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 16, 2014

Pages 7108 to 7365

7109

```
 1                      APPEARANCES

 2  Bob Peters                    )Board Counsel

 3  Sven Hombach

 4

 5  Patti Ramage                  )Manitoba Hydro

 6  Marla Boyd                    )

 7  Douglas Bedford   (np)        )

 8  Helga Van Iderstine (np)      )

 9  Jennifer Moroz    (np)        )

10  Odette Fernandes              )

11  Byron Williams                )CAC

12  Meghan Menzies                )

13

14  William Gange                 )GAC

15  Peter Miller      (np)        )

16

17  Antoine Hacault               )MIPUG

18

19  George Orle                   )MKO

20  Michael Anderson (np)         )

21

22  Jessica Saunders              )MMF

23  Corey Shefman     (np)        )

24  Christian Monnin              )IEC

25  Michael Weinstein             )
```

7110

1   TABLE OF CONTENTS

2   Page No.

7111

```
 1              LIST OF EXHIBITS

 2   EXHIBIT NO.      DESCRIPTION              PAGE NO.

 3   MIPUG-23-1    October 2013 Update          7198

 4   MIPUG-23-2    April 2014 Update            7198

 5   MPA-4         Slide deck                   7228

 6   MPA-5         Scope of work for Morrison Park

 7                 Advisors dated September 20th,

 8                 2013                         7228

 9   MPA-6         Supplementary information on

10                 Morrison Park Advisors

11                 qualifications               7228

12   MH-178        Response to Undertaking 80   7280

13

14

15

16

17

18

19

20

21

22

23

24

25
```

1 --- Upon commencing at 9:16 a.m.

2

3   THE CHAIRPERSON: Good morning. I

4 believe that we're in a position to begin today's

5 proceedings. Mr. Hombach, please...

6   MR. SVEN HOMBACH: Yeah. Good morning,

7 Mr. Chairman. Good morning, members of the panel, and

8 to everybody else in the room. The morning session

9 today is reserved for the continued cross-examination

10 of TyPlan, the independent expert consultant appointed

11 by the Board to address socioeconomic matters.

12   There are several witnesses that still

13 have to cross-examine. I'm told that there will not be

14 a timing issue. The afternoon session is reserved for

15 Morrison Park advisors. Mr. Gange of the Green Action

16 Centre has advised me that he has another commitment at

17 10:00, so I suggest that we proceed with him first and

18 thereafter turn it over to Mr. Orle and Ms. Saunders.

19   THE CHAIRPERSON: Thank you, Mr.

20 Hombach. Good morning, Mr. Gange, and Professor

21 Miller, good morning.

22

23 IEC TYPLAN WITNESS PANEL, RESUMED:

24   RUSSELL TYSON, Previously Sworn (Qual.)

25

 1 CONTINUED CROSS-EXAMINATION BY MR. WILLIAM GANGE:

 2   MR. WILLIAM GANGE: Thank you, Mr.

 3 Chair, and -- and I'd like to thank Mr. Hombach and --

 4 and the Intervenor counsel to allow me to accommodate.

 5 Just so that you know, I -- I'm not being deliberately

 6 rude. I'm going to be leaving immediately after my

 7 examination for another court appearance.

 8   But, so if -- if -- I understand that

 9 the main document has been marked as TyPlan number 1.

10 If I could refer to page 52 of that, and -- and, sir, I

11 -- I will apologize. I have not been here yesterday

12 and, so if I go over questions that were already asked,

13 please bear with me. I'm not going to be every long

14 'cause I've got to be in court at ten o'clock.

15   On page 52, down one (1) -- one (1) more

16 page, Diana. I'm sorry, I've got a little bit of a

17 difference reference than you do. Yes, thank you. And

18 if you could scroll up a little bit.

19   In -- in your report, sir, on I guess

20 this is page 53, you've said that:

21   "As the current Preferred Development

22   Plan has greatest impacts on

23   customers in the short term one (1)

24   possible means of addressing this

25   issue with ratepayers would be to

7114

1   consider changing the 75 to 25 debt-

2   equity ratio within twenty (20)

3   years."

4   When you made that statement, had you

5 done any -- any -- had you considered the impact that

6 that might have upon the -- the rating agencies, and --

7 and the rating that they do for Manitoba Hydro?

8   MR. RUSSELL TYSON: No, I did not.

9   MR. WILLIAM GANGE: So -- and -- and

10 are you aware, sir, that the evidence that we have

11 heard at this hearing and at previous hearings is that

12 Manitoba Hydro believes that with respect to its rating

13 agencies that the 75:25 debt-equity ratio is a very

14 important benchmark that the rating agencies have used

15 when giving a rating for Manitoba Hydro?

16   MR. RUSSELL TYSON: I would agree that

17 the -- the 75:25 is something that has been

18 benchmarked, and is seen as something to value those

19 aspects from an economic point of view.

20   MR. WILLIAM GANGE: Would it -- did --

21 when you -- when you made that statement, did you give

22 consideration about the effect that that might have on

23 the ability of Manitoba Hydro to -- to borrow money?

24   MR. RUSSELL TYSON: No, I did not.

25   MR. WILLIAM GANGE: Okay. Thank you.

 1 And when you made that statement, sir, did you give any

 2 thought in terms of what the debt-equity ratio might

 3 change to in your view?

 4   MR. RUSSELL TYSON: No, I did not. The

 5 reason the statement was made was to a -- as a pot --

 6 potential option to alleviate any rate increase impacts

 7 on Manitobans in general.

 8   MR. WILLIAM GANGE: So you were just

 9 focussed on that?

10   MR. RUSSELL TYSON: Just focussed on

11 that, yes, sir.

12   MR. WILLIAM GANGE: But not upon the

13 possible side effects that that might have. Okay.

14 Thank you. Diana, if I could... Just give me a second

15 here. My next reference, Diana, on my page is 65 of

16 the report.

17

18   (BRIEF PAUSE)

19

20   MR. WILLIAM GANGE: And -- and the

21 observations that are found on this -- in this section,

22 sir, as I understand it your review concludes that

23 there are benefits within the Preferred Development

24 Plan?

25   MR. RUSSELL TYSON: That is correct.

 1   MR. WILLIAM GANGE: And -- but as I

 2 read the report, it seems to be coming to the

 3 conclusion that the majority of the benefits that can

 4 be quantified right now are found in the construction

 5 of Keeyask and that -- that the construction of

 6 Conawapa has much -- has a much greater risk profile?

 7   MR. RUSSELL TYSON: That would be

 8 correct. The construction of Keeyask and the benefits

 9 associated with the construction of Keeyask are more

10 tangible than those of Conawapa. And Conawapa exhibits

11 a bigger risk profile going forward.

12   MR. WILLIAM GANGE: Right. And you've

13 -- you've made the comment that the Government of

14 Manitoba should provide the Public Utilities Board

15 legislative authority to review plans related to

16 Conawapa in the future as such risks are addressed.

17 That -- that's the conclusion that you've come to.

18   Is that correct, sir?

19   MR. RUSSELL TYSON: I believe it would

20 be prudent to have some agency or form of government in

21 Manitoba to review some of the issues regarding the PDP

22 going forward depending on the recommendations the

23 panel posts just to keep the checks and balances of

24 those outstanding issues in place.

25   MR. WILLIAM GANGE: I want to ask you

 1 this, sir, that if we were here with the information

 2 that you have and -- and the understanding that can be

 3 developed right now with respect to Conawapa, would you

 4 agree with me that -- that your recommendation to the

 5 Board would be that, right now, you would say that the

 6 Board ought not to approve Conawapa?

 7   MR. MICHAEL WEINSTEIN: Mr. Gange, I

 8 think it's outside of Mr. Tyson's scope of work to make

 9 recommendations to the Board about proceeding with

10 Conawapa. So I don't think he should be asked to

11 answer that question.

12   MR. WILLIAM GANGE: Mr. Chair, I think

13 it's a relevant question and I think it is one that

14 given -- given the dichotomy of the evidence that has

15 been presented by Mr. Tyson, he is making

16 recommendations with respect to the Preferred

17 Development Plan, but then he's bifurcated that -- that

18 commentary by saying, Yes, Keeyask seems to make sense,

19 but then makes this comment about that -- that there

20 ought to be legislative authority to review Conawapa.

21 And that's really what I'm trying to get at.

22   MR. SVEN HOMBACH: If I may comment on

23 that, Mr. Gange, as you're aware, the terms of

24 reference do not allow the independent expert

25 consultants to specifically address the question that

1 the Board has to consider, namely, whether or not the

2 Preferred Development Plan should proceed. So perhaps

3 if you could rephrase your question to -- to deal with

4 the matters that Mr. Tyson addressed as opposed to

5 specifically the recommendation as to not -- whether or

6 not one (1) of the projects would proceed, that might

7 be more appropriate.

8   MR. WILLIAM GANGE: I -- I'll attempt

9 to do that.

10

11 CONTINUED BY MR. WILLIAM GANGE:

12   MR. WILLIAM GANGE: Mr. Tyson, there

13 are significant issues that -- with -- that arise with

14 respect to Conawapa that or -- or yet unknown.

15   Is that fair to say?

16   MR. RUSSELL TYSON: That is fair.

17   MR. WILLIAM GANGE: Included in that

18 would be the fact that -- that whereas Keeyask has a

19 signed agreement with the First Nations partners,

20 you're aware that Conawapa has no such agreement?

21   MR. RUSSELL TYSON: I am aware.

22   MR. WILLIAM GANGE: And would you agree

23 with me that -- that prior to moving forward on

24 Conawapa, one of the things that one -- that -- that --

25 in terms of best practices that you've recommended

 1 would be that -- that a development plan with respect

 2 to the First Nations be concluded regarding Conawapa?

 3   MR. RUSSELL TYSON: Yes.

 4   MR. WILLIAM GANGE: And -- and as well,

 5 there are significant issues as to when the electrical

 6 power is required that -- that relates to Conawapa.

 7   Is that correct, sir?

 8   MR. RUSSELL TYSON: That is correct.

 9   MR. WILLIAM GANGE: And -- and as well,

10 there are significant issues with respect to the

11 commencement date of Conawapa.

12   Are we in agreement on that?

13   MR. RUSSELL TYSON: Yes.

14   MR. WILLIAM GANGE: And there are

15 significant issues as to the potential cost of Conawapa

16 when it does start, correct, sir?

17   MR. RUSSELL TYSON: That is correct.

18   MR. WILLIAM GANGE: So with -- with all

19 that information, from -- from your review in -- and

20 I'm not asking you now, given the comments that have

21 made as to whether or not you would recommend to the

22 Board that -- that Conawapa proceed, but in your

23 opinion is -- if -- given -- given your review, could

24 you say at this point that Conawapa is ready?

25   MR. RUSSELL TYSON: What I would say is

1 that from a socioeconomic perspective, we looked at --

2 at the projects in terms of the benefits that would be

3 derived therein over the short term and long term,

4 Conawapa being

5 long term. We are aware that other issues come into

6 play regarding the load forecasts, so on and so forth,

7 that we've spoken about.

8   We've also identified as part of our

9 socioeconomic review that if the best management

10 practice that is -- that have been implemented for

11 Keeyask are also implemented for Conawapa, the benefits

12 to Northern Aboriginals and Northern communities would

13 be optimized.

14   As for whether or not Conawapa should be

15 dropped from the Preferred Development Plan, I'm not in

16 position to suggest.

17   MR. WILLIAM GANGE: But your -- the

18 comment that you did make here at page 65 is that --

19 that:

20   "The decision with respect to the

21   construction of Conawapa does not

22   have to made until the year 2018."

23   MR. RUSSELL TYSON: That is correct.

24   MR. WILLIAM GANGE: And in fact the --

25 it...

7121

```
 1                    (BRIEF PAUSE)

 2

 3              MR. RUSSELL TYSON:   Sorry, Mr. Gange,

 4  please carry on.  I apologize for the interruption.

 5              MR. WILLIAM GANGE:   No problem at all.

 6  The -- the quote that I -- I had just referred to you

 7  is from page 65 of your report, saying that:

 8                   "A decision with respect to Conawapa

 9                   does not have to made until the year

10                   2018."

11              Correct, sir?

12              MR. RUSSELL TYSON:   Correct.

13              MR. WILLIAM GANGE:   And you're aware

14  that since you wrote this report, there have been

15  changes with respect to the demand-side management, the

16  energy efficiency programs, the load forecast that may

17  in fact mean that a decision with respect to Conawapa

18  doesn't have to be made until some period of time

19  significantly later than 2018?

20              MR. RUSSELL TYSON:   Yes.

21              MR. WILLIAM GANGE:   And would you agree

22  with me, sir, that -- that when that decision has to be

23  made, that decision should be made in the context of

24  all of the obligation -- or, pardon me, all of the

25  potential development plans that -- that might make
```

7122

1 economic -- socioeconomic sense whenever that decision

2 is made?

3   MR. RUSSELL TYSON: Just as a point of

4 clarification, are you inferring that between now and

5 the time Conawapa is proposed a review of other

6 alternatives be suggested? Is that what you're --

7   MR. WILLIAM GANGE: Yes.

8   MR. RUSSELL TYSON: Okay. As part of

9 the socioeconomic analysis we looked at best practices.

10 We noted that some of the best -- or most of the best

11 practices that we're aware of have been established for

12 the Keeyask development.

13   In terms of socioeconomic benefits over

14 the longer term, it is assumed that, provided that

15 those same best management practices are implemented

16 and the benefits derived therein, i.e., we're building

17 capacity in Northern communities to accommodate

18 education and employment, that the -- that the benefits

19 would be there.

20   We recognize, however, as part of our

21 review that Conawapa is a further along project, that

22 some of those benefits -- benefits have not been

23 monetized or tangible at this time, agreements with

24 First Nations - although I understand there is an

25 agreement. But in moving forward, I wasn't suggesting

 1 that other resource plans be looked at, just

 2 verification that all those factors for Conawapa have

 3 been addressed in detail to ensure whether or not it's

 4 the right project to move ahead --

 5   MR. WILLIAM GANGE: Yes.

 6   MR. RUSSELL TYSON: -- which would

 7 infer indirectly that, if there are other options,

 8 maybe they should be studied.

 9   MR. WILLIAM GANGE: Well, and, in fact,

10 one (1) of the points that I took from your report is

11 the fact that you didn't have sufficient information

12 with respect to the other plans in comparison to what

13 you had to study the Preferred Development Plan.

14   Is that a fair comment, sir?

15   MR. RUSSELL TYSON: In context, the

16 Keeyask Project was further ahead both in the economic

17 modelling and the numbers, the construction cost, in a

18 variety of areas that we probably had to make some

19 assumptions. However, as part of the resource planning

20 process, alternatives were identified and narrowed down

21 based on high level criteria, which is a common

22 practice in option analysis in the engineering field,

23 and we found it to be a reasonable approach to get to

24 the point where we got to.

25   MR. WILLIAM GANGE: Okay. In -- in my

7124

1 review of your report, sir, the word 'wind' is used

2 three (3) times. There -- there is -- there was no

3 analysis of --

4   MR. RUSSELL TYSON: Of the wind.

5   MR. WILLIAM GANGE: -- the wind option.

6 Is that correct, sir?

7   MR. RUSSELL TYSON: No, there was not.

8   MR. WILLIAM GANGE: So that -- and I --

9 I can tell you that the Green Action Centre has --

10 throughout this hearing and the evidence that is being

11 produced is -- is raising with the Board the fact that

12 the wind option has not been studied adequately for

13 future development.

14   You certainly didn't have any

15 information in which to study the socioeconomic

16 benefits of a wind option in the future, did you?

17   MR. RUSSELL TYSON: No, we did not. We

18 referenced in our study the high level resource level

19 planning documents that were undertaken to drop down

20 the long list to a short list of options in that very

21 generalized criteria were identified and the wind

22 options that were in the report fell off the table.

23   MR. WILLIAM GANGE: Thank you.

24   MR. RUSSELL TYSON: Based on personal

25 experience, we do know that hydro power does generate

7125

1 more employment and benefits than wind because of the

2 related construction cost.

3   MR. WILLIAM GANGE: Yes, and -- and

4 comes with a much lower cost --

5   MR. RUSSELL TYSON: That is right.

6   MR. WILLIAM GANGE: -- to -- to the

7 taxpayers of Manitoba?

8   MR. RUSSELL TYSON: That is correct,

9 sir.

10   MR. WILLIAM GANGE: On page 74 you make

11 reference to, sir, in this summary of observations,

12 yes, thank you, Diana, right there, that -- that

13 Manitoba Hydro's approach represents an industry best

14 practice.

15   When you made that comment, sir, I

16 wasn't sure from my review of your report whether you

17 were -- you were making that comment in reference to

18 Keeyask or in reference to Keeyask and Conawapa.

19   MR. RUSSELL TYSON: The best managing

20 practices that we have identified within our report

21 have been applied in general to the PDP, which includes

22 both.

23   We recognize that some of the best

24 management factors have not been implemented for

25 Conawapa to date, but we make the assumption that all

7126

1 of those practices, such as securing development

2 agreements with local First Nations employment

3 optimization will be set in place going forward.

4   We reference that by the fact that best

5 practices and a -- a project management approach,

6 which, one (1) of the key issues in project management

7 is to ascertain lessons learned and implement them

8 post-project as part of the project management

9 framework. There is something called a project close-

10 out, where interviews are undertaken to find out what

11 the issues are and how to address them going forward.

12   We noted as a result of Wuskwatim, a

13 number of issues came up regarding employment

14 contracts, so on and so forth. Manitoba Hydro is

15 moving towards addressing some of those issues.

16 Hopefully, all those issues can be addressed, and

17 moving forward further into Conawapa, we'd have a

18 relatively seamless document in which all optimization

19 has been established. However, I cannot say that for

20 sure, because there have been a lot of issues.

21   MR. WILLIAM GANGE: Okay. Thank you.

22 I'd like to go to page 9 -- page 77, Diana, and -- and

23 this may be something that you reviewed yesterday with

24 Mr. Williams, and -- because My Learned Friend Mr.

25 Williams did make reference to it in a comment to me.

7127

 1   But the -- you -- you make the comment

 2 that literature suggests that the displacement effects

 3 of rate increases predominantly affect the poor and

 4 those with low income or fixed income. The middle and

 5 upper class are not as affected as such costs are

 6 absorbed through greater disposable income.

 7   With your background, sir, are you --

 8 have -- have you ever studied rate design of utilities?

 9   MR. RUSSELL TYSON: No, I have not.

10

11   (BRIEF PAUSE)

12

13   MR. WILLIAM GANGE: And -- and I take

14 it, then -- then you haven't done any significant

15 research upon how -- how different utilities attempt to

16 deal with rates and low income or fixed in -- income

17 people?

18   MR. RUSSELL TYSON: As part of this

19 review, we did do a literature review of other

20 provincial utilities and what their solution to the

21 problem was. The progression of this analysis started

22 with, What is the issue and who are those impacted?

23 And correctly, so the low income and those on fixed

24 income are definitely impacted.

