7599:21

referencing
7430:15

referred
7406:24
7427:12
7430:19
7453:10
7482:24
7483:22
7485:13
7526:14
7556:8
7560:2
7575:22
7599:4

referring
7370:22
7437:7,18
7447:23,24
7448:6
7457:21
7464:5
7475:4
7508:3
7558:1
7588:17

reflect
7491:8

reflected
7380:14

regard
7534:21

regarding
7387:19
7548:17
7618:24

regardless
7385:13
7553:5
7609:17

regional
7530:11
7607:23

Regis
7366:13

regulated
7376:10,21
7377:3,8
7384:5
7391:22
7393:10
7428:14,19,20
7558:8,25

regulator
7384:7,13
7392:7

regulators
7443:21

regulatory
7382:8
7516:18
7557:25

relate
7397:24

related
7378:19
7379:11
7468:21
7546:16
7552:25
7590:1
7609:20

relates
7371:21
7421:15
7422:13
7427:4
7445:2
7451:1
7480:19
7514:10
7525:4,5

relating
7400:3
7539:20

relation
7409:4
7527:10
7611:5
7612:9
7613:25

relationship
7392:20
7393:8,24
7412:12
7453:15
7609:25
7610:16

relative
7369:4,8,12 7397:9
7403:8,15
7446:23
7468:10
7493:20
7494:1,9,15,20
7495:1
7529:23
7530:20,21
7571:3,6
7585:20
7601:20
7608:11

relatively
7407:10
7411:22
7412:25
7446:19
7453:20
7464:5
7475:16
7513:22,25
7518:16
7542:7
7546:5
7562:21
7564:3
7572:21
7576:8
7592:8
7609:2

relax
7496:20

relaxation
7498:12

relaxed
7499:23

relaxing
7497:6

relevance
7407:5

7552:22
7553:10

relevant
7406:22
7407:12
7457:2
7464:16
7465:1
7467:4
7468:23
7476:4,8,12 7487:21
7553:20
7610:1

reliability
7398:19

reliable
7588:3,10

reliance
7371:8

relied
7427:24

relief
7521:21

reluctant
7390:14

rely 7406:16
7420:2

remain
7609:2

remained
7610:14

remaining
7476:16
7518:8

remains
7453:18
7484:1
7488:25

remember
7436:6
7459:17,18
7535:22
7560:18

remind
7447:8

remiss
7489:3

remote
7513:25

rendered
7582:5

rental
7522:22
7527:19

rentals
7388:13
7521:22

reorganization
7518:3,11,20

reorganized
7619:3

repay
7429:16

repeat
7419:8
7505:11
7581:11

repeated
7419:8

rephrase
7432:15

report
7389:21
7396:24
7418:10,12,22
7419:15,25
7421:17
7428:24
7438:15
7444:20
7445:10
7450:1
7454:15,18
7470:6,10
7476:19
7487:17
7488:17,18
7496:10
7511:25
7512:25
7519:7
7523:13
7541:14
7543:15
7556:8,10
7560:3
7569:1
7573:15
7581:9
7589:10,20
7594:16
7596:3
7598:23
7603:1
7612:10

reporter
7457:19

reporting
7506:18

reports
7506:21
7510:6

report's
7419:1

repose
7545:8

represent
7527:23
7547:17
7549:6

represented
7544:14
7563:15

representing
7390:22

represents
7548:19
7552:9

reputation
7431:15
7432:6,16
7433:11
7440:23,25
7441:5
7443:12

request
7384:7
7533:4,18

requested
7554:9
7586:8

requesting
7550:25
7597:20

requests
7401:24

require
7402:3
7426:6
7529:17
7533:19,21
7595:13
7601:6
7604:25

required
7374:6
7384:8
7387:25
7420:17
7424:15
7432:20
7486:5
7490:21
7492:3
7495:12
7537:16
7550:7
7571:10
7587:7
7597:3
7598:5

requirement
7392:7
7436:16,21
7591:4
7595:11

requires
7402:23
7436:19
7443:18
7533:20
7565:18
7606:1
7617:9

requiring
7568:7

reread
7454:18

residential
7388:25
7389:2,23
7390:3
7412:8
7415:3

residual
7383:13
7385:23

resolve
7490:18

resource
7369:11
7371:17
7450:17
7494:19,25
7501:24
7502:6,8
7570:6,10
7577:11,25
7599:15,24
7602:24

resources
7369:17
7431:9
7432:21
7524:20
7569:20
7570:24
7571:1,24
7617:4

respect
7372:16
7408:7
7417:13
7421:24
7422:1,2
7425:21
7427:3
7431:16
7437:16
7440:22
7454:11
7468:3
7474:10
7484:12
7485:17
7490:18
7512:21
7527:11,12
7536:25
7541:8
7553:1
7554:4

7564:3
7583:13
7596:14

respectful
7487:25

respecting
7583:15
7590:18

respond
7524:4

responded
7440:16
7523:14

responding
7468:3

response
7369:22
7426:10,14
7455:16
7468:8
7475:4,6
7477:23
7517:2
7537:9
7540:7
7545:21
7564:18,19
7565:17
7573:2,5
7614:12
7618:16,19

responses
7482:4
7596:3
7611:3

responsibili ty 7512:24

responsible
7383:12
7384:17
7385:22
7411:15,17
7412:25
7457:3
7472:10
7478:3

responsibly
7466:20

restarted
7449:11

restricted
7439:18

restrictions
7382:9

result
7395:14
7398:5
7405:4
7413:2
7414:23
7432:17
7433:6
7443:13
7452:13
7477:19
7478:17,18
7488:10
7533:10
7564:7
7578:21
7580:9
7587:14
7588:8
7601:2,11

resulting
7518:7
7557:7

results
7404:3
7405:13
7424:10
7482:10
7542:11,18
7554:14,15
7576:1
7578:5
7580:16

resume
7491:13

resuming
7414:4
7491:16
7532:24

resuscitate
7481:12

retail
7376:11
7377:3

retailer
7376:5

retained
7383:3,5,6 ,11
7401:20
7402:15,21
7407:11,13
7456:25
7548:19
7549:15
7550:3,5,7 ,12,20,22
7602:8,10