25   In terms of trying to quantify that

7128

1 number, when we reviewed the literature, we could not

2 find good quantification that we could rely on, so we

3 simply came to a point that low income and those on

4 fixed income were affected. The subsequent question we

5 posed to ourselves, Well, what do other utilities do,

6 and what are the best management practices to address

7 that?

8   What came back from that review was that

9 energy efficiency programs, Power Smart, and the

10 broader DSM, were some of the areas that most people

11 would work towards. Specific to Power Smart, we know

12 that there are programs in Manitoba. Our review

13 suggested Manitoba is known for their programs.

14   It also suggests that there is

15 considerable room for improvement of those programs

16 with the low income and the poor, and that the

17 implementation and ongoing monitoring is a critical

18 issue.

19   And at the end of the day, we suggested

20 the -- again, the project management principle of

21 Smart, that all the performance measures have to be

22 specific, measurable, achievable, realistic, and time

23 laden, and that will require both parties, both

24 Manitoba Hydro and the communities that are in those

25 socioeconomic groups, to work more closely together to

 1 ensure that things are done.

 2   And the key thing that I found as part

 3 of this is performance measures will be critical, and

 4 the proforma -- performance measures have to be

 5 directly related to the people that are impacted. For

 6 example, the Refrigerator Replacement Program, can we

 7 have details on who replaced their refrigerators? In

 8 First Nations communities, can we be more accurate and

 9 efficient at ensuring that people are implementing all

10 the programs that are out there?

11   MR. WILLIAM GANGE: And -- and in your

12 literature review, did you come across rate design as

13 one (1) of the issues that has been -- has been

14 implemented by various provincial utilities?

15   MR. RUSSELL TYSON: No, I did not, but

16 I am aware of it.

17   MR. WILLIAM GANGE: Okay. And -- and

18 sorry, sir, I -- I'm going to -- I'm -- I'm going to

19 rise to that bait.

20   When you say that you're aware of it,

21 what does that mean?

22   MR. RUSSELL TYSON: I've read one (1)

23 or two (2) articles on that as a potential option to

24 consider. I do not know the practicality of

25 implementation as every utility has their own internal

7130

1 operations.

2   MR. WILLIAM GANGE: Thank you very

3 much, Mr. Tyson. Appreciate it. Mr. Chair, thank you,

4 and I'll -- I'll see you next week.

5   MR. MICHAEL WEINSTEIN: Mr. Chair, I

6 just want to -- it's Michael Weinstein. Just for Mr.

7 Gange's benefit, during the cross-examination I was

8 handed some information through an IR that I think I --

9 I would like to give Mr. Tyson just a moment or two

10 (2), if we could stand down for a minute or two (2) to

11 review.

12   And, Mr. Gange, to be fair to you I

13 wanted to flag it before you leave because it may

14 correct an answer that -- that Mr. Tyson gave earlier,

15 so I wanted you to hear if he corrects his evidence

16 before you go.

17   MR. WILLIAM GANGE: I'm leaving in two

18 (2) minutes, so if -- if he can -- if he can --

19   THE CHAIRPERSON: Let's stand down then

20 for a -- for a minute -- for two (2) minutes -- oh, a

21 minute and a half.

22

23 --- Upon recessing at 9:40 a.m.

24 --- Upon resuming at 9:43 a.m.

25

7131

1   MR. MICHAEL WEINSTEIN: Mr. Chair,

2 during Mr. Gange's cross-examination...

3

4   (BRIEF PAUSE)

5

6   MR. MICHAEL WEINSTEIN: During Mr.

7 Gange's cross-examination of Mr. Tyson, My Learned

8 Friend Mr. London was kind enough to hand me a Round 2

9 IR, PUB/MH Round 2 499e. And this IR speaks to the

10 state of negotiations with First Nations communities in

11 the Conawapa vicinity.

12   So I just want to give Mr. Tyson, having

13 reviewed this IR, the opportunity to speak to it

14 because he did speak to the status of negotiations with

15 First Nations earlier in your cross-examination.

16   MR. RUSSELL TYSON: Mr. Gange, I

17 apologize for keep you over the time limit. It would

18 appear that Manitoba Hydro has process agreements in

19 place with some of the First Nations in and around that

20 area. So I apologize for that oversight.

21   MR. WILLIAM GANGE: Well, I don't think

22 that was an oversight at all. I mean, we already heard

23 evidence from the First Nations partners that the

24 Conawapa -- that it -- that a Conawapa deal had not yet

25 been struck, and that IR doesn't change that. So, Mr.

7132

1 Tyson, you didn't misstate anything, so that's fine

2 with me. Thank you, Mr. Chair. That concludes...

3   THE CHAIRPERSON: Thank you, Mr. Gange.

4 Now I'll turn the microphone over to Ms. Saunders,

5 please.

6

7 CROSS-EXAMINATION BY MS. JESSICA SAUNDERS:

8   MS. JESSICA SAUNDERS: Good morning.

9 Jessica Saunders, and I represent the Manitoba Metis

10 Federation. I have a few questions. My Friend Mr.

11 Williams got into a few areas that were of importance

12 to my client yesterday. I intend to expand somewhat on

13 some of those areas and then just ask a few other areas

14 of my own.

15   So, Mr. Tyson, you're aware that the

16 terms of reference for the PUB's review require that

17 the PUB consider, 2H:

18   "The socioeconomic impacts and

19   benefits of the plan and alternatives

20   to Northern and Aboriginal

21   communities."

22   Correct?

23   MR. RUSSELL TYSON: Correct.

24   MS. JESSICA SAUNDERS: I'll refer you

25 to TyPlan's scope of work. And we can just do page 1

7133

1 from your report at TyPlan Exhibit 1, if that's okay.

2 Scroll down. So a number -- at section -- there we go.

3   You were directed to perform a critical

4 analysis of the socioeconomic impacts and benefits of

5 Manitoba Hydro's PDP and alternative plans, and that

6 this should include examination of potential effects to

7 the people of Manitoba, especially Northern and

8 Aboriginal communities. That's correct?

9   MR. RUSSELL TYSON: That is correct.

10   MS. JESSICA SAUNDERS: And in Mr.

11 Williams's examination of you yesterday, he asked you

12 if you considered additional benefits to communities

13 that were not part of the Keeyask Cree Nations.

14   Do you recall that?

15   MR. RUSSELL TYSON: Yes.

16   MS. JESSICA SAUNDERS: You answered

17 that you were able -- that you were to evaluate five

18 (5) scenarios and that consideration of additional

19 benefits to Aboriginal communities, and anything other

20 than the five (5) scenarios that was not part of your

21 scope of work.

22   Do you recall that?

23   MR. RUSSELL TYSON: Yes.

24   MS. JESSICA SAUNDERS: So from your

25 comments to Mr. Williams yesterday, is it fair to say

1 that you interpreted the term -- the sentence in

2 TyPlan's scope of work, "Potential effects to

3 Aboriginal communities," as primarily referring to the

4 potential effects to the KCNs?

5   MR. RUSSELL TYSON: My comments are

6 specific to the requirements outlined in the Canadian

7 Environmental Assessment Act. As discussed yesterday,

8 the establishment of both a local study area and a

9 regional study area are critical elements in developing

10 any environmental impact statement guideline.

11   In developing those guidelines,

12 considerable consultation is undertaken with a variety

13 of parties to identify such local areas. Once those

14 local areas and the regional area is identified, the

15 evaluation then becomes more specific to those

16 communities and those Aboriginal groups within that

17 area.

18   Yes, you are correct in that the KCNs

19 were the identified Aboriginal groups, but so were the

20 company Town of Gillam as well as Thompson, Manitoba.

21   MS. JESSICA SAUNDERS: Okay. I

22 intended to get into this later, but since you brought

23 it up, did you review the CEAA guide -- the CEAA --

24 CEAA's comments with respect to the Keeyask Generation

25 Project and concerns they identified with respect to

7135

1 the consideration of other Aboriginal peoples in the

2 local and regional study areas?

3   MR. RUSSELL TYSON: No, I did not.

4   MS. JESSICA SAUNDERS: Okay. Thank

5 you. At page 83 of your report is Appendix A, in which

6 you list the documents you relied on in your analysis.

7   You reference Sections 3, 4, and 5 of

8 the Keeyask Environmental Impact Statement, correct?

9   MR. RUSSELL TYSON: Yes.

10   MS. JESSICA SAUNDERS: The Keeyask EIS

11 was prepared by the -- the KCNs, correct?

12   MR. RUSSELL TYSON: The limited

13 partnership.

14   MS. JESSICA SAUNDERS: Yes.

15   MR. RUSSELL TYSON: Yes.

16   MS. JESSICA SAUNDERS: And you

17 indicated in your testimony yesterday that it was

18 commendable that EA -- the EIS incorporated the Cree

19 world view. And in that you were speaking particular

20 to the KCN's involvement in that regard.

21   Is that correct?

22   MR. RUSSELL TYSON: Yes.

23   MS. JESSICA SAUNDERS: Is it fair to

24 say then that the Keeyask EIS is KCN focussed?

25   MR. RUSSELL TYSON: I -- I would

 1 observe so, yes.

 2   MS. JESSICA SAUNDERS: And in

 3 performing your analysis of the socioeconomic impacts

 4 and benefits of the PDP and alternative plans, you

 5 relied on the Keeyask EIS?

 6   MR. RUSSELL TYSON: Yes.

 7   MS. JESSICA SAUNDERS: Then, sir, would

 8 you agree that it's fair to say that your analysis is

 9 primarily focussed on the impacts and benefits to the

10 KCNs?

11   MR. RUSSELL TYSON: To the extent that

12 they're identified in the plans, yes. However, other

13 areas and other populations, such as those in Thompson,

14 are also included in the EIS and it's assumed at some

15 point in them there are Metis within that community.

16   Again, I have to be specific that in

17 preparation of an EIS, there are guidelines established

18 that specify local study areas and regional study areas

19 and that we have to build ourselves on that.

20   MS. JESSICA SAUNDERS: Okay. But in

21 performing the critical analysis of the socioeconomic

22 impacts and benefits here, this -- do you interpret

23 that as -- as needing to include an assessment with --

24 with particular regard to Northern and Aboriginal

25 communities?

7137

1   And if -- if, say, for instance, you --

2 you didn't -- like you were able to speak very

3 particular to the information that you in fact

4 commended in the Keeyask EIS with respect to the KCNs,

5 but I'm just wondering, did you have sufficient

6 information on other Aboriginal groups, and in

7 particular, Northern communities like Thompson and

8 Gillam, in order to complete that critical examination

9 that you were required to do under the terms of

10 reference?

11   MR. RUSSELL TYSON: Yes, under the EIS

12 and under, I believe, Section 3, 'Economy', it goes

13 into detail on the socioecon -- economic

14 characteristics of both Gillam and Thompson, of which

15 population distributions are identified.

16   MS. JESSICA SAUNDERS: Okay. And you

17 had mentioned that some of that information may have

18 included Metis.

19   But do you confirm whether or not there

20 was particular information that spoke to the Metis in

21 the local or regional study areas?

22   MR. RUSSELL TYSON: I cannot confirm

23 that.

24   MS. JESSICA SAUNDERS: Okay. Did you

25 ever inquire into receiving more information in that

 1 regard from Manitoba Hydro?

 2   MR. RUSSELL TYSON: No, I did not. And

 3 not to be a broken record, environmental impact

 4 assessment, I've learned through the years is very

 5 specific as to what you do study and what you don't

 6 study. And we based our evaluation on best practices

 7 based on the law and regulation that exists.

 8   MS. JESSICA SAUNDERS: Right. Those

 9 guidelines are very important, but you also confirmed

10 though, with respect to Comment C they might have had

11 on this particular project, that you didn't review what

12 comments they had on other Aboriginal communities with

13 respect to Keeyask.

14   That's correct?

15   MR. RUSSELL TYSON: That is correct.

16   MS. JESSICA SAUNDERS: On slide 23 of

17 your presentation, you actually referred to the local

18 and regional study areas.

19   Was this included in your report?

20   MR. RUSSELL TYSON: No, it was not.

21   MS. JESSICA SAUNDERS: Okay. So this

22 is new information. And I just want to, I guess,

23 confirm your understanding then.

24   Were you provided any information from

25 Manitoba Hydro regarding the -- the local study area

 1 and the regional study area as to the presence of other

 2 Aboriginal peoples in these areas?

 3   MR. RUSSELL TYSON: Could you repeat

 4 the question, please?

 5   MS. JESSICA SAUNDERS: I'm -- I'm just

 6 curious, because in reading your report we didn't have

 7 these -- these maps in your report and I -- I believe

 8 that you provided these as -- as greater clarification

 9 for some of your understandings of, say, the CEAA

10 guidelines and --

11   MR. RUSSELL TYSON: Yes.

12   MS. JESSICA SAUNDERS: -- the

13 importance of those guidelines in impact assessment.

14   And so I'm just wondering, were you

15 provided any information from Manitoba Hydro regarding

16 the presence of other Aboriginal peoples in the local

17 study area?

18   MR. RUSSELL TYSON: No, my review was

19 specific to the documentation that was provided in the

20 EIS, in the proper EIS, and then Sections 3, 4, and 5.

21   MS. JESSICA SAUNDERS: Thank you.

22 Moving on. On page Roman numeral VII of your report,

23 in the summary section, it's the last paragraph, you

24 indicate that:

25   "Monitoring issues related to access

7140

1   health education and the cultural

2   implications of project development,

3   while identified, should be monitored

4   aggressively and lessons learned

5   implemented on an annual basis to

6   ensure sustainable capacity within

7   First Nations and Northern

8   communities."

9   This same paragraph also appears in the

10   last paragraph on page 80 of your report in your

11   observation section, correct?

12   MR. RUSSELL TYSON: That is correct.

13   There may be opportunities for the broader communities

14   to secure employment, and that would include Metis

15   people, where they would not benefit from the training

16   that was presented.

17   MS. JESSICA SAUNDERS: Ensure, again,

18   sustainable capacity building within First Nations and

19   Northern communities.

20   Is it your view that, particularly for

21   Keeyask, First Nation communities should have a role in

22   discussing the lessons and how those lessons should be

23   implemented with respect to matters that affect them?

24   MR. RUSSELL TYSON: Yes.

25   MS. JESSICA SAUNDERS: Similarly, that

 1 Northern communities should have a role in discussing

 2 the lessons and how those lessons should be implemented

 3 with respect to matters that affect them?

 4   MR. RUSSELL TYSON: Yes, with a proviso

 5 that one has to consider the local study area in which

 6 project effects are monitored.

 7   MS. JESSICA SAUNDERS: Okay. Is it

 8 your view that the KCNs were fully involved in all

 9 discussions regarding the consideration and

10 implementation in the Keeyask Generation Project of the

11 lessons learned from Wuskwatim?

12   Are you able to -- to comment on whether

13 or not you're aware if whether the KCNs were involved

14 in implementing the lessons learned from Wuskwatim that

15 you considered in your report?

16   MR. RUSSELL TYSON: I'm not exactly

17 sure who implemented the lessons learned. I would

18 presume that discussions were held and that Manitoba

19 Hydro was the driver on trying to address some of the

20 issues.

21   MS. JESSICA SAUNDERS: But based on

22 your comments regarding the Northern communities, that

23 when -- when Hydro is driving those discussions and you

24 are considering the CEAA guidelines in the local study

25 area and -- and matters such as that though, that

 1 perhaps maybe Northern communities would not have been

 2 involved in the discussions regarding the

 3 implementations of lessons learned with respect to

 4 Northern communities?

 5   MR. RUSSELL TYSON: That may be the

 6 case, yes.

 7   MS. JESSICA SAUNDERS: My -- I'm

 8 nearing the end of -- of my discussion with you. But

 9 in the summary section of your report on page Roman

10 numeral V, in the second paragraph outlining your

11 findings regarding the Manitoba Hydro customer account

12 in the multiple account benefit cost analysis, you

13 indicate that:

14   "Further discussion regarding the

15   short- to medium-term rate increases

16   associated with Manitoba Hydro plans

17   should be clearly outlined and

18   understood by the people of Manitoba

19   as part of this process."

20   Do you see that?

21   MR. RUSSELL TYSON: Yes.

22   MS. JESSICA SAUNDERS: In what ways, if

23 any, did you envision these discussions occurring when

24 you made this recommendation?

25   MR. RUSSELL TYSON: Anything that

7143

1 impacts the ratepayer or the consumers is a significant

2 issue that has to be fully understood and addressed by

3 -- by Manitobans or whomever. It would be prudent for

4 government and for Manitoba Hydro to explain to the

5 public why these increases are required and what

6 opportunities are available to them to address the

7 potential of increased rates on household income and --

8 and their effects so that a dialogue is opened up and

9 that the programs that are currently in place can be

10 evaluated and possibly new and more specific programs

11 identified that would clearly go to the key of the

12 matter, which is, I don't want my hydro rates to go up

13 because I can't afford it.

14   For example, in BC, they have a similar

15 program where you can have somebody from Hydro come to

16 your house and then do a efficiency review. I haven't

17 done it, but over the last two (2) utility bills I've

18 decided to do so.

19   MS. JESSICA SAUNDERS: And have you had

20 experience with respect to utility customer outreach

21 policies in the various projects that you've worked on?

22   MR. RUSSELL TYSON: In different

23 sectors, yes, I have.

24   MS. JESSICA SAUNDERS: Did you assist

25 in the development or implementation of any of those

7144

1 policies?

2   MR. RUSSELL TYSON: Outreach within

3 First Nations communities for other related projects,

4 yes, but not specific to ratepayers.

5   MS. JESSICA SAUNDERS: Okay.

6   MR. RUSSELL TYSON: Or the Power Smart

7 Programs that I think you're referring to.

8   MS. JESSICA SAUNDERS: Okay. In

9 considering rate impacts, have the purported

10 socioeconomic benefits to individuals of Aboriginal and

11 Northern communities that you examined in your report

12 been measured up with the rate increases that members

13 of these communities will face?

14   MR. RUSSELL TYSON: Did I look

15 specifically at the numbers for specific individuals?

16 No, I did not.

17   MS. JESSICA SAUNDERS: Thank you, those

18 are my questions.

19   THE CHAIRPERSON: Thank you, Ms.

20 Saunders.   Mr. Orle, please?

21

22 CROSS-EXAMINATION BY MR. GEORGE ORLE:

23   MR. GEORGE ORLE: Thank you, Mr. Chair.

24 Mr. Tyson, good morning. My name is George Orle. I

25 represent MKO, which is an organization of Northern

 1 Chiefs representing some thirty (30) sovereign First

 2 Nations and approximately sixty-five thousand (65,000)

 3 inhabitants within those First Nations. Just a little

 4 background to give you who -- who it is that I'm going

 5 to be directing my questions on behalf.

 6   My questions are going to be entirely in

 7 regards to the question of the impact of rates with

 8 respect to the Preferred Development Plan. And I'd

 9 like to draw your attention, first of all, to page 1 of

10 your Exhibit number 1 which is -- sets out the scope of

11 work. And I'll direct you to number 1 under 1.2.

12   And I'd just like to make sure that I

13 have a correct understanding of what this scope of work

14 actually involves. And I'm dealing with the very first

15 sentence and the words, "Perform a critical analysis."

16 And I wonder if you could tell me what -- what is the

17 effect of using the word 'critical' in front of the

18 word 'analysis'.

19   What -- how does that change what type

20 of analysis you do?

21   MR. RUSSELL TYSON: It would represent

22 a more in-depth analysis based on the information

23 that's available.

24   MR. GEORGE ORLE: And in terms of the

25 information available, would that mean that you would

7146

1 go beyond just something that could be easily obtained

2 or -- or easily gleaned, that there would be some

3 effort to be made to find the best references of

4 information that you could get?

5   MR. RUSSELL TYSON: The use of the

6 references is part of the program. I also reference,

7 being that this is subject to environmental impact

8 statement, it's assumed in all similar projects that

9 the reference material is based on the documentation

10 that's presented as part of an EIS or, in this case,

11 the NFAT.

12   MR. GEORGE ORLE: Okay, but in regards

13 to the critical analysis, you're -- you're being asked

14 to do a critical analysis of the socioeconomic impacts.

15 And then I'm going to go down a little further into

16 that scope:

17   "An examination of the potential

18   effects to the people of Manitoba,

19   especially, Northern and Aboriginal

20   communities."

21   And again, going a little further:

22   "...in dealing with personal family

23   and community life."

24   So it would be correct that part of the

25 scope of work is to take a look at what the overall

7147

1 socioeconomic impact is upon the general day-to-day

2 lives of the -- the inhabitants of Manitoba?

3   MR. RUSSELL TYSON: Yes.

4   MR. GEORGE ORLE: And in particular,

5 you were to do a critical analysis of the socio impact

6 upon Northern and Aboriginal communities, correct?

7   MR. RUSSELL TYSON: That is correct.

8   MR. GEORGE ORLE: Okay. Did you

9 differentiate in your critical analysis as to

10 Aboriginal communities where there are First Nations

11 inhabitants living on a reserve as opposed to

12 Aboriginals living in the general population?

13   MR. RUSSELL TYSON: You were referring

14 to on and off reserve status?

15   MR. GEORGE ORLE: Yes.

16   MR. RUSSELL TYSON: No, we did not, but

17 we are aware of it.

18   MR. GEORGE ORLE: Okay. Are you aware

19 that in the thirty (30) communities that I -- I

20 represent, that the majority, if not all of the

21 housing, is community owned; that there is no such

22 thing as individual-owned housing?

23   MR. RUSSELL TYSON: Yes, I am aware of

24 that.

25   MR. GEORGE ORLE: And did you review

 1 any literature in regards to the effect of either

 2 remedial plans or rate effects upon residents that are

 3 living in a community owned home as opposed to a

 4 resident having their own home?

 5   MR. RUSSELL TYSON: No, I did not, but

 6 I understand Manitoba Hydro has individuals that do

 7 visit Northern communities to promote the Power Smart

 8 Programs through the band managers. And we also

 9 recognize that the infrastructure on reserve is

10 actually developed through Indian and Northern Affairs

11 Canada, as opposed to Manitoba Hydro.

12   MR. GEORGE ORLE: Okay. Have you done

13 any review of literature determining how effective or

14 what the most effective programs for energy efficiency

15 are, in terms of reserve housing?

16   MR. RUSSELL TYSON: No, not specific to

17 reserve housing.

18   MR. GEORGE ORLE: In regards to the --

19 the impact of rate increases in -- in regards to either

20 current or future benefits to the -- to the province,

21 did you take into account in your critical analysis

22 that most of the benefits that are provided to Manitoba

23 communities are not benefits that are provided to

24 reserve communities?

25   MR. RUSSELL TYSON: That would be a

7149

1 consideration, yes.

2   MR. GEORGE ORLE: Did you take that

3 into consideration in the --

4   MR. RUSSELL TYSON: I was aware of it,

5 but I did not consider it.

6   MR. GEORGE ORLE: Okay. The fact that

7 reserve communities depend upon the federal government

8 for education costs, housing costs, roads,

9 infrastructure, those would not be a benefit that would

10 come to the -- the reserve communities from the

11 province of Manitoba?

12   MR. RUSSELL TYSON: Sorry, could you

13 repeat that?

14   MR. GEORGE ORLE: Benefits such as

15 infrastructure, roads, community buildings, education,

16 schools, social programs, those are all paid for by the

17 federal government. That would not be a benefit that's

18 paid for by the province, or paid by the province to

19 reserve communities.

20   MR. RUSSELL TYSON: Yes.

21   MR. GEORGE ORLE: So in effect, the

22 increase in rates that are being paid by residents in

23 reserve communities have a limitation upon them in

24 regards to what their future benefit may be from those

25 rate increases.

7150

1   MR. RUSSELL TYSON: Yes.

2   MR. GEORGE ORLE: As part of your

3 critical analysis, did you either interview or review

4 any reports from the communities themselves as to the

5 impacts of rates or increases in rates?

6   MR. RUSSELL TYSON: No.

7

8   (BRIEF PAUSE)

9

10   MR. GEORGE ORLE: I'd like you to go to

11 page 38 of your report, and specifically, I'd like to

12 deal with Exhibit number 12. And is it correct, sir,

13 that you used this exhibit essentially to indicate that

14 Canada in particular has been very -- I'm not going to

15 use the word 'lucky', but they've benefited from very

16 low electricity rates?

17   MR. RUSSELL TYSON: It suggests that

18 Canada has some of the lowest rates in the world, yes.

19   MR. GEORGE ORLE: Okay. And although

20 it's interesting, does it really provide me with any

21 basis of comparison when you include countries such as

22 Italy or Poland in -- in that analysis?

23   MR. RUSSELL TYSON: In context to what?

24   MR. GEORGE ORLE: In context to -- if I

25 take a look at the bottom three (3), which is really

7151

 1 North America --

 2   MR. RUSSELL TYSON: M-hm.

 3   MR. GEORGE ORLE: -- Canada, Mexico,

 4 United States, that if we use that as a term of

 5 reference, there really is very little difference

 6 between the electricity rates in those three (3)

 7 countries.

 8   MR. RUSSELL TYSON: That is correct.

 9   MR. GEORGE ORLE: And -- and I would

10 assume that for the purpose of comparison, one would

11 want to compare like jurisdictions, jurisdictions that

12 are close by, and may have the same sorts of industrial

13 infrastructures that -- that Canada would have?

14   MR. RUSSELL TYSON: M-hm. Yes.

15   MR. GEORGE ORLE: Yes. In the first

16 paragraph of 4.1.1, you make the statement that:

17   "Canada benefits from some of the

18   lowest rates, resulting from historic

19   capital investments associated with

20   major hydroelectric projects in

21   renewable energy."

22   Do you see that?

23   MR. RUSSELL TYSON: Yes.

24   MR. GEORGE ORLE: You have a footnote

25 indicating the source of that information, and am I

7152

 1 correct that when I go down to the bottom of the page,

 2 footnote 25, that this is information that you obtained

 3 from a PowerPoint presentation done by the Canadian

 4 Electricity Association?

 5   MR. RUSSELL TYSON: Yes.

 6   MR. GEORGE ORLE: Do you have any other

 7 literature that supports that statement?

 8   MR. RUSSELL TYSON: No.

 9

10   (BRIEF PAUSE)

11

12   MR. GEORGE ORLE: I'll refer you to

13 page 40 of your report, and the -- the first paragraph

14 of that page sets out your information obtained from a

15 CBC report dealing with proposed increases in rates

16 across the next several years in -- in several

17 jurisdictions.

18   MR. RUSSELL TYSON: Yes.

19   MR. GEORGE ORLE: I'll refer you to the

20 slide exhibit, and to page -- or slide -- slide number

21 28, and I'm -- I'm wondering whether or not both of

22 those -- that page and the slide can be put side by

23 side or one over the other?

24   MR. RUSSELL TYSON: Yeah.

25

 1   (BRIEF PAUSE)

 2

 3   MR. GEORGE ORLE: When I was looking at

 4   the slide when you were giving your presentation

 5   yesterday, I was trying to compare it to the report

 6   itself. And I note that the numbers that are used on

 7   the slide are considerably different than the ones that

 8   are set out on page 40.

 9   And I'm wondering, sir, what -- what --

10   is this an updated slide from your report, or is there

11   someplace else in your report where I can find this

12   information, the current rate applications in Canada

13   set out on slide 28 --

14   MR. RUSSELL TYSON: That -- that

15   information was provided to the panel as part of BC --

16   or Manitoba Hydro's, sorry, my apology, presentation a

17   while back. Probably two (2) weeks ago.

18   MR. GEORGE ORLE: Yeah, so --

19   MR. RUSSELL TYSON: I --

20   MR. GEORGE ORLE: Sorry.

21   MR. RUSSELL TYSON: Sorry, my

22   apologies. I note that in referencing different

23   articles there are numerous different sources about

24   increases in rates, some of which is not consistent.

25   My point that was trying to be made was that in -- rate

7154

1 increases are consistent across the Board with all

2 major utilities in Canada.

3   MR. GEORGE ORLE: All right. And in

4 your report when you talked about rate increases and

5 where they were occurring, that was all based on the

6 CBC report.

7   Was there any other literature that you

8 reviewed or any other reports?

9   MR. RUSSELL TYSON: That was common

10 knowledge, being that I'm in the industry.

11   MR. GEORGE ORLE: Okay. And in regards

12 to slide number 28, other than taking what Hydro has

13 provided to you, did you do any other analysis as to

14 whether or not those rates were correct, or -- or

15 whether the time frames that they proposed were -- were

16 correct?

17   MR. RUSSELL TYSON: No, I did not.

18   MR. GEORGE ORLE: Did you ask where

19 that information had come from?

20   MR. RUSSELL TYSON: No, I did not.

21

22   (BRIEF PAUSE)

23

24   MR. GEORGE ORLE: In your report in

25 dealing with the -- the impact of rates, you had had a

7155

1 -- a slide and it's the same slide, number 28, showing

2 that household expenditures that, based upon the

3 information you had available to you, that electricity

4 costs made up about 3 percent of the -- of the total

5 cost of expenditures?

6   MR. RUSSELL TYSON: Based on the source

7 that was presented there.

8   MR. GEORGE ORLE: And that's relative

9 to what the amounts are for the other expenditures?

10   MR. RUSSELL TYSON: In the household,

11 total household expenditures.

12   MR. GEORGE ORLE: Okay. If those

13 expenditures outside of electricity costs increase by

14 the rate of inflation or the cost of living each year

15 and electricity increased at a higher rate, then that 3

16 percent would be a larger amount out of the total

17 expenditures?

18   MR. RUSSELL TYSON: Yes.

19   MR. GEORGE ORLE: Okay. In your review

20 of the literature, have you examined or found any other

21 jurisdiction that has raised electricity rates

22 continuously over a twenty (20) year period over and

23 above the -- the general cost of living?

24   MR. RUSSELL TYSON: Sorry, could you

25 repeat the question?

7156

 1   MR. GEORGE ORLE: In your review of the

 2 literature that you had available to you, did you come

 3 across any other jurisdiction that had consistently

 4 raised electricity rates for a period of twenty (20)

 5 years or more at a rate higher than the rate of

 6 inflation?

 7   MR. RUSSELL TYSON: No.

 8   MR. GEORGE ORLE: And it would follow

 9 from that that you have no information or any analysis

10 as to what the economic effects of that type of

11 increase would be?

12   MR. RUSSELL TYSON: Not on a GDP

13 perspective.

14

15   (BRIEF PAUSE)

16

17   MR. GEORGE ORLE: As part of your

18 observations, you indicate that one of the main

19 solutions to dealing with rate increases should be

20 effective forms of energy efficiency and programs

21 available to -- to ratepayers to lower their rates?

22   MR. RUSSELL TYSON: Yes.

23   MR. GEORGE ORLE: Okay. In your

24 analysis, did you review what types of programs might

25 be more effective or most effective for different types

7157

 1 of ratepayers?

 2   MR. RUSSELL TYSON: We looked at a

 3 variety of programs. My recommendation is that the

 4 programs and the way they perform or are measured is

 5 the critical issue going forward. Performance measures

 6 have to be specific, measurable, achievable, and

 7 realistic, and time laden to the communities in which

 8 the effects are most predominant.

 9   MR. GEORGE ORLE: Okay. Well, that's

10 going forward. I'm asking whether or not in your

11 analysis you took a look at what types of programs had

12 been effective in either -- either other jurisdictions

13 or, in particular, to certain types of ratepayers?

14   MR. RUSSELL TYSON: Not to specific

15 ratepayers, but in other jurisdictions in our home

16 province of BC, Power Smart, we have a similar program.

17   MR. GEORGE ORLE: Okay. Have you

18 reviewed or had available to any literature that

19 indicates whether or not for low-income families,

20 whether outright grants or whether time or low-interest

21 loans are a more effective way of bringing programs to

22 them?

23   MR. RUSSELL TYSON: I -- they had been

24 identified. The success rate, I am not familiar with.

25   MR. GEORGE ORLE: Okay. In your review

 1 of the literature, have you found any jurisdictions

 2 that have either capped or made a specific

 3 classification of types of ratepayers and applied

 4 different rates to them?

 5   MR. RUSSELL TYSON: No, I'm not.

 6   MR. GEORGE ORLE: Thank you, Mr. Tyson.

 7 Those are all the questions that I have. Thank you,

 8 panel.

 9   THE CHAIRPERSON: Thank you, Mr. Orle.

10 I think that -- Mr. Weinstein, did you have...? I

11 think it's probably an appropriate time to take a

12 break, so let's take ten (10) minutes. Thank you.

13

14 --- Upon recessing at 10:29 a.m.

15 --- Upon resuming at 10:45 a.m.

16

17   THE CHAIRPERSON: I believe that we're

18 ready to resume this morning's proceedings. And it's

19 over to you, Mr. Fernandes. Welcome. It's the first

20 time that you are on the microphone.

21

22 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

23   MS. ODETTE FERNANDES: Yes, it is.

24 Thank you very much, Mr. Chairman, panel. Good

25 morning, Mr. Tyson.

 1   MR. RUSSELL TYSON: Good morning.

 2   MS. ODETTE FERNANDES: I just have a

 3 few areas I'd like to go through with you and -- just a

 4 couple of matters just to clarify on the record. But

 5 the first area I'd like to review with you is the

 6 input/output models.

 7   Now, your report indicates that

 8 Newfoundland and Labrador Hydro utilize their

 9 provincial input/output modelling in the determination

10 of Canada-wide and provincial benefits, correct?

11   MR. RUSSELL TYSON: That is an

12 assumption. When we reviewed the literature, we

13 assumed, and some of the results, looked like they had

14 utilized the input/output model.

15   MS. ODETTE FERNANDES: Okay.

16   MR. RUSSELL TYSON: I cannot a hundred

17 percent confirm that.

18   MS. ODETTE FERNANDES: Okay. So sorry.

19 If I go to page 67 of your report, under Section 6.3.2

20 it indicates:

21   "Provincial input/output modelling

22   was utilized in the determination of

23   Canada-wide and provincial benefits."

24   That's an assumption?

25   MR. RUSSELL TYSON: That is an

7160

1 assumption. Thank you.

2   MS. ODETTE FERNANDES: With respect to

3 BC Hydro, are you aware if they utilize their

4 provincial input/output model in determining benefits?

5   MR. RUSSELL TYSON: Yes.

6   MS. ODETTE FERNANDES: They do. Okay.

7 And Hydro-Quebec?

8   MR. RUSSELL TYSON: I assume they did,

9 too, for the numbers that I saw --

10   MS. ODETTE FERNANDES: Okay.

11   MR. RUSSELL TYSON: -- and the results

12 that were posted.

13   MS. ODETTE FERNANDES: Okay. So based

14 on your assumptions, would you agree with me that

15 provinces with major hydro generation tend to use their

16 provincial output models in terms of determining

17 benefits for their province?

18   MR. RUSSELL TYSON: I would believe

19 they do so, yes.

20   MS. ODETTE FERNANDES: Okay.

21

22   (BRIEF PAUSE)

23

24   MS. ODETTE FERNANDES: Now, in your

25 PowerPoint presentation of yesterday at slide 22, you

1 quoted a report from Habitat -- Habitat Health

2 Consulting, and the quote you referenced there states

3 that:

4   "The approach to community health

5   effects in the Keeyask EIS closely

6   parallels HIA, and addresses a broad

7   range of associated health issues and

8   exempli -- exemplifies the inclusion

9   of stakeholders in the EIA/HIA

10   process. While some small gaps

11   remain in the assessment of health

12   impacts and mitigation strategies,

13   the overall quality of the assessment

14   of community health is high."

15   Have I read that correctly?

16   MR. RUSSELL TYSON: Yes.

17   MS. ODETTE FERNANDES: And that quote

18 was taken from the report entitled, 'Review of

19 Community Health Issues in the Keeyask Generation

20 Project Environmental Impact Statement', and it was

21 prepared by Habitat Health Consulting, correct?

22   MR. RUSSELL TYSON: Correct, and that

23 was the concluding page of the report.

24   MS. ODETTE FERNANDES: Right. And in -

25 - just in terms of clarification for the record, can

7162

1 you confirm that this report was, in fact, not prepared

2 by or on behalf of Manitoba Hydro, but was rather

3 prepared for the Public Interest Law Centre, who was

4 represented by Mr. Williams for the Keeyask Clean

5 Environment Commission hearing?

6   MR. RUSSELL TYSON: Yes.

7   MS. ODETTE FERNANDES: Now, this

8 morning, Ms. Saunders asked you about aggressive

9 monitoring. Do you recall that discussion?

10   MR. RUSSELL TYSON: Yes, I do.

11   MS. ODETTE FERNANDES: Now, the

12 partnership has developed extensive monitoring plans,

13 and has established a mon -- monitoring advisory

14 committee to ensure those plans are carried out.

15   Now, would you consider such steps to be

16 reasonable for monitoring?

17   MR. RUSSELL TYSON: Yes, I would.

18   MS. ODETTE FERNANDES: And would you

19 agree, in fact, that those steps would be considered

20 best practice?

21   MR. RUSSELL TYSON: Yes, I would.

22   MS. ODETTE FERNANDES: Now, those plans

23 will be on a public website and the results will be

24 posted, and this will enable the public, including any

25 Northern or Abor -- Aboriginal individuals, including

7163

1 Metis and other non-partners, to review those plans and

2 results, and to provide feedback -- feedback and raise

3 concerns, if any.

4   Now, would you also consider this to be

5 a reasonable and practical way to involve those not

6 directly affected, but still interested?

7   MR. RUSSELL TYSON: Yes, that would be.

8   MS. ODETTE FERNANDES: And would I --

9 would you agree that this would also be considered a

10 best practice?

11   MR. RUSSELL TYSON: Yes, it is a best -

12 - best practice.

13   MS. ODETTE FERNANDES: Now, is it your

14 understanding that it would also be a -- a licence

15 condition to report monitoring results to both a

16 provincial and federal government?

17   MR. RUSSELL TYSON: That would be a

18 prudent approach. I don't know whether it has been

19 mandated to do so.

20   MS. ODETTE FERNANDES: If it is a

21 licence condition, would you agree, then, that the

22 governments also have an opportunity to review

23 partnership monitoring?