retaining
7383:10

retirements
7542:2

RETIRES
7619:7

return
7376:15,19
7377:10
7393:12
7401:3
7404:8
7408:9
7417:15
7427:20
7428:14,17
7430:6
7533:2
7548:18
7551:5,10, 14,18,22,2 3,25
7552:2
7553:4,16
7554:6
7557:7,15
7559:24
7561:21
7563:3
7564:7
7593:3

returning
7550:20

return-maximizing
7551:13

returns
7427:13
7549:4
7553:24
7572:12
7591:8

revenue
7390:2,5,9
7412:19
7413:10
7440:8
7456:24
7468:24,25
7470:1,8,1 9 7471:22
7472:14
7473:8
7514:15,17
7521:6,12, 16 7530:9
7553:21
7576:16
7584:3,12
7585:6
7591:4
7595:11,14
7605:9
7606:18

revenues
7380:3
7388:13
7389:19,22
7393:18
7412:6,7,1 1,12,16
7449:25
7504:17
7512:7
7527:10,13
7528:1,6,1 2,24
7529:2
7530:15,16
7539:18
7554:16
7570:7
7574:24
7590:12
7602:6

reverse
7503:3

revert
7590:25
7593:3,5,7

reverting
7522:14
7592:22

reverts
7522:11

review
7366:9
7395:18
7397:7
7417:21
7422:7
7424:14
7475:18
7479:17
7486:3
7487:23
7545:8
7552:24
7596:22
7597:8,22
7598:4,11
7609:10

reviewed
7475:22
7531:20
7545:10
7554:20
7597:16
7598:11

reviews
7556:13

revised
7555:20
7618:16

reward
7377:20
7438:2

rewards
7382:20

Richard
7366:16

rights
7527:11,25

rise 7571:9
7606:21
7608:22
7610:6,10

rising
7475:7
7477:1,10

risk 7370:24
7371:16,23
7373:22,23
7374:9
7375:2
7378:9,13
7385:24
7386:2
7393:16
7408:21
7411:4,9
7423:6
7428:8,9,20,25
7429:1,11,17,18
7437:21,22
7438:2
7439:14,15,16,18,23
7440:2
7449:22
7512:3
7513:18,21,24
7514:20
7515:17
7519:9
7520:5
7531:23,25
7532:2,4
7568:23
7569:1
7573:21
7588:11,16
7590:1,3,18
7594:8,16
7602:6

risk-adjusted
7584:2

risks 7372:3
7374:4
7379:24
7380:23
7392:12,18
7393:22
7394:2
7413:17,18
7430:12
7512:15
7513:24
7514:2
7517:4
7520:7
7524:9,16
7528:19,20
7538:24
7539:20,23
7588:20
7589:5,20,21
7594:15,25

road 7614:4

robust
7407:18,22
7454:7
7601:14

robustness
7407:8
7421:8

rock 7476:23

ROEs 7557:23

room 7371:20
7490:12
7522:3
7619:3

roughly
7405:11
7455:19

round
7455:6,25
7457:16
7468:2
7596:23,24

row
7471:16,17
7502:23

rows 7579:12

rule 7540:20
7604:5

rules 7540:9

ruling
7556:5
7557:8

run 7369:3
7446:6
7493:19,25
7505:6
7576:18

running
7579:23
7585:23

runs 7457:21
7587:1

S

S&P 7506:22

safe
7588:3,9
7590:24

sale 7433:16
7434:1
7435:1,10,23 7436:4
7437:11
7440:16
7504:4,9,11

sales
7389:15
7437:22
7438:7
7526:23

sample
7578:4,16

satisfy
7436:18
7591:9

Saunders
7367:22
7484:18
7489:10,12,17

saw 7407:25
7408:7
7482:22
7488:2

scale
7527:16

scenario
7403:6
7441:14
7455:24,25
7459:15,21
7461:3,5,9
7463:9,11
7473:15
7507:9
7509:3,19
7514:14
7515:16,25
7523:7
7539:3
7542:12
7577:8,24
7579:11,14
7580:20
7583:1
7585:7
7591:18,25
7592:14,16
7595:8
7600:18
7605:16
7606:5
7610:18

scenarios
7387:13
7456:2
7467:1
7473:3
7488:10
7515:17
7569:6
7575:5,24
7576:2,18
7577:13,17
7579:6,8
7580:25
7584:13
7592:4
7596:2,3
7599:5

schedule
7465:1
7488:13,16
7490:7
7517:23

scheduled
7485:9

scheduling
7492:9

Schulz
7568:3
7572:9

science
7562:1

scope
7569:23

scratch
7426:21

screen
7469:5
7536:6
7545:15
7581:8

scroll
7375:7,11,13,16
7378:12
7381:4
7390:17
7460:12
7581:9
7605:24

scrolling
7375:16
7377:23

se 7611:16

search
7536:6

second
7371:8
7375:8,12
7391:10
7397:24
7404:21
7433:13
7445:19
7502:13
7507:15
7545:21
7618:15

second-last
7498:14

section
7573:7

sectors
7422:8

secure
7463:23

securing

7431:10

seeing 7497:13 7498:9 7546:3 7579:19

seek 7417:10 7464:18,19,20 7570:8

seeking 7379:1 7384:24 7439:15 7465:13,14 7467:3

seeks 7441:11

seem 7390:15 7441:3 7525:1

seen 7424:8 7432:2 7444:15 7453:7,24 7458:6 7479:23 7498:4 7501:25 7616:13

select 7382:2 7580:20

selected 7544:23 7604:22

selection 7450:19

self 7511:19 7515:11 7522:4 7523:18

selfish 7487:5

self-supporting 7512:16 7515:15 7521:24 7522:8,10 7537:6

sell 7377:16 7383:23 7384:24 7385:8

selling 7377:3,4,15

sense 7383:4 7391:13 7392:4 7399:6,13,18 7417:7 7422:23 7443:8,10 7449:5 7454:7 7460:3 7466:7 7473:24 7516:23 7521:5 7548:12 7549:17 7551:16 7563:14 7578:5 7595:10 7597:20 7616:7

sensible 7551:11

sensitive 7371:7,10 7423:15 7541:10 7562:18

sensitivities 7576:19

sensitivity 7475:8

sentence 7477:22

separate 7499:20 7501:17 7558:6 7577:17 7605:25

series 7493:19 7535:2 7563:11

serious 7444:1 7615:23

serv 7556:10

serve 7384:9

served 7442:22

service 7391:16 7472:13 7506:22 7550:12,14 7588:4 7609:15

services 7588:10

session 7492:24 7493:1,6

sets 7549:1 7557:14

setting 7380:4 7419:15 7537:4 7542:22

seven 7438:3 7519:23 7591:2 7611:16,22

seventeen 7496:9

seventy 7423:8,21

seventy-eight 7422:17,19 7423:1,5,10,25 7462:7 7536:16 7574:8,11,13

seventy-five 7373:6 7548:13

seventy-four 7405:12

several 7523:25 7524:19 7570:17 7582:3 7598:23

severe 7515:25 7519:21 7568:14

shale 7372:21

share 7408:20

shared 7579:17

shareholder 7383:14,19,22 7411:2 7552:18

shares 7383:23

shattered 7467:9

sheer 7374:17

sheet 7402:6,8,10,11 7407:5 7469:14 7537:10 7549:15 7569:4

sheets 7468:4 7469:18

Shefman 7367:23

shift 7610:4

short 7449:24 7454:2 7459:16 7535:2,3 7536:22

shorter 7450:23 7461:1 7573:23 7591:1

shorter-term 7574:16

shorter-termed 7536:22

shortly 7545:16

shoulder 7381:11

showing 7435:11 7542:10 7584:20 7603:15,20

shown 7448:12 7459:9

shows 7369:7 7437:25 7448:17 7459:4 7494:9,14 7605:4

sic 7393:13 7394:6 7616:17

sides 7407:23

sign 7570:17

signed 7441:2,5,25

significance 7381:24 7397:23 7407:14 7408:1,25

significant

7395:13
7420:25
7423:3
7424:9
7425:17,22
7426:4
7448:13
7475:16
7511:10
7533:19
7570:17
7573:20
7601:9,17
7610:9
7615:23
7616:10

significantly 7512:10

s'il 7414:9
7487:13

silent
7576:8

similar
7421:21
7461:2
7470:13
7474:17
7496:13
7504:24
7505:15
7508:19
7560:12

Simonsen
7505:24
7506:1
7535:7,8

simple
7533:18

simplifying
7541:20,23

simply
7378:1
7379:24
7380:24
7382:3
7397:19
7445:20
7452:6
7483:18
7487:2
7489:25
7536:17
7565:20
7566:1,20

single
7396:10
7436:8,9
7451:14
7462:10
7523:15,16
7524:2
7574:11
7582:2

sink 7409:11

sir 7375:22
7376:6
7381:24
7387:3
7393:1
7394:24
7396:19
7400:20,23
7401:5
7404:15
7406:15
7415:8
7416:21
7417:14
7418:2,4,10,19
7421:23
7422:13
7426:8,15
7430:23
7431:24
7433:9,19
7435:3,19
7436:14
7437:14
7440:13
7443:5
7444:25
7447:23
7450:10
7454:2,14,18 7455:11
7458:5
7461:15
7462:24
7468:1,13
7469:16
7470:2
7471:15
7472:22
7475:6,11
7476:19
7477:11
7479:15,19
7482:2,17
7483:10
7489:20
7506:19
7507:12
7508:1
7509:23
7517:11
7521:11
7523:4
7526:5
7527:8

sitting
7486:3,15,23 7492:1
7495:13

sittings
7492:10

situation
7514:21
7566:20
7599:19
7610:15
7615:13

situationally 7400:4

situations
7468:6
7524:5
7566:11,24
7568:13
7573:25
7575:7
7604:24

six 7508:19
7559:15
7564:14
7580:5

sixteen
7497:25

sixth 7447:1

sixty 7464:7

size 7374:17
7402:8,20
7407:5
7512:5
7527:16
7555:7

sizeable
7598:4

sizes 7402:6

skewed
7390:3
7412:5

slice 7540:5

slide
7370:21,22
7386:16
7400:22,24
7401:14
7402:19
7421:18,19,21
7430:17
7434:3
7440:11
7537:1,20
7538:5,10

slight
7463:11

slightly
7379:18,19
7513:24
7555:6

slowly
7518:24
7543:2

small 7390:6
7394:5
7475:16
7477:12
7495:14
7504:18
7535:6

smaller
7402:10
7416:7

smooth
7380:2

snappers
7535:3

snappy
7535:3

so-called
7379:9

social
7415:24
7448:24

solar 7502:7

sold 7385:16

Soldier
7366:15

solely
7411:17
7439:6
7449:1
7451:17,20

somebody
7431:18
7443:18
7586:25
7613:18

somehow
7516:10
7614:10

somewhat
7371:23
7421:21
7463:11
7504:12
7547:4
7608:23

somewhere
7387:14
7406:4
7420:13
7472:14
7591:18

sophisticated 7466:9
7572:6

sorry 7394:8
7402:19
7403:12
7411:11,13
7421:17
7426:11,13
7445:13
7450:7

7456:12
7468:4
7471:9
7475:3
7491:19
7493:15
7499:7
7501:2
7502:13
7543:1
7545:21
7566:1
7569:13,18
7573:4
7591:19
7596:23,24
7603:14
7612:12
7617:21

sort 7428:11
7448:9
7501:7
7548:22
7577:18
7613:4

sounds
7533:17

source
7539:6

sources
7388:3
7541:18,21

south
7398:21

space
7578:15

span 7373:6

spans 7463:7

speak 7495:5
7595:3

speaking
7372:17
7382:17
7413:1
7416:3
7488:23
7513:22
7529:8
7530:7
7551:12

special
7415:19
7518:22

specific
7376:25
7401:6,12
7477:19
7485:16
7556:25

specifically
7448:5
7463:22
7586:16
7588:16
7611:6

specifics
7394:25

specified
7369:9
7494:10,16

speculative
7424:22
7433:5
7442:10

speed
7586:20

spend 7407:1
7434:10
7564:17
7617:11

spending
7391:23
7396:20
7425:8,10,16,17
7524:20,23
7563:20,21
7570:23
7571:1,4
7604:16
7615:19
7617:6

spent
7397:8,11,21 7400:14
7431:10
7441:24
7442:20
7467:25
7481:13
7483:17,23
7614:15
7617:15