24   MR. RUSSELL TYSON: Yes.

25   MS. ODETTE FERNANDES: And if there

 1 were any concerns, the developer or partnership would

 2 be required to address any issues?

 3   MR. RUSSELL TYSON: Yes. Would that

 4 include organisations dealing with health and other

 5 aspects?

 6   MS. ODETTE FERNANDES: Yes.

 7   MR. RUSSELL TYSON: Sorry --

 8   MS. ODETTE FERNANDES: Although I'm not

 9 giving evidence.

10   MR. RUSSELL TYSON: Yeah, sorry. My

11 apologies.

12   MS. ODETTE FERNANDES: Now, in your

13 report, you indicate that your review found that there

14 were significant employment benefits to First Nations

15 as a result of the construction of Keeyask, correct?

16   MR. RUSSELL TYSON: Yes.

17   MS. ODETTE FERNANDES: Now, earlier in

18 the hearing, we heard from Manitoba Hydro's witness,

19 Ms. Shawna Pachal, who discussed direct negotiated

20 contracts.

21   Are you familiar with Manitoba Hydro's

22 use of those contracts?

23   MR. RUSSELL TYSON: I am familiar with

24 the amounts. I believe the number is now 360 million.

25 Is that correct?

7165

 1   MS. ODETTE FERNANDES: Yes.

 2   MR. RUSSELL TYSON: Oh, I'm sorry, I'm

 3 not -- I'm sorry.

 4   MS. ODETTE FERNANDES: I know, I almost

 5 need to be sworn in.

 6   MR. RUSSELL TYSON: I promise I will

 7 not...

 8   MS. ODETTE FERNANDES: I think Ms.

 9 Ramage would be very proud though.

10   Under those direct negotiated contracts,

11 the First Nations or their joint ventures who are

12 awarded these contracts have the right to hire directly

13 in their communities, correct?

14   MR. RUSSELL TYSON: Correct.

15   MS. ODETTE FERNANDES: And do you agree

16 that this is a good way to achieve higher Aboriginal

17 employment?

18   MR. RUSSELL TYSON: Yes.

19   MS. ODETTE FERNANDES: In your report,

20 you also reference the Employer Retention and Support

21 Contract for Keeyask?

22   MR. RUSSELL TYSON: Yes.

23   MS. ODETTE FERNANDES: And this

24 contract includes, for example, counselling services,

25 cross-cultural activities, and ceremonies, correct?

7166

 1   MR. RUSSELL TYSON: Correct.

 2   MS. ODETTE FERNANDES: Now, these

 3 contracts would be important to the communities and

 4 build a bridge between the individuals who work on the

 5 site, and specifically Aboriginal employees on the

 6 site.

 7   Is that consistent with your

 8 understanding?

 9   MR. RUSSELL TYSON: That is consistent.

10   MS. ODETTE FERNANDES: Now, would you

11 agree that that is both a benefit and one way of

12 retaining jobs for those members?

13   MR. RUSSELL TYSON: Yes, it would be.

14   MS. ODETTE FERNANDES: And your report

15 also refers to the job referral service.

16   And you're familiar with that service?

17   MR. RUSSELL TYSON: Yes.

18   MS. ODETTE FERNANDES: Now, Manitoba

19 Hydro has also discussed the aspect of job seeker

20 managers who are able to work with members of the First

21 Nation communities to assist their members in

22 registering with a job refer -- referral service and

23 ensuring that their registration in the service is

24 renewed and kept up to date.

25   Now, is that consistent with your

 1 understanding?

 2   MR. RUSSELL TYSON: Consistent.

 3   MS. ODETTE FERNANDES: And there was

 4 also testimony by Manitoba Hydro witnesses regarding

 5 other measures that are being utilized, including

 6 Aboriginal union reps and having Keeyask Cree Nation

 7 site representative positions on the project.

 8   And are you familiar with those?

 9   MR. RUSSELL TYSON: Yes.

10   MS. ODETTE FERNANDES: Would you agree

11 that all the examples we -- we've just reviewed, would

12 you agree that that supports maximizing Aboriginal

13 employment and meeting and/or exceeding the EIS

14 projections on Keeyask?

15   MR. RUSSELL TYSON: Yes.

16   MS. ODETTE FERNANDES: Now, yesterday

17 Mr. Williams suggested to you that job preferences for

18 local Aboriginal can be sidestepped by artificially

19 increasing the skills or qualifications for certain

20 jobs.

21   Do you recall that discussion?

22   MR. RUSSELL TYSON: Yes, I do.

23   MS. ODETTE FERNANDES: Now, in your

24 report at page 34, I don't think we need to turn there,

25 but you mention the advisory group on employment, which

7168

 1 is one (1) of the committees which has been negotiated

 2 and designed specifically for the Keeyask project.

 3   You're familiar with that?

 4   MR. RUSSELL TYSON: Yes.

 5   MS. ODETTE FERNANDES: The advisory

 6 group exists to address those types of concerns should

 7 they arise, correct?

 8   MR. RUSSELL TYSON: Yes.

 9   MS. ODETTE FERNANDES: Now, would it

10 surprise you that Manitoba Hydro, as a project manager,

11 would also be reviewing some of those job descriptions

12 by way of spot checks to look out for such issues?

13   MR. RUSSELL TYSON: It would not

14 surprise me, as I've seen that being done in other

15 agencies. But it is a useful tool.

16   MS. ODETTE FERNANDES: With respect to

17 the Keeyask project, it is being constructed by a

18 partnership between Manitoba Hydro and four (4) First

19 Nations, correct?

20   MR. RUSSELL TYSON: Correct.

21   MS. ODETTE FERNANDES: And because of

22 that business relationship, it would be reasonable to

23 assume that if employment preferences were being

24 circumvented, the four (4) First Nation partners would

25 bring that to Manitoba Hydro's attention right away for

7169

1   it to be rectified?

2   MR. RUSSELL TYSON: That would be a

3   reasonable assumption.

4

5   (BRIEF PAUSE)

6

7   MS. ODETTE FERNANDES: Now, again

8   referring back to a discussion you had yesterday with

9   Mr. Williams regarding whether various First Nation

10 impact benefit agreements required equity investments.

11   Do you recall that?

12   MR. RUSSELL TYSON: I do recall that.

13   MS. ODETTE FERNANDES: And would it

14 surprise you to know that the First Nation partners in

15 both Wuskwatim and Keeyask expressed a preference for

16 equity ownership in the projects rather than an impact

17 benefit agreement without equity?

18   MR. RUSSELL TYSON: That would surprise

19 me, but it's good to hear. Sorry, could you say that

20 over again?

21   MS. ODETTE FERNANDES: Would it

22 surprise you to know that the First Nation partners

23 expressed a preference for equity ownership versus an

24 impact benefit agreement without equity?

25   MR. RUSSELL TYSON: No, it wouldn't

1 surprise me.

2   MS. ODETTE FERNANDES: Okay. And would

3 you consider an equity ownership to be a positive

4 feature of a hydro project?

5   MR. RUSSELL TYSON: Yes.

6   MS. ODETTE FERNANDES: Now, on page 30

7 of your report under, yeah, 3.5 there, it discusses the

8 Northern and Aboriginal community-based impacts. And

9 you speak about the criteria and measures utilized by

10 large Crown corporations' approach to Aboriginal

11 issues.

12   I'm assuming that some review of

13 academic literature was used to assist in defining the

14 criterion measures?

15   MR. RUSSELL TYSON: Yes.

16   MS. ODETTE FERNANDES: And if we move

17 down to footnote number 16, you also indicate that

18 criterion measures were also derived from a review of

19 the -- of Quebec-Hydro's approach to Eastmain and

20 Rupert Division Project, and now, of course, Lower

21 Churchill River Hydro Electric Project?

22   MR. RUSSELL TYSON: Yes.

23   MS. ODETTE FERNANDES: And then you

24 also go on to state that:

25   "The criteria and measures were

7171

```
 1                      further defined based on experience

 2                      with First Nations involved in

 3                      hydroelectric facility development in

 4                      British Columbia."

 5             Correct?

 6             MR. RUSSELL TYSON:   Yes, that is

 7 correct.  And as mentioned earlier, I have been

 8 involved in the development of benefit agreements with

 9 First Nations in British Columbia.

10             MS. ODETTE FERNANDES:   Now, I'm -- am I

11 able to summarize then that you're -- the criterion

12 measures were derived from both the review of academic

13 literature and your firsthand experience?

14             MR. RUSSELL TYSON:   Yes.

15             MS. ODETTE FERNANDES:   And you would

16 agree with me that actual firsthand experience with

17 First Nations would greatly assist in defining

18 criterion measures and would provide additional

19 information and insight than you otherwise wouldn't

20 have?

21             MR. RUSSELL TYSON:   Absolutely

22 critical.

23             MS. ODETTE FERNANDES:   And yesterday

24 something that stood out for me is you indicated that

25 you were constantly known for pushing the envelope of
```

7172

1 procedural requirements and improving them so that we

2 can optimize socioeconomic benefits for First Nations

3 to ensure benefits come to fruition.

4   Do you recall making that statement?

5   MR. RUSSELL TYSON: I do recall making

6 that statement.

7   MS. ODETTE FERNANDES: And you also

8 indicated that you -- you just don't table reports, but

9 that you want to see tangible benefits for Aboriginal

10 people and local communities in which projects are

11 being developed.

12   Do you recall making that comment?

13   MR. RUSSELL TYSON: Yes, I do.

14   MS. ODETTE FERNANDES: Now, when you

15 were asked to perform a critical analysis of the

16 socioeconomic impact and benefits of the Preferred

17 Development Plan and alternative plans, am I correct to

18 say that, based on your reputation and what you have

19 just indicated, you have take -- you would have taken a

20 long, hard look in terms of what Manitoba Hydro was

21 actually doing to ensure benefits was coming to

22 fruition, as opposed to simply reading words on a -- on

23 a piece of paper?

24   MR. RUSSELL TYSON: Yes.

25

7173

1   (BRIEF PAUSE)

2

3   MS. ODETTE FERNANDES: Thank you, Mr.

4 Chairman. Thank you, Mr. Tyson.

5   THE CHAIRPERSON: That last question,

6 Mr. Tyson, could you indicate to the panel -- when --

7 when you indicated that you had taken a long, hard look

8 at what Manitoba Hydro was actually doing versus what

9 they were reporting, could you tell us how they did

10 that?

11   MR. RUSSELL TYSON: Sorry, could you --

12   THE CHAIRPERSON: Well, it's --

13   MR. RUSSELL TYSON: Yeah.

14   THE CHAIRPERSON: -- just really to

15 follow up on the question that was --

16   MR. RUSSELL TYSON: Yeah.

17   THE CHAIRPERSON: -- asked by Mr.

18 Fernandes. And you indicated that you took a long,

19 hard look at what Manitoba Hydro was actually doing

20 versus what they were reporting. And I --

21   MR. RUSSELL TYSON: Yeah. As part of

22 that -- sorry, Reg, I couldn't hear you --

23   THE CHAIRPERSON: Okay.

24   MR. RUSSELL TYSON: -- or Chair.

25   THE CHAIRPERSON: Could you describe

7174

1 what you did?

2   MR. RUSSELL TYSON: As part of the

3 review, we looked throughout the EIS to identify all

4 the activities and all the programs that were in place.

5 We did scan the Deloitte report regarding training

6 opportunities. We noted the deficiencies that were

7 inherent in them. We also looked at some of the work

8 that was being done in the benchmarks that have already

9 been stated, about trying to move the projects

10 forwards.

11   Our conclusion at the end of the day is

12 that critical to any success of any project such as

13 this is going to be monitoring and implementation. And

14 the first step towards that is ensuring that the right

15 mechanisms or monitoring plans are in place to ensure

16 that these things can happen.

17   In this example, we did look at Manitoba

18 Hydro's Socioeconomic Environmental Monitoring Plan to

19 ensure that some of the key items that had been

20 identified in the past were being addressed and

21 monitored going forward.

22   So to that extent, we looked at that as

23 a high level. And then we tried to drill down to more

24 details about exactly what was going to happen. The

25 concluding mark and the concluding issue going forward

7175

1 with all of these projects is the effective monitoring

2 and implementation of these issues. We see that

3 constantly on a number of projects in British Columbia.

4 And from what we've seen on Manitoba Hydro's

5 responding, is that they have identified the issues,

6 and they've put in place the plans to address it. How

7 that resolves itself going forward, I cannot state.

8

9   (BRIEF PAUSE)

10

11   THE CHAIRPERSON: Thank you very much,

12 Ms. Fernandes. The panel has no further questions for

13 the time being, so I'll turn the microphone over to

14 you, Mr. Hombach.

15

16 CROSS-EXAMINATION BY MR. SVEN HOMBACH:

17   MR. SVEN HOMBACH: Okay. Thank you,

18 Mr. Chairman, and good morning, Mr. Tyson. One (1) of

19 the benefits of being the last in line is that other

20 lawyers tend to do your work for you, so thankfully, I

21 won't be very long. But I do have a -- a few

22 questions, just to clarify.

23   And I want to start by going back to

24 this concept of where the direct benefits occur,

25 whether they occur in Manitoba or whether they occur in

7176

1 the rest of Canada. Now, that general debate, that's

2 also known as the subject of leakage --

3   MR. RUSSELL TYSON: Yes.

4   MR. SVEN HOMBACH: -- the economic

5 term? And in preparing your report, is it fair to say

6 that you reviewed and considered Chapter 13 of the NFAT

7 filing, meaning the multiple account benefit cost

8 analysis?

9   MR. RUSSELL TYSON: Yes, it is. M-hm.

10

11   (BRIEF PAUSE)

12

13   MR. RUSSELL TYSON: Yes.

14   MR. SVEN HOMBACH: Your report was

15 submitted, on time, I might say, in January 2014?

16   MR. RUSSELL TYSON: Yes.

17   MR. SVEN HOMBACH: Have you had an

18 opportunity to review the revised Chapter 13 that

19 Manitoba Hydro subsequently filed in February?

20   MR. RUSSELL TYSON: The pages in terms

21 of the econ -- Manitoba economy review? Yes, I have.

22   MR. SVEN HOMBACH: Yes. I'd like you

23 to -- to take you to some of those pages, and they're

24 actually excerpted in a Board counsel book of

25 documents. It's Exhibit PUB-58-5, so I'll ask Ms.

7177

1 Villegas to put that on the screen, and go to page 175.

2 Sorry, go to page 180.

3

4   (BRIEF PAUSE)

5

6   MR. SVEN HOMBACH: If we scroll to the

7 bottom of that page, there's a discussion as to the

8 percentage of jobs that would be filled by Manitobans,

9 and you'll see that the initial NFAT filing had

10 envisioned that 70 percent of jobs would be Manitoba

11 jobs, and that was revised downwards to 40 to 45

12 percent.

13   If you've had an opportunity to review

14 this, do you have any reason to disagree with those

15 revised percentages?

16   MR. RUSSELL TYSON: No, I do not, and

17 if I may, I may clarify the economic impact assessment

18 is a different tool than the -- what's being spoke of

19 here. This is multiple account cost benefit analysis,

20 in which the principle of economic rent is being

21 applied.

22   MR. SVEN HOMBACH: Now, it's my

23 understanding from reviewing your report that the

24 Manitoba Bureau of Statistics model tries to actually

25 distinguish where the direct benefits occur, whereas

7178

1 the Stats Can model assumes that the direct benefits

2 occur in the specific province where the job is taking

3 place. That --

4   MR. RUSSELL TYSON: A -- a point of

5 clarification. The Manitoba Bureau of -- I -- in fact,

6 I have to step back even further.   In input/output

7 modelling, the first step is to provide a list of

8 construction costs allocated to input/output commodity

9 categories. That is submitted to the Manitoba Bureau

10 of Statistics, who then runs the model.

11   The results of our analysis are based on

12 certain assumptions we make. However, I would like to

13 point out that the Stats Can monitor manages the flows

14 of goods and services between provinces based on

15 historic information and a tremendous amount of

16 statistics from a variety of sources. So the Stats

17 Canada model, just to be sure, just to be clear, what

18 that does is manages the expected flows of goods and

19 services between provinces and then runs the model.

20   MR. SVEN HOMBACH: And --

21   MR. RUSSELL TYSON: What Manitoba Hydro

22 has done is made assumptions about where those flows

23 are going to go. The concept of leakages deals with

24 wholesalers and suppliers that can provide services in

25 Manitoba. Our assumption in our report that some of

7179

1 those leakages may have been -- sorry, I -- I have to

2 go through this to explain it.

3   Some of the leakages may have been

4 overstated because the margins, or the taxes associated

5 with transportation and wholesaling, have not been

6 incurred to the Province of Manitoba.

7   I'm sorry if I didn't answer that

8 question.

9   MR. SVEN HOMBACH: No, and -- and

10 that's the way I -- I stood under a -- understood your

11 argument, Mr. Tyson. As far as the inputs then go, are

12 you suggesting that under the Stats Can model that you

13 included in your report if, let's say, cement is

14 sourced from Alberta or steel is sourced from China,

15 those aren't input as direct benefits to begin with in

16 the model?

17   MR. RUSSELL TYSON: In the Manitoba --

18 again I'd have to back up and explain the process to

19 which we did this. The first key is the construction

20 cost inputs. Manitoba Hydro provided us a list of

21 commodity costs inputs and the breakdown of the

22 expected leakages. That was put into the Manitoba

23 Bureau of Statistics model, and the results were based

24 on that.

25   The key issue here is how the leakage is

7180

1 retreated as opposed to the Stats Canada model that

2 assumes how the leakages are going to be treated.

3 That's the major difference. The assumptions made by

4 Manitoba, based on their experience with Wuskwatim,

5 probably led them to the decision that some of the

6 leakages would be more prevalent than what we

7 identified in the Stats Canada model.

8   MR. SVEN HOMBACH: So just to be clear

9 then, you're not suggesting that all direct benefits

10 should be incurred in Manitoba; will be incurred in

11 Manitoba.

12   You're merely saying there are some

13 transportation benefits that Manitoba Hydro that might

14 not have included?

15   MR. RUSSELL TYSON: We to be careful on

16 our interpretation. It is assumed as part of one (1)

17 of the general assumptions of input/output model that

18 the direct benefits are incurred in the province in

19 which you're located.

20   What has happened through experience

21 with Manitoba is Manitoba Hydro, because they know

22 where some of the suppliers are coming from, have made

23 assumptions in the model about what those leakages

24 would be.

25   The Stats Canada model, on the other

7181

1 hand, does not benefit from the experience with

2 contractors, but uses historical record to evaluate and

3 determine where those benefits are.

4   THE CHAIRPERSON: Can I suggest, Mr.

5 Tyson, that you move your microphone a little bit away

6 from your mouth so it --

7   MR. RUSSELL TYSON: Sorry.

8   THE CHAIRPERSON: -- because it -- it

9 creates some echo and...

10   MR. RUSSELL TYSON: So, Sven, may I

11 speak? You -- you mentioned an example of concrete,

12 and maybe we could explore that. We know that there --

13

14 CONTINUED BY MR. SVEN HOMBACH:

15   MR. SVEN HOMBACH: Sure.

16   MR. RUSSELL TYSON: We know that there

17 are no more concrete plants in Manitoba and that two-

18 hund -- approximately $224 million of concrete is

19 bringing -- being brought in from Alberta.