spike
7466:15,18

SPLASH
7541:12
7575:22,23
7576:14,17,21
7577:17,20
7587:1
7613:1

split 7412:7
7527:2
7559:9

spread
7451:19
7459:10
7555:8
7560:1,3,5

spreadsheet
7469:5,7

spun 7518:7

staff
7487:19
7488:23
7489:1

stage
7372:12
7465:24

stakeholder
7562:9,10

stakeholders
7409:1
7456:13
7468:22
7535:21
7536:9
7562:6
7564:5
7573:25
7575:2
7588:21
7614:20

stakeholder's 7562:11

stand
7484:17
7532:20

standard
7580:25

standing
7583:3

stark
7451:25

start 7370:4
7388:25
7413:24
7444:22
7449:4
7455:1
7460:8
7471:5
7477:15
7479:14
7506:13
7510:13
7520:21
7524:16
7535:2,4,16 7603:13
7606:19

started
7430:15,21,25
7431:17
7468:9
7591:19

starting
7391:2,11
7398:1
7446:19
7554:19
7578:12
7581:22
7582:22
7596:5

state
7485:17
7544:12

stated
7409:22
7428:24
7536:14
7548:20

statement
7378:7
7381:16,24
7397:24
7452:17
7468:13
7553:24
7554:14,15
7569:23
7585:22

statements
7450:11
7480:7
7526:15
7549:22,25
7577:11

States
7417:3
7442:22
7443:21

static
7453:18

stating
7388:18

stations
7508:25

Statistic
7459:3

Statistics
7460:15

status
7537:6

stay 7370:7

stayed
7463:1

staying
7376:2,25
7382:16

steadily
7608:22

steady
7604:25

step 7559:23
7596:15

steps 7425:3
7520:7,11

7568:16
7596:21
7597:2

stick
7424:18

stop 7405:7

storage
7525:22

story
7531:25

straightforward 7566:8
7588:2

stranded
7373:17,22
7515:4
7517:22,23
7518:9,21
7519:12
7564:20
7565:18

stream
7584:11

streams
7391:6

strength
7537:6

strengthen
7569:4

stress
7456:9
7473:12
7602:8

strip
7612:13

strive
7420:10

stroke
7419:12

strong
7442:9
7525:6
7614:18
7615:25
7616:4

stronger
7616:25

structure
7410:25
7411:2
7549:10
7551:15
7559:7,9

structured
7380:22
7550:11

structures
7427:23
7558:12

Structuring
7392:17

struggle
7408:24

struggled
7407:24,25

struggling
7400:22

studied
7591:18

studies
7563:23

stuff
7444:12
7467:25
7469:23
7484:12

subdivide
7558:10

subject
7416:22
7437:3
7441:17
7444:18,23
7463:16
7484:9
7525:4
7563:2
7570:11

submission
7496:13,15
7555:13

submissions
7556:10,12

submitted
7552:17

subsequent
7539:5
7602:1

subsequently
7478:18

subset
7411:22

substa
7604:16

substantial
7392:10
7393:4
7397:8
7398:4
7604:16

substantially 7402:10

subtract
7473:13
7509:11

subtracting
7472:5

suffer
7377:20

suffered
7519:22

suffering
7382:20

sufficient
7439:9
7532:5
7591:7
7594:25
7597:23
7606:17,18
7610:4
7614:21
7616:10

suggest
7371:16
7388:6
7391:11
7410:3,22
7415:8
7429:17
7436:13
7462:24
7482:2
7486:6
7490:15
7493:10
7494:21
7521:11
7522:6,7
7523:4
7539:12
7546:7
7556:3
7558:21
7572:13
7600:3

suggested
7374:21
7387:21
7460:2
7463:10
7537:21
7538:20
7591:25

suggesting
7377:2
7382:24
7385:10
7485:25
7521:2
7531:23
7543:24
7544:2
7593:8,13
7612:19
7613:15,19
7614:9

suggestion
7395:2,19
7474:11
7484:16
7616:17

suggests
7388:7
7404:25
7429:1
7446:12
7462:5
7489:24
7614:22
7616:3

sum 7606:16

summarizing
7445:20
7589:25

summary
7369:12
7454:8
7494:20
7495:1
7504:23
7505:14
7533:7
7534:21
7556:16

summation
7451:6

summer
7431:1

sums 7604:16

sunk
7396:6,11
7397:6,13
7409:11
7479:12
7480:19,22
7482:25

superior
7446:16

superiority
7531:18

supplemental
7591:21

supply
7369:20
7372:17
7373:8
7501:23
7502:4
7618:6,10

support
7409:24
7431:6
7443:20
7462:25
7484:1
7512:11
7513:7
7516:23
7562:13
7579:22

7597:20

supported
7506:16
7512:6
7513:3,5
7514:11
7516:6
7518:17

supporting
7511:20
7515:12
7516:3
7517:21
7518:18
7521:7
7522:5
7523:19

supportive
7441:11
7486:22

suppose
7407:18
7534:6,19
7535:4

sure 7374:12
7375:14
7407:14
7408:6,25
7409:9,15
7418:21
7433:6
7436:12
7445:1
7458:9,17
7465:15
7471:3
7472:25
7486:23,24
7492:16
7525:14
7528:15
7547:19
7548:2,14
7549:12
7552:22
7564:23
7572:8
7578:13
7579:17,24
7597:1
7600:22
7612:16
7616:11

surprise
7595:12
7604:14

survey
7539:22

surveys
7563:19

suspect
7483:19
7601:13
7616:12

sustain
7408:13

sustained
7568:13

Sven 7367:3

swap 7532:19

switch
7447:7
7577:6

switches
7577:5

switching
7496:24

system
7398:5,24
7399:2
7426:14
7476:14,16
7478:12,14
,15,18
7525:15,17
7540:19
7600:13
7609:23

systems
7525:14

T

tab 7557:4,6

table 7368:1
7369:7
7437:25
7445:25
7448:13
7467:5
7470:22
7494:9,13
7496:7
7497:19
7504:2
7507:22
7545:24
7589:18
7611:9,20
7612:23

tables
7369:20
7437:19
7504:24
7505:14
7533:7
7534:21
7603:8
7618:6,10

taker 7378:1

taking
7380:24
7399:9
7411:4
7415:8
7428:20,25
7472:4
7476:14
7492:22
7501:25
7519:19
7524:16
7562:16

talk 7377:25
7381:9
7390:14
7492:17
7510:20
7515:16
7602:22

talked
7421:1
7449:3
7479:11
7517:10
7580:6
7581:13
7594:2

talking
7371:4
7379:14
7386:5
7387:9,13
7391:2
7411:21,24
7423:16
7445:15
7451:3
7464:22
7470:1
7512:13
7515:9
7517:3
7530:15
7548:10
7576:20
7587:22

target
7401:22
7402:2
7547:10
7549:9
7550:19,24
7560:3

targeting
7534:23

targets
7401:21
7549:2
7550:25
7552:4
7601:6
7604:9

tariffs
7390:7

task 7583:6

tasks 7451:7

tax
7389:6,7,8
,10,14,15,
16,17
7413:16
7415:10,11
7416:11
7506:16
7513:2,5
7514:10
7516:5
7518:16
7521:1,22

taxes
7388:14
7527:12
7528:1
7530:18

taxpayer
7393:14
7411:18
7413:1

taxpayers
7388:8
7389:3
7415:1,4
7416:4,9
7467:24

tax-supported
7510:15
7511:14
7520:3

tec 7419:13

technical
7461:12
7511:20

Technically
7517:20

technologically
7598:15

technologies
7598:17

technology
7372:16,19
,24 7374:8
7419:13
7474:12
7539:20

temporarily
7447:7
7619:1

temporary
7466:14

ten 7372:21
7379:10
7380:3,8
7385:5
7394:13
7404:4
7423:23

7427:19
7441:13
7458:20,23
7459:5
7460:16,17
,18,23
7465:16
7476:1,3
7507:5
7509:19
7546:18
7548:10
7564:14
7587:16
7591:2
7604:18
7605:23

term 7375:22
7393:11
7401:2,6,9
7437:3
7462:8
7475:17
7476:8
7548:21
7568:25
7569:3
7593:14
7607:5

terminal
7536:17,22

terms
7370:24
7373:20,21
7379:21,23
7390:7,20
7400:3
7406:6
7410:20
7464:4
7466:21
7487:2
7492:25
7528:6,18
7530:10
7555:7
7571:7
7573:11,22
,23
7585:20
7590:5
7594:1,8,1
4 7597:2
7598:6
7601:22
7609:5
7610:16
7611:21

terrible
7419:11

test 7421:7
7446:10
7456:3
7457:10
7473:12
7475:8
7545:15
7564:24
7565:4
7575:3,7

tested
7575:7
7595:15
7596:1
7605:12

testified
7538:1
7613:12

testimony
7409:3
7419:9
7422:4
7440:24
7448:22
7474:10
7540:7
7568:3,10

testing
7454:4,13
7465:9
7598:20,24

tests
7456:11
7465:6
7599:5

text 7463:4

texts
7401:10,11

thank 7386:4
7388:4
7408:2
7413:19
7416:21
7418:2
7424:7
7425:19
7426:8
7431:13
7433:9
7440:12
7442:17
7449:23
7452:9
7454:1
7457:15
7461:15
7463:13
7468:1
7469:1
7474:19
7476:17
7477:11
7479:10
7485:7
7486:12
7487:12
7488:19
7489:4,15,
16
7491:12,22
7493:16
7495:8
7506:2,7,2
3 7514:5
7517:8
7519:3
7527:8
7532:16,21
7534:15
7535:10
7536:14
7540:6
7554:19
7559:19
7564:16
7569:12
7571:14,17
7572:15,19
7589:13
7600:20
7610:25
7611:2,4
7617:19,22
7618:22

Thanks
7375:17
7390:13

That'd
7535:8

that's
7370:7
7371:10,25
7372:4,9,2
3
7373:2,23
7375:17,25
7376:16,20
,23
7377:6,11,
22 7378:3
7380:6,19
7381:14,21
7382:2,21
7383:4,21
7385:15
7386:2
7390:18
7391:9
7393:3
7394:2
7395:16
7396:7
7397:15
7398:8
7400:10
7402:16
7403:9,19
7404:8,11
7406:7,10,
13
7408:10,21
7409:21
7411:19
7412:1
7414:12,13
,18
7415:6,12
7416:2,15
7417:4,9,1
8,23
7418:1
7420:17
7421:6,9,1
0,19
7423:24
7425:18
7427:9,22
7428:1,19
7431:6
7432:20,23
7434:15
7437:24
7439:9,22
7441:2,5,2
0 7442:7
7444:1
7446:3,22
7447:10,21
7450:23
7452:2,7,8
7453:6,23,
24 7456:23
7457:16,24
7460:21
7462:19,22
7465:12
7466:13,23
7470:8
7472:8
7474:15,17
7476:11
7480:2
7481:14
7482:12
7483:17
7485:1
7489:25
7490:10,11
,12 7493:5
7498:9
7499:20
7500:13
7501:9
7502:10
7504:13
7506:1
7507:6
7508:17
7509:5,21
7510:16
7515:24
7516:15
7517:3,12
7520:14,18
,20
7521:18,25
7524:17,25
7525:24
7526:9
7527:7
7529:5,10

7531:24
7532:13
7533:23
7534:1,3
7536:10,18
7537:13
7540:2
7541:2,15
7542:19
7543:22
7546:24
7548:24
7551:1
7553:21,22
7555:4,9
7556:18
7559:17
7561:3,6,9
7563:19
7567:2
7568:15,21
,25
7569:5,22,
23 7571:3
7573:16
7580:14
7581:2
7582:9
7583:7,8
7585:13
7586:10
7587:7,24
7589:8,13
7590:12,14
7591:15
7592:4,18,
21 7596:19
7598:10
7602:3
7603:6
7605:2
7608:21
7611:25
7614:15
7615:10,20
7616:23,24
7617:15,20
7618:23

theirs
7581:6

theme
7382:17
7418:9
7421:12

themes
7417:14
7418:5,6

themselves
7456:14

theoretical
7408:10
7479:22
7480:16
7482:3
7566:18

theoreticall y 7397:13

thereabouts
7508:15
7547:15

therefore
7374:6
7392:2
7399:16
7416:16
7428:10
7453:4
7516:4
7547:25
7598:1
7615:24
7616:6