20   We assume that Manitoba Hydro has

21 assumed that that total component, for the most part,

22 is a leakage. What are we are not aware of and what we

23 suspect, that there are certain margins which are the

24 wholesalers and retailers and various taxes that have

25 been leaked out of the province; whereas it would have

 1 be inevitable that we assume that maybe some

 2 transportation organizations in Manitoba would be

 3 transporting the concrete. We assume that the concrete

 4 has to be mixed at a batch plant and then subsequently

 5 poured on site.

 6   Those things incur benefits to Manitoba

 7 which we are not sure how they have been allocated in

 8 the model. Simple as that.

 9   MR. SVEN HOMBACH: So let's go back to

10 discussing jobs. And you indicated that you don't have

11 a reason to doubt Manitoba Hydro's revised numbers

12 suggesting that 40 to 45 percent of construction jobs

13 will be filled by Manitobans.

14   But as I understand it, there's a second

15 aspect to that, and that's the concept of gross

16 employment verses net employment benefits?

17   MR. RUSSELL TYSON: Yes. The principle

18 of a economic rent.

19   MR. SVEN HOMBACH: And not being an

20 economist, I -- I may get this wrong, but I will try to

21 provide you with my description. And if I'm wrong,

22 maybe you can correct me.

23   Basically, it's suggesting if you've got

24 somebody making eighty thousand dollars ($80,000) a

25 year and they can get a highly paid hundred thousand

7183

1 dollar a year construction job, but they have to quit

2 the other job, you might not have a hundred thousand

3 dollar net benefit; you might only have a twenty

4 thousand dollar ($20,000) benefit?

5   MR. RUSSELL TYSON: Correct.

6   MR. SVEN HOMBACH: Let's go to page 182

7 of the book of documents that's up on screen. There's

8 a table on the bottom of the page -- it's Table 13.6 --

9 that provides some revised employment net benefits.

10   Have you had an opportunity to review

11 this, Mr. Tyson?

12   MR. RUSSELL TYSON: I have briefly

13 reviewed this, yes.

14   MR. SVEN HOMBACH: Do you have any

15 reasons to disagree with the numbers presented by

16 Manitoba Hydro?

17   MR. RUSSELL TYSON: No, I do not.

18

19   (BRIEF PAUSE)

20

21   MR. SVEN HOMBACH: There was some

22 discussion this morning by My Friend Ms. Fernandes on

23 the benefit agreement and the revenue sharing. You're

24 aware that there's two (2) different benefits, right?

25   With respect to Keeyask, there's the

7184

1 joint Keeyask Development Agreement, and then the four

2 (4) KCNs also have Adverse Effects Agreements in place?

3   MR. RUSSELL TYSON: I am aware of those

4 documents.

5   MR. SVEN HOMBACH: And conceptually,

6 can you advise the panel whether you would consider the

7 Adverse Effects Agreement to be a socioeconomic

8 benefit, or just be in the nature of compensation for

9 environmental harm that shouldn't be considered as part

10 of the benefits?

11   MR. RUSSELL TYSON: That's a thin line

12 for consideration. If I take a Cree world view,

13 everything is interrelated, but if I go back to a

14 purely socioeconomic, I would separate the social from

15 the environmental, and it depends on your view.

16   MR. SVEN HOMBACH: That is helpful.

17 And you were also asked by Ms. Fernandes about the

18 equity ownership, and you said it -- it would surprise

19 you that there was an equity ownership.

20   Now, when I had an opportunity to --

21   MR. CHRISTIAN MONNIN: Mr. Hombach, I'm

22 sorry to interrupt you, but I think that Mr. Tyson went

23 back and asked that question be restated, and he said

24 he wouldn't surprise him.

25

7185

1 CONTINUED BY MR. SVEN HOMBACH:

2   MR. SVEN HOMBACH: Okay. I apologize.

3 I didn't mean to mischaracterize your evidence. There

4 was some evidence given by Manitoba Hydro on March 25th

5 that the choice of whether or not the KCNs prefer to

6 stay with preferred distributions versus common equity

7 investment and an equity share would only have to be

8 made upon commissioning in 2019.

9   Were you aware of that?

10   MR. RUSSELL TYSON: I was aware of it,

11 yes.

12   MR. SVEN HOMBACH: So since you have

13 worked with hydro projects in the past, have you seen

14 projects before where such elections actually get made,

15 and there is a significant equity investment by First

16 Nations at some point?

17   MR. RUSSELL TYSON: The opportunity is

18 established in the agreements. I personally haven't

19 seen any agreements in which that was executed. Most

20 of the projects that I'm involved with are still

21 currently in construction.

22   MR. SVEN HOMBACH: Okay. Then let's

23 discuss construction employment for a moment, and I'd

24 ask that we go to page 175 of the book of documents in

25 front of us. The chart that you see in front of you is

1 Figure 13.5 from the revised NFAT Chapter 13, and it

2 shows the projected annual construction employment.

3 And what it shows is that for the

4 Preferred Plan, you have a fairly significant

5 construction spike for about ten (10) years, whereas

6 for the Gas Plans, it tends to be steady but lower

7 level employment for a number of years?

8 MR. RUSSELL TYSON: I would agree.

9 MR. SVEN HOMBACH: That's -- and that's

10 generally what you would expect to see?

11 MR. RUSSELL TYSON: That's generally

12 what I would expect to -- to see on my understanding of

13 what gas -- the life cycle of a gas project versus the

14 heavy and capital intensive construction nature of a

15 hydroelectric facility.

16 MR. SVEN HOMBACH: Let's go to the next

17 page in the document. That is Figure 13.6 from the

18 revised NFAT Chapter 13, and it shows that for

19 operational jobs, the trend is somewhat the opposite,

20 where the operational jobs are expected to steadily

21 increase with the plans that contain gas, and are lower

22 with respect to the plans that are based on hydro

23 power?

24 MR. RUSSELL TYSON: That is correct.

25 MR. SVEN HOMBACH: In terms of your

1 assessment, do you give any preference to, for lack of

2 a better word, legacy effects, where jobs that are

3 longer in duration would be given preference over jobs

4 that are shorter in duration, or is that not a criteria

5 on the -- would form part of your analysis?

6 MR. RUSSELL TYSON: Bequest value --

7 bequest value. One (1) of the things that we had to

8 look at, and if -- am I allowed to ask to scroll back

9 to the original graph that's on the page?

10 MR. SVEN HOMBACH: Absolutely.

11 MR. RUSSELL TYSON: Thank you very

12 much. When we look at -- when we look at the

13 construction effects of a hydroelectric facility, it is

14 known that hydro projects do constitute significant

15 construction during the actual construction, and then

16 it drops off thereafter.

17 As part of the socioeconomic evaluation,

18 we incorporated the principle of all the education and

19 training that was being done to build capacity within

20 these northern communities so that after the ten (10)

21 year time period, these individuals would be up and

22 ready for other resource opportunities to be developed

23 moving forward. That was one (1) of the things that we

24 looked at.

25 If we can scroll down to Figures 13.6,

 1 we acknowledge that from an operational point of view,

 2 there are more jobs on the other options. I believe

 3 the number is a hundred and sixty (160) confirmed

 4 operational jobs as a result of the Preferred

 5 Development Plan. It is assumed post-project

 6 construction, those individuals that did retain the

 7 skills can use them somewhere else. It's all about

 8 capacity building.

 9   The other aspect that we looked at in

10 this section of the report was the simple fact that the

11 majority of jobs for the All Gas Program are generally

12 for skilled labour and highly educated people, and

13 they're located in southern locations as opposed to

14 northern locations. And our initial comment regarding

15 the economic rent and the benefit therein lies in the

16 northern communities as per the southern communities.

17   The big disconnect in my logic here is

18 what happens after Conawapa or Keeyask is built, or --

19 and where do they go from there? And that's one (1) of

20 the issues that has to be monitored going forward.

21   MR. SVEN HOMBACH: And would one (1) of

22 the factors to take into account is whether or not the

23 training initiatives actually lead to Red Seal or

24 journeymen certificates, or some portable credentials

25 that would allow people to find employment in other

7189

 1 communities once these projects are done?

 2   MR. RUSSELL TYSON: That is absolutely

 3 correct, and that's why throughout this morning's

 4 deliberations, the monitoring and implementation is the

 5 critical element moving forward. We cannot suggest,

 6 however, that First Nations with that would like to

 7 stay on reserve, would be forced to move to new job

 8 sites or new areas. I didn't comment on that.

 9   MR. SVEN HOMBACH: So that's something

10 you can't rule out, but you just didn't see it as part

11 of --

12   MR. RUSSELL TYSON: I can't rule it

13 out.

14   MR. SVEN HOMBACH: -- your scope?

15   MR. RUSSELL TYSON: But I would assume

16 over time, in a resource-based economy, there is going

17 to be other projects in which such employment could be

18 absorbed into their workforces.

19   MR. SVEN HOMBACH: So when you're

20 talking about the monitoring, then, in -- in your view,

21 is that something that could be addressed in real time

22 if there were any shortcomings, or would you just have

23 to retroactively look at it and say, Okay, we'll do

24 better with the next project?

25   MR. RUSSELL TYSON: I don't think a

7190

 1 retroactive perspective is required. I think it's real

 2 time that's essential. The real time ability to

 3 respond to these issues is based on the relationship

 4 between the proponent, in this case Manitoba Hydro, and

 5 First Nations to try and address the post issue --

 6 post-construction issues. And that was one (1) of the

 7 best practices that we identified.

 8   MR. SVEN HOMBACH: Let's go back to

 9 page 39 of your report for a moment, and Mr. Orle had

10 previously asked that that be flashed up on the screen.

11 Sorry, this is a -- a slightly different chart. That's

12 a chart that shows the electricity rates in various

13 Canadian jurisdictions. It's Exhibit 13. The chart

14 that Mr. Orle had shown you showed them in an

15 international context?

16   MR. RUSSELL TYSON: That would be

17 Exhibit 12.

18   MR. SVEN HOMBACH: Okay. And your

19 point was Canada, in the grand scheme of things, has

20 fairly low rates, and within Canada, Manitoba actually

21 has fairly low rates?

22   MR. RUSSELL TYSON: That is correct.

23   MR. SVEN HOMBACH: Have you considered,

24 among these different jurisdictions, whether there's

25 any significant difference in the penetration of

7191

1 electric heat and how that would impact your answer?

2   MR. RUSSELL TYSON: No, I have not

3 considered that.

4   MR. SVEN HOMBACH: So if you were to

5 find out, for example, that Manitoba has a higher

6 penetration of electric heat than some other

7 jurisdictions, that could lead you to assume that there

8 would be a higher impact on low-income ratepayers?

9   MR. RUSSELL TYSON: That would be

10 reasonable.

11   MR. SVEN HOMBACH: Okay. Bear with me

12 for one (1) second. I don't believe I have any further

13 questions, but I'll -- I'll check with my advisor.

14

15   (BRIEF PAUSE)

16

17   MR. SVEN HOMBACH: Let's go briefly

18 back to the issue of leakages. When you said that they

19 may be understated, you didn't actually try to quantify

20 it.

21   Are you in a position to provide an

22 order of magnitude?

23   MR. RUSSELL TYSON: That -- that would

24 be difficult to do. One can appreciate that --

25 firstly, that the models are actually proprietary, so

1 both myself and -- or, Manitoba Hydro can provide

2 certain data to both, in our case, the BC Stats people,

3 and, in their case, the Bureau of Stats, and the Bureau

4 of Stats will then run the model.

5   In terms of the order of magnitude of

6 the leakages, we actually attempted to quantify that by

7 putting the inputs -- or the commodity inputs that

8 Manitoba Hydro gave us into the input table that was

9 utilized for the Site C devel -- Clean Energy Project

10 in British Columbia.

11   Unfortunately, because the economies are

12 different and because the model was produced at an

13 extremely detailed level of detail, we couldn't make

14 the comparisons.

15

16   (BRIEF PAUSE)

17

18   MR. SVEN HOMBACH: Okay. Thank you.

19 Those are my questions, Mr. Tyson.

20   THE CHAIRPERSON: Thank you. Thank

21 you, Mr. Hombach. Now, we're a little bit early, but

22 is there a provision for -- the schedule provides for

23 CSI -- CSI portion now. In your estimation, is there

24 anything that we need to address in the CSI portion?

25   MR. SVEN HOMBACH: I do not have

7193

1 anything I need to address in the CSI portion --

2 portion, and I spoke to Ms. Fernandes yesterday, and I

3 saw her shake her head right now, so there -- there

4 won't be a CSI session.

5   The afternoon session today is reserved

6 for the examination of Morrison Park advisors. Now, I

7 -- I'm not sure if it would make sense to commence them

8 early. I suspect that may not be possible, so we may

9 just have an opportunity for an extended lunchbreak

10 today.

11   THE CHAIRPERSON: I'm a little bit

12 concerned about the restricted amount of time available

13 to -- to ask questions of Morrison Park. So is it your

14 estimation that we will be sitting later today?

15   MR. SVEN HOMBACH: I -- I canvassed the

16 issue yesterday, Mr. Chairman. As you are aware,

17 Morrison Park is scheduled for a day and a half.

18 They're here for this afternoon plus all day tomorrow.

19 There does not appear to be any concern timing-wise.

20   That said, my colleague, Mr. Peters, is

21 handling the examination. I -- I don't purport to

22 speak on his behalf, but we haven't identified an

23 actual timing constraint.

24   THE CHAIRPERSON: I'm wondering -- I'll

25 -- I'll canvass the Intervenors very quickly to see if

7194

1 they have concerns around the -- the amount of time

2 that has been scheduled for Morrison Park.

3   Mr. Williams, please?

4   MR. BYRON WILLIAMS: I can just

5 indicate our examination of Morrison Park, unless there

6 is something unexpected that comes up in the direct,

7 will not be that lengthy, so I would expect less than

8 an hour. So I -- I think it's Mr. Hacault who may have

9 a -- a more extensive discussion with Morrison Park.

10   But from the CAC (Manitoba) perspective,

11 it would be a less lengthy cross-examination than

12 you've seen with some of the other independent

13 witnesses.

14   THE CHAIRPERSON: And Mr. Orle...?

15   MR. GEORGE ORLE: Ten (10), fifteen

16 (15) minutes, if at all, depending on what the

17 examination is and the cross-examination by those

18 before me.

19   THE CHAIRPERSON: And Ms. Saunders,

20 please?

21   MS. JESSICA SAUNDERS: Yes, my comments

22 are similar to Mr. Orle. It depends on what the other

23 parties are cross-examining on and what, if any,

24 questions we may have after that point. But I don't

25 anticipate it being that long of an examination. Thank

7195

1 you.

2   THE CHAIRPERSON: Thank you, Ms.

3 Saunders. And Ms. Fernandes, would you like to

4 comment, please?

5   MS. ODETTE FERNANDES: I can advise the

6 Board that Ms. Boyd will be cross-examining Morrison

7 Park, and I believe she doesn't have anything longer

8 than an hour.

9   THE CHAIRPERSON: Okay. That sounds

10 like we have enough time in the schedule to accomplish

11 what we intend to do in a day and a half. So with

12 that, I would -- you know, one (1) possibility that's

13 available to us is to start earlier than one o'clock.

14 Is that something that --

15   MR. MICHAEL WEINSTEIN: Mr. Chair --

16   THE CHAIRPERSON: Yes, please.

17   MR. MICHAEL WEINSTEIN: -- if I could

18 just speak to that. Morrison Park just arrived this

19 morning during Mr. Tyson's cross-examination, so Mr.

20 Monnin's in the workroom we've been assigned, and I

21 think we would appreciate if we could begin at 1:00 and

22 not start early, so that we have sufficient time to get

23 them prepared.

24   THE CHAIRPERSON: So with that, I think

25 we'll agree that one o'clock is when we will resume the

1 proceedings. Mr. Wojczynski, I see -- oh, Ms.

2 Fernandes...?

3   MS. ODETTE FERNANDES: Sorry, Mr.

4 Chair. Is there a presentation today?

5   MR. SVEN HOMBACH: I believe there was

6 one (1) scheduled, although my current understanding is

7 that it has been cancelled. I will confirm. I see Mr.

8 Simonsen shaking his head.

9   MR. KURT SIMONSEN: In my brief

10 discussions with Mr. Monnin before Russ Tyson's cross-

11 examination, my understanding was -- is that there --

12 there may be a presentation. I think Morrison Park is

13 putting the final touches on it, is my understanding.

14   MR. SVEN HOMBACH: I believe the

15 question that Ms. Fernandes had was whether there's a

16 presenter scheduled to appear at 12:45.

17   MR. KURT SIMONSEN: I apologize for

18 that. I thought you were talking about their

19 presentation. MIPUG is -- MIPUG is coming in for pres

20 -- presentation, correct.

21   THE CHAIRPERSON: Okay. So that we --

22 not one o'clock, but quarter to 1:00 for the

23 presentation. So have a good lunch, everyone.

24

25 --- Upon recessing at 11:27 a.m.

7197

1 --- Upon resuming at 12:46 p.m.

2

3   THE CHAIRPERSON: Okay. I believe that

4 we're ready to resume today's proceedings, so I -- I

5 look at my watch. We're a couple minutes late, so I'd

6 like to apologize to the guests. We try to run a tight

7 ship, but it isn't always possible, given the number of

8 people involved. So with that, I guess we're ready to

9 start the proceedings, so I'll turn the microphone over

10 to you, Me. Hacault.

11   MR. ANTOINE HACAULT: Merci, M.

12 President. There should have been distributed to those

13 present in the room two (2) updates. As you may

14 recall, through Board Order 67/'13, the PUB asked MIPUG

15 to play a role in consulting with the business

16 community of Manitoba.

17   As part of that consultation process, it

18 met with a customer group, which was basically through

19 Manitoba Hydro. Had meetings in Winnipeg and Brandon,

20 and some of those who attended those meetings, about

21 fifteen (15) to twenty (20) signed up to get these

22 updates, and there's also been consultation with both

23 the Winnipeg and Manitoba Chambers of Commerce who have

24 agreed to be points of distribution.

25   So I believe that we can mark the first

7198

1 update, which is the October 2013 update, as MIPUG

2 Exhibit 23-1.

3

4 --- EXHIBIT NO. MIPUG-23-1: October 2013 Update

5

6   MR. ANTOINE HACAULT: And the second

7 update, which is the April 2014 update, as MIPUG-23-2.

8

9 --- EXHIBIT NO. MIPUG-23-2: April 2014 Update

10

11   MR. ANTOINE HACAULT: Is that

12 acceptable, Mr. Simonsen?

13   MR. KURT SIMONSEN: That is acceptable.

14 Thank you.

15   MR. ANTOINE HACAULT: And I'm pleased

16 to introduce those who will be making presentations to

17 you, members of the panel. First, to your left, on

18 behalf of Manitoba Industrial Power Users Group, a Mr.