there'll
7492:8
7593:18

there's
7372:7
7374:23
7377:12
7385:2,14
7386:24
7396:3
7405:11,16
7412:11
7420:17
7424:14
7425:2
7430:18
7434:20,23
7437:6
7439:12
7441:2
7444:2
7449:21
7453:20
7454:10
7459:11
7460:2,13
7461:21,24
7463:4
7467:12,24
,25 7468:2
7473:7
7475:1
7477:2
7481:8
7482:21
7484:9,11
7489:24
7490:1,17,
20 7520:14
7523:1,16
7534:7,17
7539:5
7549:13,22
,25
7558:6,7
7559:6,20
7567:21
7568:16
7586:6
7590:17
7594:11
7595:1,13
7596:20
7597:7
7598:3
7605:13,24

the-shelf
7600:7

they'd
7472:17
7493:12

they'll
7432:22
7464:9
7478:20,21
7505:7
7525:15
7559:16
7605:10

they're
7378:19
7380:9
7382:14
7385:9
7386:2
7392:1
7408:9
7412:20
7413:7
7420:5,21
7423:22,24
7449:17
7464:18,19
7465:6
7472:11
7502:2
7505:16,17
7510:6
7534:23
7546:13
7560:4
7609:4,6,2
0

they've
7445:6
7556:21

third 7403:4
7430:18
7434:19
7446:12
7469:24
7486:19
7489:24
7547:5
7558:7

thirties
7460:18

thirty
7373:3
7458:21,23
7459:5
7460:19
7463:24
7470:13
7498:17
7591:17

thorough
7598:4,11

thoroughly
7597:16

thoughts
7486:8
7589:25

thousand
7579:12

three-quarters
7561:1

throughout
7462:18
7544:16

Thursday
7543:2

tide 7524:3

tie 7478:5
7500:4

tied 7433:16
7434:1
7440:17
7516:9
7614:1

tie-line
7432:18
7496:19,20
7499:23

till 7465:21
7486:16

timeline
7586:11

today 7373:2
7385:9,21
7397:18
7399:21
7400:4
7419:9
7424:12,21
7441:8
7442:11
7464:19
7484:22
7492:18
7499:2
7511:9
7513:2,4,5
7519:18,25
7526:7
7537:9
7538:23
7544:18
7572:5
7583:3
7584:7,11

7597:23

today's
7370:5

tomorrow
7532:8

tools
7420:22
7524:4
7536:7,11

top 7375:11
7403:4
7436:6
7451:12,13
7452:14,16
7459:10
7527:22
7530:23
7558:17
7603:16,21
7605:2

topic 7485:2
7495:11

total
7369:10
7373:1
7385:19
7450:14
7453:12,21
7468:25
7472:11
7473:7
7478:22
7484:11
7494:19,25
7514:23
7520:24

totally
7480:9
7483:18
7525:5
7581:3,4

touch
7463:17

touched
7421:13

tough
7488:17

towards
7396:13
7400:7
7448:14

trade
7525:21
7526:3

tradeoff
7613:25

traditional
7376:4,9,24 7384:4
7391:22
7392:19
7393:7

trans
7398:22

transactions
7411:5
7527:5

transcript
7368:14
7480:1
7485:14
7568:4
7618:17

transcripts
7479:24

transfer
7398:20,22,24
7399:5,10

transferred
7552:10

transitory
7423:2,3,4,8

transmission
7409:15,17,23,25
7410:4,10
7417:7
7431:20
7433:1
7445:22
7525:7,11
7558:5,7
7584:21

transmitters
7558:19

treasury
7466:9
7572:6

treated
7433:5
7597:15

tremendous
7385:15
7489:1

trends
7542:10

tried 7407:3
7492:25
7497:15
7512:25
7551:9

true 7382:2
7391:9
7453:4
7482:12
7526:9
7529:5
7553:5
7569:6

truncated
7473:22

try 7380:2
7404:7
7418:3,4,5
7421:4
7466:20
7477:8
7487:20
7499:19
7500:2
7513:16
7519:5

trying
7389:5
7394:3
7407:1
7418:7
7419:24
7435:10
7444:18
7462:20
7489:20
7497:12
7523:12
7524:8
7544:7
7553:9
7562:5,8
7566:21
7600:16
7603:20
7613:11
7614:9

Tuesday
7485:8
7486:15
7487:23
7490:19
7492:1
7580:4

turbines
7473:24
7474:11
7504:12,15,16
7508:24

turn
7370:9,11
7371:13,14
7373:16
7376:12
7381:9,11
7388:5
7390:16
7394:14
7404:14
7408:4
7414:8
7485:5
7491:20
7493:11
7505:20
7524:2
7532:14
7533:3
7543:2
7557:11
7561:16
7576:6,10
7581:7
7583:22
7589:17
7600:21

turned
7476:23

turning
7377:24

twelve
7441:14
7604:18,24

twenty
7428:5
7450:24
7458:24,25
7463:5
7469:25
7470:3,9,12
7472:2,17
7473:6
7547:21
7548:10,11
7592:7,13,24
7593:4,6,9,11,18
7601:25
7602:1
7605:15,16
7606:6,9

twenty-eight
7508:18

twenty-five
7428:5,6
7497:25
7498:17
7517:25

twenty-four
7605:18,21
7606:22

twenty-fourth
7606:11

twenty-nine
7472:4
7508:19

twenty-one
7500:22
7564:13
7578:1,8

twenty-seven
7472:6
7473:14
7474:6
7508:18
7577:12

7579:6,7

twenty-three 7405:12

twofold 7378:17

two-thirds 7486:18

tying 7435:24

type 7421:14 7426:9 7447:22 7448:6 7600:17

types 7390:8 7598:13

typical 7392:19 7393:7

typically 7376:21 7379:11 7427:23 7428:7 7439:17 7458:20 7546:11

U

ultimate 7441:18

ultimately 7383:12 7397:21 7411:21 7530:16 7582:18,25 7595:14

unacceptable 7513:18

unambiguously 7478:7

uncertainties 7451:12,13

uncertainty 7372:7 7452:2 7491:2

underlies 7581:18 7607:18

underline 7453:14

underlying 7372:16 7555:19

underneath 7451:6

understand 7382:23 7399:24 7400:13 7401:13 7403:5,9,17 7405:8 7407:3,23,24,25 7408:23,24 7425:25 7430:25 7435:13 7436:20 7450:10 7453:2 7457:12 7463:15 7482:8 7484:19 7489:13 7492:5 7505:16 7515:9 7533:7 7548:21 7566:22 7572:22 7573:22 7575:1 7579:18 7581:12 7589:13 7612:4,17,25