19 Bill Turner. To his left, or your right, the next

20 person is Dave Forsyth, of Gerdau Long Steel North

21 American, and he's the reng -- regional energy manager

22 who was flown in today. And seated to him is Gav --

23 Mr. Gavin Tobin, who's the vice-president and general

24 manager of Gerdau's Manitoba Mill, which is sometimes

25 referred to as the Selkirk Mill -- Selkirk Steel Mill.

7199

 1   So with those very brief introductions,

 2 I'd ask these gentlemen if they could please proceed

 3 with their presentations. There'll be one (1)

 4 presentation on behalf of MIPUG, and one (1)

 5 presentation on beh -- behalf of Gerdau.

 6   THE CHAIRPERSON: On behalf of the

 7 members of the panel, I'd like to welcome you to these

 8 proceedings and look forward to hearing from your

 9 comments. I guess, Mr. Turner, will you be starting?

10 Yes? Okay. Thank you.

11

12 PRESENTATION ON BEHALF OF MIPUG:

13   MR. BILL TURNER: Thank you, Mr.

14 Chairman and members of the Board. My name is Bill

15 Turner, and I am the interim chair of Manitoba

16 Industrial Power Users Group, and the -- I'll say

17 almost recently retired plant manager at Canexus in

18 Brandon.

19   With me today, as Mr. Hacault said, are

20 Dave Forsyth and Gavin Tobin of Gerdau Long Steel North

21 America. Dave is the regional man -- energy manager

22 for Gerdau, and Gavin is the vice-president and general

23 manager for Gerdau Manitoba Mill. Each of us has

24 presented to the -- this PUB before, mainly in general

25 rate applications.

7200

 1   I have been the chairman of the Manitoba

 2 Power Users Group since 2000. Since retiring from

 3 Canexus in 2012, the MIPEN -- MIPUG members asked if I

 4 would stay on as the interim Chair of MIPUG through the

 5 current initiatives underway. My responsibilities

 6 include communicating the interests of MIPUG related to

 7 electricity costs.

 8   Thank you for the opportunity to address

 9 the panel. We will be happy to answer questions from

10 the Board after the presentations.

11   MIPUG is an association of major

12 industrial companies operating in Manitoba. Each

13 belongs to the largest GSL 100 kV class or the GSL 30

14 to 100 kV class. MIPUG's current member companies are

15 as follows: HudBay Minerals Inc., Flin Flon; Tolko

16 Industries, The Pas; Canexus Chemicals in Brandon; Koch

17 Fertilizer Canada ULC in Brandon; ERCO World --

18 Worldwide, Virden; Gerdau Long Steel North America

19 Manitoba Mill in Selkirk; Amsted Rail; Griffin Wheel

20 Company in Winnipeg; Enbridge Pipeline, southern

21 Manitoba; TransCanada Keystone Pipeline, also in

22 Southern Manitoba; and Vale in Thompson.

23   MIPUG menger -- members work together on

24 issues of common concern over electricity supply and

25 rates. MIPUG has participated as an Intervenor in each

7201

1 of the Board's reviews of hydro rates since 1988, as

2 well as the Board's review of Hydro's major capital

3 projects in 1990.

4   The association's key concerns related

5 to electricity costs are stability and predictability

6 of rates, ongoing transparent regulation of Manitoba

7 Hydro's rates and major capital spending, and ensuring

8 rates for all customer classes reflect the fair cost to

9 serve the class.

10   In past presentations before the PUB,

11 we've explained that the cost of power is very

12 important to the operations and growth of industry.

13 MIPUG members compete in a global marketplace, and

14 attractive cost-based electricity rates allow

15 industries to remain competitive in Manitoba by

16 offsetting some of the geographic, climate, and other

17 disadvantages faced by industry in this province,

18 including distance to market.

19   The decrease in the cost of power in the

20 USA produced by natural gas is making it more difficult

21 for some major Canadian and Manitoban companies to be

22 as competitive in the export of finished goods. Also,

23 many MIPUG members compete globally, where the cost

24 structures are far more difficult to match.

25   Competition for the MIPUG members is

7202

1 internal to each company as well as external. Most

2 MIPUG members have sister plants in other jurisdictions

3 that compete for capital investment. Businesses make

4 location and capital investment decisions based on cost

5 and predictability.

6   Industry takes a long-term view in

7 making these decisions. It is not just today's rates,

8 but also tomorrow's rates, that are of interest. Once

9 you have invested many millions in a plant and its

10 staff, exposure to electricity pricing changes is high.

11   One (1) of the best examples we've had

12 of why rates matter and why it's not just a matter of

13 being a bit below the next best jurisdiction came from

14 the mining members. They have a very compelling

15 example to emphasize the importance of power cost to

16 their industry.

17   With some theatre, they will drop a

18 piece of Northern Manitoba geology on the table and

19 pose the question: Is this valuable ore or just

20 worthless rock? It turns out that this is a trick

21 question, as the difference between rock and ore is not

22 geological, but economic.

23   There are some valuable minerals in all

24 rock, ore that is material that can be profitably mined

25 to create exportable products, jobs, and industry.

7203

1 This is dependent on international competition, product

2 demand, and the price of the product, but also on the

3 cost to mine and process the material.

4   Electricity costs are a key element of

5 determining what is ore and what is rock. All things

6 being equal, lower prices for power means more ore,

7 more jobs, and more activity.

8   MIPUG companies are significant

9 contributors to the provincial economy. Nine (9) out

10 of ten (10) MIPUG industries are located outside of

11 Winnipeg. In several instances, they are the principle

12 employer in the community.

13   MIPUG completed an economic impact

14 assessment in the spring of 2012. Total spending in --

15 on salaries and benefits in Manitoba for MIPUG

16 industries was $457 million annually, and another 72

17 million for contract labour. That represents

18 approximately forty-three hundred (4,300) direct full-

19 time high-paying jobs, and nearly thirteen hundred

20 (1,300) contract jobs.

21   The average salary at a MIPUG company

22 before benefits is about ninety-one thousand (91,000)

23 per year, which is more than twice the provincial

24 average of forty-two thousand (42,000). Municipal,

25 provincial, and federal governments benefit from MIPUG

7204

1 companies. Combined, MIPUG companies contribute an

2 estimated 261 million to the three (3) levels of

3 government.

4   In addition to direct spending, MIPUG

5 industries bring numerous secondary economic benefits

6 to communities. MIPUG industries spend more than 260

7 million on goods and services in the province each

8 year. In addition, workers earning high industrial

9 wages help support the retail, hospitality, and service

10 sectors in their local communities.

11   That is particularly significant in

12 Northern regions, since areas of Northern Manitoba have

13 an unemployment rate many times as high as Winnipeg's.

14 Industries such as Vale, Tolko, HudBay, and their

15 subcontractors are directly or indirectly responsible

16 for a significant percentage of existing employment

17 opportunities in the North.

18   Total growth expenditures in Manitoba as

19 a result of MIPUG industries is almost -- almost $4.2

20 billion, while MIPUG industries contributed an estimate

21 2.3 billion to the province's GDP.

22   The NF -- the NFAT decisions will affect

23 the long-term competitiveness of Hydro's rates.

24 Industry has been typically supportive of Manitoba's

25 development of hydro resources including when Conawapa

7205

1 and the Ontario transmission line were prosed --

2 proposed in the early 1900 -- 1990s.

3   When it comes to rates both Hydro

4 developments and trans -- transmission connections to

5 other jurisdiction typically fit -- typically fit with

6 industry's needs. This is because industry has to be

7 concerned about the long-term rates and because it is

8 important that power rates are stable. Both of these

9 things are critical to companies that collectively

10 invest billions in plants in Manitoba.

11   Industry also cares about reliability.

12 And hydro provinces with interconnections have

13 typically proven to perform well in this measure. Also

14 important to industry is that sufficient power is

15 available for growth and expansions.

16   When Manitoba Hydro advances the in-

17 service date of its new plants, there's more room to

18 meet unexpected load growth by all industries. For all

19 these reasons Manitoba Hydro has been a good partner

20 for industry, and future hydro developments should be

21 something industry supports.

22   Today's PDP proposal, however, has some

23 notable challenges. First, industry Manitoba has been

24 challenged by steady power rate increases of more than

25 40 percent since 2004, which also includes a requested

7206

1 3.95 percent for April 1st of 2014.

2   Throughout this entire period, Hydro has

3 produced cost-of-service studies that show industry

4 paying up to 10 percent or more above its costs. Yet

5 all rate changes were implemented on an across-the-

6 board basis. Initially, these are rates -- increases

7 were presented as a decade of investment, with a decade

8 of returns occurring promptly thereafter. With each

9 sub -- subsequent financial forecast, these returns

10 become more diluted and out of reach.

11   Second ,to add to this, industries and

12 other jurisdictions are often offered a much wider

13 range of ways to help manage their load and power costs

14 and to participate in al -- in alternative rate

15 setting. There are minimal such offerings in Manitoba.

16 And one (1) of the key offerings that does exist, the

17 Curtailable Rate Program, has been capped by Manitoba

18 Hydro.

19   Industries are very eager participants

20 in DSM in Manitoba. So it is encouraging to see that

21 Hydro is looking to expand the DSM programming and

22 become more creative with such options as invested

23 generations of power from waste products.

24   It remains to be seen if the curtailable

25 program caps will be removed and the prices Hydro will

7207

1 pay for the power generated by industry will be

2 sufficient to actually achieve any successes. It also

3 remains to be seen whether added pursuit of DSM can be

4 achieved without driving up rates for other customers

5 as a new form of cross subsidy.

6   Finally, with the changes in Manitoba

7 and the natural gas price changes affecting competitive

8 jurisdictions, Manitoba's position with respect to

9 power costs has changed. For many MIPUG members,

10 Manitoba has been among the lowest-cost jurisdictions

11 for power in the past. This is not true today.

12   Hydro will still indicate that its rates

13 are among the lowest published. However, with only a

14 limited degree of participation in alternative

15 conservation program offerings in these other places,

16 customers can achieve overall power costs lower than

17 what is available in Manitoba in a number of locations

18 within North America.

19   In regard to the NFAT process, the

20 original numbers, we were provided for comparative rate

21 impacts showed that the PDP may have a .5 percent

22 higher impacts each year, compounding for almost twenty

23 (20) years at 3.9 percent -- 5 percent per year,

24 compared to three point five (3.5) if Hydro just

25 focussed on Keeyask and new transmission.

7208

1   Just comparing these two (2) numbers,

2 industry would end up paying a sum of 400 million more

3 over the next twenty (20) years for the PDP rather than

4 viable alternatives. This is $400 million that will

5 not be available to Manitoba -- Manitoba companies to

6 invest in expansion, employees, community support, and

7 other actions that may help with competitiveness.

8   We were informed new numbers may show

9 the impacts being even larger. At the same time, we

10 were informed the provincial government will

11 significantly increase its recoveries from Hydro with

12 this plan. This, in fact, underlines the NFAT

13 challenge.

14   In principle, MIPUG is among the first

15 to support hydro development in Manitoba. However,

16 Mani -- MIPUG will have to undertake a careful review

17 of the financial evidence in this hearing before it

18 will be able to make a decision as to whether the full

19 PDP is in the best interests of -- of ratepayers.

20   In closing, MIPUG companies involved in

21 -- in the Manitoba economy reflects the benefits of

22 competitive cost-based rates, and a clear and

23 transparent regulation. Without a stable and

24 predictable regulated rate environment, there is a risk

25 that investments will occur elsewhere, taking along

7209

1 hundreds of millions of dollars in capital investment,

2 reinvestment, and upgrades of the associated

3 construction and permanent high-paying jobs.

4   The industrial customers of Manitoba

5 Hydro have been well-served by this utility and the PUB

6 in the past. Hydro is a good company to deal with, and

7 we would not want our comments to be read in any way as

8 criticism of the professionalism and competent staff

9 that we work with at Hydro.

10   I ask the Board to consider the

11 presentations made by MIPUG in light of the competitive

12 challenges faced by industrial power users in Manitoba,

13 and to help us retain our competitive position in

14 Manitoba and in North America when preparing your final

15 report to the Minister.

16   MIPUG's detailed position on the various

17 issues in this proceeding will be communicated by Mr.

18 Har -- Hacault in our final argument. For today, the

19 members wanted to relay to you the customer

20 perspectives on Hydro's Preferred Development Plan and

21 the Needs For and Alternatives To Review.

22   Mr. Dave Forsyth and Gavin Tobin will

23 now provide information on their specific operations in

24 relation to the future energy concerns.

25

7210

1 PRESENTATION BY GERDAU:

2   MR. DAVID FORSYTH: Chair and members

3 of the Board, thank you for allowing us to pres --

4 present the comments of Gerdau to you today. I'm Dave

5 Forsyth, the regional energy manager responsible for

6 the Manitoba mill, and with me is Gavin Tobin. He's

7 the vice president and general manager of the mill.

8   Gerdau is -- Gerdau is very proud to be

9 celebrating a hundred and thirteen (113) years in

10 business as of May 2014, and we now have forty-five

11 thousand (45,000) employees in Canada, the US, and

12 twelve (12) other countries around the globe. The

13 Manitoba mill started production in 1907, some one

14 hundred and seven (107) years ago. You probably know

15 it as Manitoba Rolling Mills.

16   The steel mill in Selkirk is one of the

17 largest manufacturers in the province. Gerdau is also

18 the largest recycler in the province, processing scrap

19 metal collected from throughout the region. We recycle

20 approximately 400,000 tonnes of scrap each year.

21 Recycling along with process innovation has made Steel

22 a leader in reducing energy intensity from the steel-

23 making process, and correspondingly reducing greenhouse

24 gas emissions.

25   We're one of the largest shippers in the

7211

1 region, averaging over one hundred and fifty (150)

2 truckloads and twenty-five (25) railcars per week. In

3 addition to the five hundred (500) jobs at the Gerdau

4 Manitoba Mill, Gerdau has also attracted several large

5 downstream manufacturers to the province, creating

6 valuable manufacturing jobs at Monteferro America in

7 Birds Hill and Steinbach, TC Industries in Selkirk,

8 Black Cat Blades in Selkirk, Bradley Steel Processors

9 in Winnipeg, and ESCO Steel in Steinbach.

10   Including Gerdau Metallics Raw Materials

11 Group, which is our recycling operations, over eight

12 hundred (800) jobs and families are directly involved

13 with the plant. There are also many Winnipeg

14 industries that support Gerdau. They are creating a

15 significant number of collateral jobs.

16   A report by Timothy Considine, an energy

17 economics professor at the University of Wyoming,

18 reveals that every one (1) job in the US steel industry

19 supports seven (7) jobs in the economy, reflecting the

20 industry's ripple effect on employment, and the same

21 goes for Canada.

22   Gerdau takes the social responsibility

23 very seriously in Manitoba. With the help of our

24 employees, we support Selkirk hospice, Safe Workers of

25 Tomorrow, the Food Bank, Red River Toy Drive, and the

7212

1 Manitoba Heart and Stroke Foundation, the Red River

2 Clean-up Operation, and the Selkirk Fire Department, to

3 name a few.

4   Steel is an energy- and capital-

5 intensive business. As with any investment decision,

6 Gerdau's management must consider the long-term costs

7 of doing business. Electricity costs are second only

8 to our scrap steel cost and, as such, are a very

9 important contributor to the competitive cost

10 structure. We are an energy-intensive business.

11   It's important to note that Gerdau's

12 size in North America means more than -- means more

13 than one (1) plant can typically make the products that

14 our customers require. Gerdau's financial model looks

15 at where these products can be produced and delivered

16 at the lowest cost. Energy is one of our key

17 controllable costs and is, therefore, a very important

18 consideration in Gerdau's production and investment

19 decisions.

20   Using electric arc furnace, we melt the

21 scrap. That's where most of the electricity is

22 consumed. We cast it into steel billets, fine tune the

23 temperature in the reheat furnace, and roll it in a

24 rolling mill, producing new steel products for many

25 uses.

7213

1   We are extremely efficient at what we

2 do, and we do it in an environmentally responsible

3 manner. In fact, making steel from scrap metal reduces

4 70 percent of the energy and 60 percent of the

5 emissions when compared to making steel from iron ore.

6   Low cost, stable, and reliable

7 electricity is essential to Gerdau's operations in

8 Manitoba. All energy costs from Manitoba are presently

9 favourable. Our increasing costs, including high

10 transportation and fuel costs, and Manitoba Hydro's

11 plans are items that will consume this current

12 advantage offered by low-cost electricity.

13   Manitoba energy rates have increased

14 substantially since 2004. As Mr. Turner said, the

15 rates are up over 40 percent in that ten (10) year

16 period. Industrial customers in Manitoba have been

17 paying 10 percent more than the cost to serve them.

18 Now we are told rates could be rising anywhere from 51

19 to 114 percent in the next eighteen (18) years, and a

20 major factor in this is a choice of development plan.

21   Ten (10) years ago, Manitoba Hydro

22 probably offered the lowest industrial rates in North

23 America. There is a myth in Manitoba that electricity

24 rates are still the lowest in North America. This is

25 not the case when you consider the all-in costs of

7214

1 delivered electricity, including optional programs that

2 are available in other jurisdictions.

3   Sixteen percent of our plants had lower

4 costs in 2013. And at the proposed pace of increases

5 in Manitoba, this number will be 37 percent by 2016.

6 At all of our nineteen (19) North American steel mills,

7 we participate in demand-response programs if they

8 exist or we work with the utility or grid operator to

9 develop new ones if they don't. This provides us the

10 opportunity to manage and control costs at the plant

11 while providing a service that the utility must pay for

12 anyways.

13   In Ontario, we can avoid the major

14 component of the demand charge by shifting consumption

15 to off-peak times and avoiding critical peaks. We also

16 participate in demand-response programs where we

17 respond to supply question issues when required by the

18 grid operator. The Ontario market rules also allow

19 loads to be dispatchable, and we participate in the

20 operating reserve markets.

21   In New Jersey, we participate in PJM's

22 reliability pricing model, which -- the RPM or the --

23 the capacity market, by curtailing our load during the

24 highest demand periods. And we benefit by reducing our

25 capacity obligation in forward years. We also

7215

 1 participate in PJM's economic demand response in the

 2 synchronized reserve market to lower our costs.

 3   In Texas, we reduce our fixed costs by

 4 avoiding the high demand periods. And we offer demand

 5 response into an emergency program and receive credits

 6 for the service.

 7   In California, we participate in demand

 8 response, receiving credit for being on emergency

 9 standby.   Other jurisdictions have total variable

10 costs which directly pass through cost reductions

11 during low consumption periods. At many of our North

12 American filidy -- facilities we participate in

13 interruptible rate contracts.

14   We have approached Manitoba Hydro many

15 times to subscribe to the appropriate program, but, as

16 Mr. Turner stated earlier, their Curtailable Rate

17 Program is closed to new entrants. Hydro has also --

18 has no other options to help us control the power cost.

19 As a result, there is little we can do to help manage

20 these costs.

21   We and other members of MIPUG have

22 shared demand response program information and

23 proposals from other jurisdictions with Manitoba Hydro

24 in areas where we operate, yet Manitoba Hydro has

25 generated sixteen (16) scenarios in the Needs For And

7216

1 Alternatives To study, and not one (1) of them

2 considers additional demand response participation by

3 Manitoba industrial customers.

4   Energy efficiency is one of the few

5 tools -- or DSM, one of the few tools at hand to help

6 Gerdau's Manitoba facility improve its competitiveness,

7 and we have invested heavily, improving our costs and

8 benefiting the environment. We have received heavy

9 support from Manitoba Hydro on this front.