understandable 7495:10

understanding 7404:12,22 7417:16 7418:1 7433:19 7434:4 7441:16 7533:18 7534:4 7535:25 7540:24 7541:3 7542:16 7562:8 7590:15

understands 7597:1

understood 7391:14 7408:17 7415:22 7433:14 7442:4 7462:3 7465:7 7474:18 7537:10 7546:6 7600:23

undertake 7477:5 7538:2 7573:5 7599:16

undertaken 7534:2 7568:20

undertaking 7369:22 7402:25 7417:22 7552:25 7618:16,20

undertakings 7483:22

unexpected 7581:4

unfortunate 7473:2 7487:14

unfortunately 7508:8

unhappy 7382:14

unit 7378:25 7379:2,5 7477:24

United 7417:3 7443:21

unknown 7385:21

unless 7370:9 7534:17

Unlike 7424:19

unlikely 7446:4 7532:3

unpredictability 7372:14

unreasonable 7544:10

unsupported 7566:16

update 7369:7 7494:7,13 7555:11 7586:8

updated 7410:13,17 7435:17 7485:10 7501:11 7502:19 7504:10 7556:19 7557:1 7585:14 7586:7 7594:20 7600:25 7601:2 7611:25 7612:5 7613:6 7618:17

updates 7485:11,12 7533:6 7585:19 7601:11,17,20

upon 7370:1 7377:9 7395:17 7403:15 7406:16 7414:3,4 7427:24 7463:17 7491:15,16 7532:23,24 7619:9

upper 7566:15,18

upset 7522:7

upside 7381:9 7438:2,4,7 7594:4

upstairs 7534:21

useful 7420:19 7421:21 7422:6 7425:18 7458:12 7467:1 7477:7 7495:17 7600:17

usefully 7525:23

usefulness 7486:3 7525:16

users 7423:14,16 7476:5

utilities 7366:3,21 7392:6 7530:16

7557:12
7558:8

utility
7376:11,21
7384:5,6
7391:22
7392:21
7393:7
7428:8,13,14,19
7486:2
7552:17
7553:3

V

val 7483:16

valiant
7463:15

valid
7444:19

valuation
7406:17

valuations
7536:20

value
7390:23
7391:5
7402:20
7403:8,14
7405:11
7406:6
7409:23
7424:14,23
7432:4
7435:15,17
7437:18
7446:20
7447:14,18
7450:15
7451:5,15,18 7456:18
7469:25
7470:7
7473:6
7479:18
7480:9
7483:11,16
7485:23
7525:16,20
7536:17,22
7540:8
7548:19
7562:3,12,18
7563:14,17
7574:12
7584:2,10,11 7585:6

values
7437:18
7471:13
7508:3

Van 7367:8

variability
7384:21
7438:19
7547:2,21
7588:20
7589:5

variable
7474:2
7542:5
7590:22
7599:7

variables
7390:21
7445:9
7453:14
7455:22
7474:17
7599:1,6

variation
7438:22
7439:4,18
7451:8,9,10,11
7600:15

variety
7526:11
7566:11
7567:22
7568:16
7574:3
7596:2

various
7374:23
7387:13
7418:5,19
7422:16
7470:4
7490:17
7501:11
7518:6
7519:7
7535:20
7536:9
7575:2
7595:6
7604:8,12

vary 7522:24
7553:25
7588:25
7589:2

vast 7387:23
7577:25

vein 7570:13

versa
7457:14

versus
7405:5
7406:10
7408:19
7411:2
7412:13
7423:17
7436:8
7438:20
7443:16
7449:24
7451:2
7455:24
7457:13
7538:23
7543:3
7562:9,13
7570:14
7611:22

viability
7570:18

viable
7531:7

vice 7457:14

vicissitudes
7377:19

view 7369:11
7373:22
7400:3
7406:25
7407:3,4
7409:22
7421:1
7424:3
7426:10
7432:5,15
7439:21
7441:3
7443:11
7449:4
7461:8
7468:17,18
7475:8
7487:25
7494:19,25
7515:20
7519:15
7525:19
7531:10,13
7536:4
7540:5
7556:16
7562:11
7570:1,18,21 7573:20
7582:10
7596:18
7597:4,13
7599:17
7603:3
7604:7
7606:5
7614:1
7616:6

views
7509:25
7525:6
7531:17
7532:6
7536:9

volatility
7380:2
7589:5

volume
7369:14
7374:5
7392:18
7505:24
7506:4
7526:11

voluntary
7391:14
7392:4

vous 7414:9
7487:13

vulnerability 7371:21

W

WACC 7391:4
7457:18
7503:22

W-A-C-C
7457:18

wait 7466:18
7495:20

waiting
7486:16
7548:11,14

Walker
7396:23

warning
7420:25

wasn't
7388:21
7433:10
7489:21
7500:19
7501:8
7541:20
7553:10
7599:18

water
7388:13
7521:22
7522:22
7527:11,13,19,25
7528:11
7530:15
7558:11
7568:14
7569:19
7591:8

ways 7501:14
7588:25
7589:1

wealth
7389:15

we'd 7413:24
7462:14,15
7472:7

7488:6
7550:20
7581:2
7586:14

wedded
7455:17

Wednesday
7534:23
7580:3

wee 7435:15

week 7465:19
7469:18
7487:3,18
7490:10,19
7495:25
7496:10,11
7499:24
7534:23

weekend
7618:14
7619:5

weekends
7492:10

weeks 7489:2
7533:24
7587:16,17
,19

weight
7452:1
7548:7

weighted
7391:4
7404:9
7405:1
7408:8,18
7427:25
7428:10,15
7429:2,12,
23 7445:3
7455:19,23
7456:1
7543:16
7551:6
7554:23
7555:12,16
,20 7561:7
7562:4,22
7566:14

weighting
7445:4,6,9

weights
7445:4

Weinstein
7367:25

welcome
7572:20
7576:7

we'll
7375:11
7378:11
7390:16
7397:22,23
7403:2,23
7404:3
7409:13
7450:8
7454:23
7470:21
7487:10
7491:12
7492:11,18
7496:20
7505:17
7508:21
7532:14,19
7535:3
7539:4
7572:14
7587:10,11
7589:12
7603:13
7619:5

well-designed
7419:23

we're
7372:13
7386:21
7387:13
7396:1
7400:2
7411:21,24
7421:5
7424:12
7429:20
7431:8
7438:3,6
7441:1
7445:20
7448:6
7449:5
7450:22
7452:3,8
7468:16
7483:7
7486:17,18
7487:10
7488:2
7490:3
7491:19
7495:13
7502:20
7509:1
7510:20
7512:12
7517:3
7520:17
7533:1
7534:4,17
7548:12
7553:7,8
7562:5
7564:2
7587:22
7600:16
7603:17

wet 7569:3
7605:8

we've
7396:11
7424:8
7428:23
7432:2
7434:24
7437:7
7446:1,11
7454:6
7470:17
7472:12
7474:10
7479:11
7488:5
7492:14,25
7497:20
7501:13,14
,15,16
7502:19
7509:19
7514:7
7519:6
7524:18
7528:2
7530:14
7539:24
7557:3
7572:5
7581:13
7584:7
7587:3
7594:2
7597:11

whatever
7426:6
7484:24
7500:17
7515:2

whatnot
7607:25

whereas
7442:9
7497:10
7511:20
7607:13

wherever
7566:11

whether
7384:13
7399:1
7400:7
7407:13
7410:13
7413:15,16
7417:6
7423:4
7424:13
7429:10
7432:25
7433:11
7434:2,9
7435:12
7436:7
7438:12
7439:13
7446:8
7449:17,21
7452:12
7453:17
7454:6
7462:13
7463:17
7467:5
7468:5
7476:13
7479:17,21
7482:18,19
7483:1,16
7488:3
7490:19,20
7491:2,6
7508:23
7510:1
7512:1,3
7520:5,10
7562:11,17
7570:1,25
7590:7
7594:24
7595:1
7597:6,9
7601:19
7613:16
7614:9
7617:4

whichever
7389:16

white 7514:3
7523:15

whole
7416:23
7425:2
7429:21
7442:18
7448:25
7449:25
7477:12
7478:12
7479:11
7481:20
7500:14,16
7511:24
7512:22
7513:25
7515:6
7518:20
7539:16
7580:23

wholesale
7377:5,8

wide 7421:6
7539:17
7566:10
7599:11

widely
7519:24

William

7367:14

Williams
7367:11
7368:9
7370:11,17,18
7371:12,19
7372:1,5,10
7373:10,15,20
7374:9,15,25
7375:5,15,21
7376:1,8,17,23
7377:7,12,17,23
7378:4
7381:4,8,15,22
7382:16,22
7383:16,24
7386:4,11,14,20,24
7387:3,7,12,17
7388:4,11,16,20,23,24 7390:13
7391:1,10,19 7392:25
7394:4,9,12,19,24
7395:5,9,17,23
7396:8,17,18 7397:22
7398:12
7399:22
7400:12,18
7401:1,5,15
7403:2,11,13,19,22
7404:2,6,13,20
7405:6,16,20,25
7406:3,8,15 7408:2
7421:13
7430:3,19
7431:14
7486:10,12
7487:13
7488:20,21
7489:5,8,24 7492:15
7499:6,10
7501:1
7537:15,19
7538:20
7548:17
7614:8

willing
7449:12,17
7526:25

wind 7378:23
7379:4
7427:14,18,24
7428:2,9
7613:20

Wind/Gas/ Conawapa
7616:19

winners
7450:12

Winnipeg
7366:23
7370:6,8

wires 7558:3
7559:18

wires-exclusive
7558:1

Wisconsin
7430:20
7431:16,17,19 7432:1
7443:3

wisdom
7523:5

wish 7395:5
7414:12
7499:3

witness
7413:21
7422:1

witnesses
7485:1,10
7487:4

Wojczynski
7489:21
7495:5,6,8,24
7499:8,13,17 7501:2
7504:6,8

wondering
7505:12

work 7420:5
7490:19
7533:19,24
7534:1

working
7487:3,20
7492:15,20

works 7551:2

world 7384:6
7397:12
7480:7
7591:6

worse 7432:3

worth 7410:7
7520:10
7533:24
7570:23
7571:4
7616:13

worthwhile
7488:8

worthy
7444:5

WPS 7432:25
7435:1,10
7436:4
7437:11
7438:12
7441:6,16
7443:8,12
7444:10
7449:8
7499:14
7500:17
7504:4,9,11,14,16

WPS's
7432:18
7443:13

wrap 7487:24

wrestle
7491:4

write 7480:8
7482:19

write-off
7395:14
7482:10

write-offs
7482:13

writing
7483:2,18

written
7481:1,7,13,21
7482:25
7484:2,5

wrong
7411:13
7421:18
7433:15

wrote 7386:5
7387:8
7594:16
7600:24

Y

yesterday
7372:7
7373:12
7375:3
7378:5
7395:2
7409:3
7422:5
7423:15
7424:17
7444:25
7448:22
7477:1
7483:22
7484:20
7485:14
7488:24
7489:3
7499:5
7521:20
7536:15
7540:7
7551:10
7584:7
7596:14
7610:21

yet 7397:8
7425:4
7431:4
7518:25
7533:18
7565:16
7576:10

yield
7461:10
7572:12

yields
7460:15,16,22 7461:5

you'll
7375:13
7381:6
7387:4,12
7394:25
7401:1
7403:5,9
7404:15
7405:21

yours
7409:10

yourself
7415:1
7420:20

you've
7370:25
7371:19
7374:11
7418:18
7420:24
7421:1,3,12 7449:3
7499:4,14
7501:25
7507:19
7517:9
7519:6
7525:5
7542:21
7543:4
7554:25

7565:16,19
7572:6
7576:8
7582:11
7597:8
7613:12
7614:2,3,5

Z

zero
7420:12,14
7500:21