10   It's alarming that this hearing is being

11 held at a point in the game where Manitoba Hydro has

12 already spent $1 billion into the Keeyask program,

13 making it a competitive project with the gas scenario.

14 This amount, it appears, has to be paid for by

15 ratepayers whether the project is built or not. As a

16 result, there is no level playing field with lower cost

17 options like a gas scenario.

18   We're always concerned when utilities,

19 such as Manitoba Hydro, propose to take on big risk on

20 behalf of the ratepayers with projects that require a

21 long lead time to satisfy load or contracts that are

22 predicted to show up decades away. If this turns out

23 to be overbuilding or the major assumptions turn out to

24 be wrong, it could result in cost skyrocketing for

25 existing customers. These costs would be in addition

7217

1 to the possible 51 to 114 percent increase.

2   We understand that this plan will result

3 in a current 10 billion rate base for 5,000 megawatts

4 to be nearly doubled for an additional 630 megawatts.

5 Adding Conawap -- Conawapa as well will triple the

6 rate base.

7   In summation, the outcome of these

8 hearings much achieve firm, low-cost, stable power

9 rates that are necessary to maintain investment and

10 jobs in the province. Rate stability and certainty are

11 key inputs Gerdau considers when making long-term

12 investments decisions. This cannot be achieved unless

13 additional programs to help industrial customers manage

14 their costs are developed. Thank you.

15   THE CHAIRPERSON: Thank you, Mr.

16 Forsyth. Mr. Tobin, would you like to say a few

17 comments? Okay.

18   MR. RICHARD BEL: Hi. On -- on the

19 introduction, on one of the bullets, you talked about

20 incentives for self-generation. So my question is:

21   Are there viable self-generation

22 technologies available that some of your companies use,

23 and what kind of incentives are you talking about?

24   MR. BILL TURNER: Sorry. Yes, there

25 are options out there within some of the companies

 1 within the MIPUG group. Two (2) examples I could give

 2 you is waste hydrogen at the Canexus plant in Brandon,

 3 which I was a part of for many years, and with the pulp

 4 mill, that they could generate power from -- from the

 5 chips and bark that would be left over from -- from the

 6 manufacturing process.

 7   MR. RICHARD BEL: So the incent -- the

 8 incentives you're talking about would be to connect

 9 back to the grid and sell power when you're not using

10 it or if there's excess?

11   MR. BILL TURNER: There -- there's

12 several options of doing it, I guess. And -- and if --

13 if there was power to be produced within a facility,

14 that could be sold back to Manitoba Hydro. In some

15 other jurisdictions -- Canexus has plants in other

16 provinces as well . In some of those jurisdictions,

17 the hydro actually foot the bill to install some of the

18 -- the generation processes, using the waste in the

19 plant as a good green effort within that province

20 itself.

21   MR. RICHARD BEL: Okay. Next question.

22 I'm curious, so the curtail -- the curtailable rates

23 program seems to be widely used in other jurisdictions.

24   So why do you think it's not being so

25 widely used, or being curtailed?

 1   MR. BILL TURNER: I think that's a

 2 question for Manitoba Hydro, more so than myself.

 3 Canexus does use it, but there is a limitation on other

 4 companies now coming into that plan.

 5   MR. DAVID FORSYTH: There -- there's a

 6 cap on new subscribers.

 7   MR. RICHARD BEL: Okay. Thank you.

 8   DR. HUGH GRANT: I remember no

 9 distinction in energy consumption between power and

10 heat. And it -- would it be correct that your firm is

11 fairly unique in terms of being a large electricity

12 consumer for heat purposes, as opposed to power?

13   Is that correct?

14   MR. DAVID FORSYTH: No, we -- we use

15 the electricity to melt the steel. It's -- it's a --

16 it's like a big arc furnace.

17   DR. HUGH GRANT: But my impression was

18 that electricity's most typically used as a form of

19 motion, motive power.

20   MR. DAVID FORSYTH: No.

21   DR. HUGH GRANT: No.

22   MR. DAVID FORSYTH: No.

23   DR. HUGH GRANT: So in this case...

24 Okay.

25   MR. DAVID FORSYTH: We -- we...

7220

 1   MR. GAVIN TOBIN: We use the

 2 electricity to transform the scrap into molten steel.

 3   DR. HUGH GRANT: Right. So my question

 4 is: Is that a fairly unique -- amongst manufacturing

 5 firms, does that make you somewhat unique?

 6   MR. GAVIN TOBIN: We're certainly not

 7 unique in the steel industry. Compared to other

 8 industries, perhaps.

 9   DR. HUGH GRANT: Could -- could I pose

10 it this way? I would have thought that with most

11 manufacturing companies, their electricity bill is a

12 fairly small portion of their overall costs.

13   But I take it, in your industry, that's

14 not the case?

15   MR. GAVIN TOBIN: That is not the case.

16   DR. HUGH GRANT: So you're a large

17 electricity consumer?

18   MR. GAVIN TOBIN: Correct. In our

19 industry, electricity cost is our second-highest cost.

20   DR. HUGH GRANT: So, could -- I'll put

21 it to you this way then: If you were shopping around,

22 trying to locate a new -- a new plant, would there be

23 lots of competitive areas at this stage? Considering

24 not just -- let's say just considering electricity

25 costs alone and leaving aside transportation issues and

7221

1 such.

2   But if you're just shopping around to

3 locate a plant, concerned only about electricity costs,

4 would there be a lot of competing places in North

5 America?

6   MR. DAVID FORSYTH: Yes. Yeah, there

7 would be. The -- the Midwest in the United States;

8 Texas has very low electricity rates.

9   DR. HUGH GRANT: Okay. Thanks.

10

11   (BRIEF PAUSE)

12

13   THE CHAIRPERSON: Thank you. That's

14 all the questions that the panel has for you two (2).

15 I want to press -- express my appreciation for taking

16 the time and trouble to come to speak to us. I know

17 you're busy people, so thank you very much. I -- I

18 know you have businesses to run, so I appreciate you

19 being here. You're very well-represented by Me.

20 Hacault on a regular basis, so it's good to see that he

21 has some -- some clients that he has to -- to serve, so

22 glad to -- to see you come.

23   So with that, I think that we'll --

24 we'll stand down for a few minutes so that we can

25 reposition the room for some new witnesses, so let's

7222

1   stand down for a couple minutes. Thank you very much.

2

3   --- Upon recessing at 1:15 p.m.

4   --- Upon resuming at 1:25 p.m.

5

6   THE CHAIRPERSON: I believe that

7   everybody's in position so we can start the proceedings

8   this afternoon. Before we start, I turn the -- over

9   the microphone to Me. Monnin. I just wanted to make

10 sure that we take notice of a -- a publication that was

11 distributed during the lunch hour, and I just noticed

12 that there's an individual on the cover that is -- is

13 quite familiar to us, Mr. Byron Williams.

14   So congratulations, Mr. Williams. And I

15 also noted that the header on this is, "The Provision

16 of Free Legal Advice." So we'll keep that in mind when

17 we receive your -- your budget request, or your...

18   MR. BYRON WILLIAMS: Thank you, Mr.

19 Chair. Please don't share it with my client.

20   THE CHAIRPERSON: So congratulations

21 for that. So with that, unless there is some matters

22 to attend to, I -- I'm looking to -- to Mr. Peters and

23 Ms. Boyd, unless there are matters to attend to, we'll

24 -- it doesn't appear that there are any matters to

25 attend to, so we'll turn the microphone over to you,

7223

1 Me. Monnin.

2   MR. BYRON WILLIAMS: If -- if we might

3 just have just a second, and it has nothing to do with

4 Morrison.

5

6   (BRIEF PAUSE)

7

8   MR. BYRON WILLIAMS: I just, Mr. Chair,

9 we -- we've -- at CAC (Manitoba), we've had the -- and

10 to the panel, the opportunity to look over the

11 financial analysis provided late on -- on Friday over

12 the -- the last couple of days, and -- and just on

13 behalf of our client, we've talked from the start of

14 this hearing about a funnel in which options are

15 excluded.

16   And from our client's perspective,

17 they're quite disappointed in the financial analysis

18 provided, which, to our understanding, is limited to

19 three (3) plans, being Plan 14, 5, and -- and Plan 1.

20 So our client is expressing that concern at this point

21 in time. They are certainly anxious to see a more

22 robust analysis that takes into account some of the

23 other real contenders that are out there, and we hope

24 to have that discussion either on the record or off the

25 record in the -- the next couple of days.

7224

1   MR. ANTOINE HACAULT: And sorry to also

2 interject, Mr. Chairman. On behalf of MIPUG, I also

3 expressed the same concerns, and without preempting the

4 presentation, at slide 12, which you will see, it

5 appears that this panel is in the same situation as

6 other panels like La Capra, et cetera. A lot of the

7 report's based on the August filing, and we all know

8 that over the last several weeks, we've got a lot of

9 very significant and -- and in our respectful view, an

10 important information.

11   And it poses a particular challenge in

12 cross-examinations, because we don't think we're able

13 to test the most recent information and get the views

14 on the most recent information, and we think as a

15 result of that, the quality of information which the

16 Board might have may suffer, and it'll be up to the

17 Board to make that decision as to whether it is in a

18 position where the quality of information is not as

19 good as a result of these challenges.

20   And it's not meant to -- to be critical

21 of Manitoba Hydro. I know the staff has been working

22 tirelessly to try and get all the information out. But

23 we also express some concern about the quality of

24 information and the ability to properly test that

25 information with the panels that come up.

7225

1   So thank you very much.

2   THE CHAIRPERSON: Well, it's rather

3 obvious that we share your concerns both with respect

4 to the quality of information and in our -- and the

5 parties' ability, including our own ability to -- to

6 test that information. But we all recognize that the

7 calendar is getting ever shorter in terms of the

8 deadline that we are -- have been imposed by

9 government. And so it will require that we make some

10 choices about which additional information -- what

11 additional information will we request from -- from

12 Manitoba Hydro.

13   And you'll be pleased to know that the

14 panel has spent whatever free time is available this

15 morning trying to -- and at lunch time trying to make

16 some decisions around that very matter. And we expect

17 that we will be doing that after this session is over

18 today and so on.

19   So we're well aware of the -- of the

20 difficulties that are being faced by all the parties,

21 including -- including MIPUG and CAC. So you can rest

22 assured that we're going to -- to be making some quick

23 decisions around that and -- and entering into

24 discussions with Manitoba Hydro as to what additional

25 information it is possible to get and -- and what time

7226

 1 frame that can be made available to all the parties.

 2 So that is top of the agenda as far as the -- the Board

 3 is concerned. So with that, I will turn the microphone

 4 over to -- just as second, please.

 5   Ms. Saunders, do you have anything you

 6 want -- would like to say?

 7   MS. JESSICA SAUNDERS: No, thank you.

 8 We've been watching the -- the dialogue, I think,

 9 between CAC and MIPUG and Manitoba Hydro and the PUB

10 with interest. And I think that any concerns we have

11 are being effectively dealt with by other parties.

12 Thank you.

13   THE CHAIRPERSON: Mr. Orle, did you

14 wish to comment at all?

15   MR. GEORGE ORLE: No, I'll -- I'll

16 follow along the same lines. I believe that our

17 interests are similar to the concerns being raised by

18 previous counsel, and we'll -- we'll deal with them on

19 -- on the same basis.

20   THE CHAIRPERSON: Ms. Boyd, did you

21 want to share your views, or Mr. Wojczynski, about this

22 issue?

23   MS. MARLA BOYD: I suppose I'd start by

24 saying that I'm a little disappointed to hear those

25 views, given the efforts that have been put in by

7227

1 Manitoba Hydro staff. We'll await with interest

2 whatever discussion the Board intends to engage us in,

3 and we'll -- we'll deal with it as we can.

4   THE CHAIRPERSON: With that, Me.

5 Monnin, s'il vous plait.

6   MR. CHRISTIAN MONNIN: Merci, M.

7 President. I'm pleased to present today Morrison Park

8 Advisors, Mr. Pelino Colaiacovo, who is to my immediate

9 left, and Mr. Benjamin Kinder, who is to the left of

10 Mr. Colaiacovo. First, dealing with administrative

11 matters, I believe Mr. Colaiacovo and Mr. Kinder ought

12 to be sworn in.

13   And I will then introduce some documents

14 into exhibits and then proceed with the qualification

15 questions for Mr. Colaiacovo and Mr. -- Mr. Kinder.

16

17 IEC MORRISON PARK ADVISORS PANEL:

18   PELINO COLAIACOVO, Affirmed (Qual.)

19   BENJAMIN KINDER, Affirmed (Qual.)

20

21   MR. CHRISTIAN MONNIN: Merci, M.

22 President. Mr. Secretary, with respect to the filing

23 of exhibits as discussed prior, the slide deck -- the

24 hard copy of the slide deck, which Mr. Colaiacovo will

25 be presenting today will be Exhibit MPA number 4.

7228

1   --- EXHIBIT NO. MPA-4:   Slide deck

2

3   MR. CHRISTIAN MONNIN: The next will be

4   the scope of work for Morrison Park Advisors dated

5   September 20th, 2013. That'll be MPA number 5.

6

7   --- EXHIBIT NO. MPA-5:   Scope of work for Morrison

8   Park Advisors dated

9   September 20th, 2013

10

11   MR. CHRISTIAN MONNIN: And the

12 supplementary information on MPA qualifications will be

13 MPA number 6.

14

15 --- EXHIBIT NO. MPA-6:   Supplementary information

16   on Morrison Park Advisors

17   qualifications

18

19   MR. KURT SIMONSEN: So noted, Mr.

20 Monnin. Thank you.

21   MR. CHRISTIAN MONNIN: Thank you, Mr.

22 Secretary. M. President, what I propose to do is to,

23 in the normal course of action, ask the qualification

24 questions of Mr. Peli -- Colaiacovo first, and then Mr.

25 Kinder, and then proceed to have the panel qualify them

7229

 1 as experts.

 2

 3 QUALIFICATION OF WITNESSES:

 4   MR. CHRISTIAN MONNIN: Beginning with

 5 Mr. Colaiacovo. You are here on behalf of Morrison

 6 Park Advisors, which has been retained by the Manitoba

 7 Public Utilities Board in order to assist the PUB to

 8 conduct a Needs For and Alternatives To Review of

 9 Manitoba Hydro's proposed Preferred Development Plan.

10   Is that correct?

11   MR. PELINO COLAIACOVO: Yes, it is.

12   MR. CHRISTIAN MONNIN: MPA has prepared

13 a report which has been filed in accordance with the

14 terms of reference and MPA's scope of work dated

15 September 20th, 2013, to critically review certain

16 aspects of Manitoba Hydro's Preferred Development Plan

17 and filings.

18   Is that correct?

19   MR. PELINO COLAIACOVO: Yes, it is.

20   MR. CHRISTIAN MONNIN: Was this report

21 prepared by you or under your supervision and control?

22   MR. PELINO COLAIACOVO: Yes, it was.

23   MR. CHRISTIAN MONNIN: Can you please

24 describe for the Board the primary areas of focus in

25 Morrison Park Advisors' work for the PUB?

7230

 1   MR. PELINO COLAIACOVO: Our scope of

 2 work included commercial evaluation of the Preferred

 3 Development Plan, in particular, with relevance to

 4 alternatives to the Preferred Development Plan, looking

 5 at it from the perspective of critical stakeholders.

 6   In addition, we were looking at costs,

 7 risks, and benefits that would be applicable to each of

 8 those stakeholders from the Preferred Development Plan

 9 and its possible alternatives. We also were looking

10 specifically at some of the export contracts and their

11 relevance to ratepayers, in particular, the risks that

12 were being undertaken through those contracts.

13   Finally, a -- a specific part of our

14 scope of work addressed the issue of potential impacts

15 on government with respect to its access to capital

16 markets, the credit rating of the province, and

17 potential costs to the province's credit that may occur

18 in the future with a Preferred Development Plan.

19   MR. CHRISTIAN MONNIN: Thank you. Your

20 curriculum vitae has been filed with the PUB as part of

21 Exhibit Hill Co. number 8 at Tab -- Tab 7a. In

22 addition, at MPA number 6, the supplementary

23 information and MPA qualifications has been provided.

24   Can you please describe your

25 qualifications and experience generally and

7231

1 specifically as they relate to the work undertaken by

2 MPA for the PUB?

3   MR. PELINO COLAIACOVO: MPA, Morrison

4 Park Advisors Inc., to use our full legal name, is a

5 independent investment bank based in Toronto. We are a

6 partner-owned company, providing exclusively financial

7 advisory services to companies, governments, and not-

8 for-profit entities.

9   Typically, we deal with mergers and

10 acquisitions. We deal with capital raising

11 assignments. We do restructurings, and we provide

12 financial evaluations and strategic advice. Our

13 clients typically are boards of directors, special

14 committees of boards of directors, private company

15 shareholders, and, from time to time, governments,

16 provincial and municipal, and, from time to time,

17 regulatory or other public bodies.

18   We focus on a few different areas, from

19 a client or industry perspective, but one (1) of our

20 major areas of focus is electricity and natural gas

21 utilities, as well as electricity generation companies

22 of various types, and I would say that over the last

23 eight (8) to nine (9) years, that sector broadly, so

24 called, is about 40 percent of our total business. We

25 also operate in a few other sectors, such as mining and

 1 technology.

 2   Personally, my background. I've been

 3 with the company for over eight (8) years. Prior to

 4 that, I was chief of staff to the Ontario Minister of

 5 Energy in the -- in the Ontario government, and prior

 6 to that, I was a consultant with an international

 7 consulting firm, spending time in Toronto; Ottawa; and

 8 Washington, DC.

 9   I have worked on a number of advisory

10 assignments over the past eight (8) years that I think

11 are directly relevant to the scope of work that we have

12 with the Manitoba PUB, including providing advice --

13 independent advice to the Nova Scotia Utilities Review

14 Board, and assignment for the Market Service

15 Administrator of Alberta and assignments for two (2)

16 other provincial entities that were dealing with major

17 electricity industry decisions.

18   In addition, I have personal and direct

19 experience working on numerous valuations of

20 electricity and utility companies over the past eight

21 (8) years, and those assignments being for boards of

22 directors typically or special committees, where I've

23 looked at a broad range of electricity generation

24 assets, including hydroelectric, wind, solar, all forms

25 of fossil fired biomass; and in addition utilities

 1 companies on the wires side, be that transmission or

 2 distribution, in addition to natural gas pipeline and

 3 distribution companies.

 4   Our firm -- the depth of experience in

 5 our firm with respect to this area goes beyond just me.

 6 There are several other members of our firm who have

 7 deep experience in energy utilities and infrastructure,

 8 including one (1) colleague, Brent Walker, who was

 9 directly involved in this assignment but who is not

10 here today. He has twenty-five (25) years of

11 experience in the investment banking industry, and his

12 CV in the supplementary materials lists a number of the

13 assignments that he's worked on over the years.

14   And there are two (2) other individuals

15 at our firm, David Santangeli and Ken Skinner, who also

16 have a deep background in the energy and utilities

17 industry.

18   MR. CHRISTIAN MONNIN: Thank you very

19 much. Now proceeding with Mr. Kinder. You are here on

20 behalf of Morrison Park Advisors, which has been

21 retained by the PUB in order to assist it with -- to

22 conduct a Needs For and Alternatives To review of

23 Manitoba Hydro's proposed Preferred Development Plan.

24   Is that correct?

25   MR. BENJAMIN KINDER: That's correct.

7234

 1   MR. CHRISTIAN MONNIN: And Morrison

 2 Park has prepared a report, which has been filed in

 3 accordance with the terms of reference, and Morrison

 4 Park's scope of work dated September 20th, 2013, to

 5 critically review certain aspects of Manitoba Hydro's

 6 Preferred Development Plan and its filings.

 7   Is that correct?

 8   MR. BENJAMIN KINDER: That's also

 9 correct, yes.

10   MR. CHRISTIAN MONNIN: Was this report

11 prepared by you or under your supervision and control?

12   MR. BENJAMIN KINDER: Report was

13 prepared by my colleague, Pelino Colaiacovo, with my

14 direct input, editing, and review.

15   MR. CHRISTIAN MONNIN: Thank you. And

16 you heard your colleague provide a description for the

17 Board, the primary areas of focus of MP's work for the

18 PUB.

19   Do you care to add to that?

20   MR. BENJAMIN KINDER: I don't. I

21 second that.

22   MR. CHRISTIAN MONNIN: Mr. Kinder, your

23 curriculum vitae has been filed with the PUB as part of

24 Exhibit Hill Co. number 8, Tab 7b. In addition, a

25 supplementary qualification sheet is found at MPA

7235

1 number 6.   Can you please describe your

2 qualifications and experience, generally and

3 specifically, as they relate to the work undertaken by

4 MPA for the PUB?

5   MR. BENJAMIN KINDER: I currently work

6 for Morrison Park Advisors. I've been there for

7 over...

8

9   (BRIEF PAUSE)

10

11   MR. BENJAMIN KINDER: I currently work

12 for MPA, Morrison Park Advisors. I've been there for

13 five and a half (5 1/2) years. My current position is

14 as vice president. I started my career at Scotia

15 Capital, where I was an analyst in investment banking

16 and equity capital markets for two (2) years. I joined

17 Morrison Park Advisors as an associate, and I'm

18 currently employed as a partner and vice president.

19   In my capacity as analyst associate and

20 vice president, I'm responsible for mergers and

21 acquisition investment banking financial models.

22 That's corporate valuations, acquisitions, mergers,

23 divestitures, and financings. So that's a total of

24 seven and a half (7 1/2) years of corporate finance

25 experience.

 1   MR. CHRISTIAN MONNIN: Thank you.

 2 You've also heard Mr. Colaiacovo provided a general

 3 description of the type of clientele that MPA -- MPA

 4 works for.

 5   Do you care to add to that?

 6   MR. BENJAMIN KINDER: I don't. I

 7 second that.

 8   MR. CHRISTIAN MONNIN: Thank you very

 9 much, Mr. Kinder. Mr. Chair, I would ask that Mr.

10 Colaiacovo and Mr. Kinder be accepted by the panel as

11 experts for the purposes of giving evidence on the work

12 performed by MPA in accord -- according to the scope of

13 work under the NFAT.

14   THE CHAIRPERSON: Merci, Me. Monnin.

15 I'd like to canvass the Intervenors and Manitoba Hydro.

16 So I'll start with Mr. Williams, please.

17   MR. BYRON WILLIAMS: Thank you. And

18 I'll indicate first of all that our clients will

19 certainly be supportive of the qualification of these

20 witnesses, but I want to just see if we can be a little

21 more precise in terms of the -- the expertise that --

22 that Morrison Park brings in. So, Mr. Colaiacovo, and

23 hopefully I've pronounced that all right, I'm going to

24 take a shot at it and then you can correct me where I

25 err, okay?

7237

1   As I listen to the enumeration of

2   expertise from your firm, I identify expertise in

3   corporate finance, financial advisory services, and

4   investment banking.

5   And would I be correct that you, in --

6   in this context, apply it in -- towards commercial and

7   financial evaluation of capital investments, including

8   the costs, the risks, the benefits, and the

9   implications for access to the capital market?

10   MR. PELINO COLAIACOVO: That's correct.

11 Investment banking is one of the classic misnomers. We

12 don't actually bank. We don't take any money in or --

13 or distribute money. Investment bankers provide

14 analysis and advice for clients.

15   MR. BYRON WILLIAMS: And the point

16 you've made in terms of your work, especially over the

17 last seven (7) or eight (8) years, is that you have

18 applied this expertise in some considerable detail to

19 the energy industry, including electricity, natural --

20 and natural gas.

21   Would that be fair?

22   MR. PELINO COLAIACOVO: That's correct.

23 A number of -- well, a large number of the assignments

24 that I've worked on and our firm has worked on over the

25 past eight (8) years have dealt with the utilities

7238

1 industry and electric power and natural gas, to a

2 lesser extent also water, which I didn't mention, but

3 it's not relevant.

4   There are a variety of different forms

5 of organization of the utility industry. But

6 fundamentally, from a ferna -- financial perspective,

7 they all deal with cashflows in similar ways. And so

8 we bring that experience to the analysis today.

9   MR. BYRON WILLIAMS: And you've also

10 done it both in terms of regulated and less regulated

11 environments?

12   MR. PELINO COLAIACOVO: That's correct.

13 The assignments that we've worked on are the full gamut

14 of what's available in Canada, in terms of not-for-

15 profit regulated and for-profit merchant assets.

16   MR. BYRON WILLIAMS: So did I miss

17 anything in trying to summarize your expertise, sir?

18   MR. PELINO COLAIACOVO: Some of our

19 assignments have also included what can best be

20 described as market analysis and market surveys,

21 understanding the interaction between the capital

22 markets and the energy industry to understand the

23 opportunities for development, whether certain types of

24 asset development are likely to be profitable or not

25 for the owners of those assets.

7239

 1   That goes beyond somewhat the

 2 traditional investment banking, but our expertise has

 3 been used in -- in that manner in the past, as well.

 4   MR. BYRON WILLIAMS: Mr. Chair, I could

 5 make some submissions, but -- but certainly, we accept

 6 the qualifications of -- of these experts.

 7   THE CHAIRPERSON: Thank you, Mr.

 8 Williams. Me. Hacault, s'il vous plait.

 9   MR. ANTOINE HACAULT: Yes. To start

10 off, we have no objections to the qualifications, but I

11 do have one (1) question or two (2).

12   In your capacity as investment bankers,

13 do you have occasion to deal with bond rating agencies

14 directly?

15   MR. PELINO COLAIACOVO: We have in the

16 past. One of the kinds of transactions that we do are

17 we work on capital raising transactions. And so we

18 have worked with clients in the past who had to get

19 credit rating agencies prior to the issuance of new --

20 credit ratings prior to the issuance of bonds. And we

21 work directly with credit rating agencies to assist our

22 clients in achieving their credit rating, as well as

23 managing their credit ratings over time.

24   MR. ANTOINE HACAULT: My question is

25 going to be a little bit more focussed now.

7240

1   Have you had any experience as a firm in

2   dealing with credit rage -- rating agencies as it

3   relates to hydroelectric utilities generally or

4   electric utilities?

5   MR. PELINO COLAIACOVO: We have. A

6   number of the assignments that we've been involved with

7   have included companies that have public bond issues

8   that are rated. And we have had to both understand and

9   evaluate and advise our clients with respect to the

10 potential impact on their credit ratings if they were

11 to undertake the transaction that was proposed.

12   And so, as a result, we've had to have

13 dealings in the past with credit rating agencies for --

14 and -- and the particular people in credit rating

15 agencies who track the electric power market in Canada,

16 as well -- not incidentally, as well as the public

17 markets in general, the government markets for bond and

18 -- or for bonds.

19   MR. ANTOINE HACAULT: Thank you. One

20 of the specific items listed in the scope of work --

21 that's at, for the record, under page 14, Item 1.2H --

22 is consideration of, and I'm skipping to nearly the end

23 of the sentence:

24   "Potential impact on other budgetary

25   priorities."

7241

1   And that's in addition to the province's

2   credit rating and borrowing capacity. My question is:

3   Has Morrison Park had any experience in the area

4   identified by me as, and I'm quoting:

5   "Potential impact on other budgetary

6   priorities."

7   MR. PELINO COLAIACOVO: We understood

8   that aspect of our scope of work to be related to an

9   analysis of the magnitude of the potential impact on

10   the Government of Manitoba of a negative event in the

11   future related to Manitoba Hydro and whether that

12   magnitude would be large enough to affect the financial

13   health and the ability of the Government of Manitoba to

14   proceed in its normal business.

15   We did not understand that aspect of our

16   scope of work to be related to detailed questions of

17   what government priorities actually are on any given

18   day. That would be outside of our scope.

19   MR. ANTOINE HACAULT: Now that you've

20   explained your view of what that sco -- scope item was,

21   my question to you, reverting back to the question

22   itself, was: Could you comment on the experience of

23   Morrison Park Advisors in the area that you've just

24   described with respect to that particular scope item?

25   MR. PELINO COLAIACOVO: We have done

7242

1 assignments in the past for ministries of finance of

2 provinces relating to the potential impact on them of

3 events -- financial events and the question of whether

4 events are sizable enough to register on the capital

5 market's perception of a government. And -- and its

6 financial position is something that we have had

7 experience with on several occasions for several

8 different clients.

9   Unfortunately, I can't give you names,

10 because typically those are confidential assignments

11 that we've done. But we've done it both at a municipal

12 and a provincial level.

13   MR. ANTOINE HACAULT: Thank you. Those

14 are all my questions. Thank you for providing that

15 additional insight on the additional experience that

16 Morrison Park has to enable it to do scope of item

17 work.

18   THE CHAIRPERSON: Merci, Me. Hacault.

19   Mr. Orle, please?

20   MR. GEORGE ORLE: Thank you, Mr. Chair,

21 and good afternoon, gentlemen. Just a couple of quick

22 questions.   One, have either of you been qualified

23 as expert witnesses in any other, either court

24 proceeding or administrative proceeding?

25   MR. PELINO COLAIACOVO: I appeared

7243

1 before the Nova Scotia Utilities Regulation Board just

2 a mon -- a few months ago, actually.

3   MR. GEORGE ORLE: Okay. And -- and

4 secondly, part of your scope of work is dea -- dealing

5 with the -- considering the potential impact of the PDP

6 on the government and taxpayers of Manitoba with a

7 subheading of burden on taxpayers.

8   Where in your qualifications or the

9 previous advice that you've given allows you to give

10 expert testimony on -- on burden on taxpayers?

11   MR. PELINO COLAIACOVO: The -- again,

12 as we understood our scope of work, the issue at hand

13 was whether an event in the future could have an impact

14 not only on Manitoba Hydro, but also on the credit

15 rating and access to capital markets of the Government

16 of Manitoba.

17   And the -- it's in that context that we

18 see our experience in understanding credit ratings and

19 understanding how credit ratings are established, how

20 capital markets perceive governments as well as

21 companies, and the kinds of impact that a change in

22 perception of a bond issuer can change that bond

23 issuer's access to markets, and therefore cost of -- of

24 debt.

25   MR. GEORGE ORLE: Okay. So

7244

1 essentially, we're talking about the taxpayer being the

2 final pocket, and that's where you take a look at what

3 the effects are.

4   MR. PEPINO COLAIACOVO: That's correct.

5   MR. GEORGE ORLE: Okay. Mr. Chair,

6 we're prepared to accept the qualifications of the

7 witnesses as experts, and in particular, because as I

8 noticed from slide number 3, anybody who would start

9 off a heading with, "Other Stuff in the Future," is

10 talking language that I can understand. Thank you.

11   THE CHAIRPERSON: Thank you, Mr. Orle.

12   Ms. Saunders, please?

13   MS. JESSICA SAUNDERS: Yes, thank you.

14 The Manitoba Metis Federation has no objections to the

15 qualifications as presented. Thank you.

16   THE CHAIRPERSON: Thank you, Ms.

17 Saunders. Ms. Boyd, please?

18   MS. MARLA BOYD: Thank you. Manitoba

19 Hydro has no objection to the qualifications of these

20 witnesses as they've been presented.

21   THE CHAIRPERSON: Thank you, Ms. Boyd.

22   With the -- with that, the panel agrees

23 that we will accept both Mr. Colaiacovo and Mr. Kinder

24 as expert witnesses for the purposes of these

25 proceedings. So on behalf of the panel, I'd like to

7245

 1 welcome both of you to Winnipeg, and I appreciate your

 2 coming -- coming to Winnipeg, leaving home to attend

 3 these proceedings. So thank you very much for that.

 4   MR. PELINO COLAIACOVO: Thank you very

 5 much, Mr. Chair.

 6

 7   (BRIEF PAUSE)

 8

 9   MR. PELINO COLAIACOVO: Mr. Chair and

10 members of the panel, as I -- as I've stated already,

11 I'm Pelino Colaiacovo from the firm of MPA, Morrison

12 Park Advisors Inc., and we are here to provide our

13 testimony on the NFAT.

14

15   (BRIEF PAUSE)

16

17   MR. PELINO COLAIACOVO: My proposal for

18 this presentation is to run through the main points of

19 our analysis that we provided in our report, address

20 the issue briefly of new data that has come out since

21 we provided our report, and -- and thirdly, address

22 some of the more detailed or methodological issues that

23 have arisen over the course of the last seven (7)

24 months of this process, where we may be competent to

25 provide some additional advice.

7246

 1   As has already been discussed through

 2 the discussion of our qualifications, our scope of work

 3 addresses a commercial evaluation, and the commercial

 4 reasonableness of Manitoba Hydro's Preferred

 5 Development Plan. In addition, we were considering the

 6 potential impact of the Preferred Development Plan on

 7 the government and taxpayers in Manitoba.

 8   The primary question that -- and I'm

 9 moving to slide 3. The primary question that -- that

10 we asked at the outset of the process was, What really

11 is the Preferred Development Plan? Because in order to

12 understand it and provide advice on it from a

13 commercial perspective, it's critical to tease through

14 the massive volume of data that's been available

15 throughout this process to kind of get to the nub of

16 what it is that we're talking about.

17   So the understanding that we've come to

18 is the Preferred Development Plan really consists of

19 two (2) parts, and a subsidiary third part. The first

20 part is an immediate package of actual deliverables

21 consisting of the construction of the Keeyask

22 hydroelectric facility, an associated 750 megawatt

23 intertie with Minnesota crossing the border into the

24 United States, and a set of export contracts, which

25 are, if not fully negotiated, substantially negotiated,

7247

1 and a growing list of export contracts now that the

2 project appears closer to reality.

3   Our understanding is that the Keeyask

4 facility has been fully developed from the perspective

5 of permits and approvals, or nearly fully developed.

6 The 750 megawatt intertie is a real project that has

7 been negotiated with a commercial party on the other

8 side of the border. Recently, there was an

9 announcement on Keeyask that a significant contract for

10 construction has been let, on the order of another

11 billion and a half dollars.

12   In addition, it was reported before this

13 panel a few weeks ago as part of Manitoba Hydro Exhibit

14 109 that expenditures to date, including interest on

15 Keeyask, were $850 million as of December 31st. By the

16 time we get to the end of June, it's been stated again

17 before this panel that costs for -- for Keeyask and

18 other associated elements of the plan will reach well

19 over a billion dollars.

20   This is, for lack of a better term, a

21 ready-to-go set of projects and forms a very discreet

22 part of the Preferred Development Plan.

23   The second piece of the Preferred

24 Development Plan is a proposal to build the Conawapa

25 generating station. This is a very different in --

 1 very different in nature part of the Preferred

 2 Development Plan. It is much later in time. It is far

 3 less determinate. And we've seen before this panel, in

 4 fact, in the last few weeks, that the suggested timing

 5 or target date for Conawapa has shifted.

 6   There are not export contracts that are

 7 being signed to take up all of the available energy

 8 from that project. That remains a question for the

 9 future. Only -- relatively speaking, only $290 million

10 will have been -- have been spent as of December 31st.

11 Substantial ongoing expenditures would be required on a

12 variety of fronts, in terms of environmental permits

13 and other permits and approvals and construction

14 arrangements and export arrangements and so on. All of

15 those things would still be required to make that

16 project into a real project. And it's been explicitly

17 stated by Manitoba Hydro that there is a future

18 decision point. There is another opportunity for a

19 decision around Conawapa.

20   All of this amounts to a qualitative

21 difference between Conawapa and the package of Keeyask

22 and -- and intertie and export contracts that is part

23 of the Preferred Development Plan.

24   And then there is a third part. And the

25 third part is an almost placeholder that, at some point

7249

1 in the distant future, in addition to Keeyask and

2 Conawapa, gas plants or some other kind of plant would

3 have to be built. And it's -- it's apparent from

4 reviewing the details of the Preferred Development Plan

5 that that placeholder was created simply to ensure that

6 Plan 14 could be compared to other plans and to -- to

7 fill out the seventy-eight (78) year time horizon that

8 Manitoba Hydro chose for its analysis.

9   In the original documents that were

10 provided to us last August, in Plan 14, the Preferred

11 Development Plan, there is a pencilled-in natural gas

12 fired plant that gets built in 2042. And it's very

13 clear that no one has any idea whether a plant would be

14 built in 2042 or not, because between now and then

15 many, many things will happen. So it's not a real

16 decision point.

17   So the Preferred Development Plan really

18 breaks down into an immediate and very concrete

19 decision point around a real proposal on actionable set

20 of commercial opportunities; a second, highly malleable

21 opportunity for further future development; and a

22 third, which is simply a placeholder.

23   Looking at that Preferred Development

24 Plan -- and I'm moving to slide 4 on our presentation -

25 - what are the options before us when we're

7250

1 commercially evaluating the plan? I mean, part of our

2 scope is to consider options and alternatives.

3   Well, narrowly speaking, what are the

4 options with respect to the Preferred Development Plan?

5 The first option is to simply support the Preferred

6 Development Plan, which would entail approving that

7 package of Keeyask and the intertie and export

8 contracts to go ahead and additionally providing

9 support to the further development of the Conawapa

10 project with a view to, at some point in the near to

11 medium term, approving construction of Conawapa.

12   Under that scenario, under that option,

13 it would be assumed that Manitoba Hydro would spend

14 aggressively, would spend resources aggressively to

15 develop the Conawapa opportunity, would pursue

16 environmental assessments, would pursue, you know,

17 detailed design, and construction approvals.

18   A second option is to support part 1 of

19 the Preferred Development Plan only and recommend

20 restricting expenditures on Conawapa going forward.

21 And when I say, "restricting expenditures," it doesn't

22 necessarily mean zero expenditures, though that's

23 certainly an option. There has been discussion in the

24 past about what it would take to keep the option

25 "alive," quote/unquote, but this suggests significant

7251

 1 justification should be required to spend that next

 2 dollar.

 3   When compared to the Keeyask

 4 opportunity, for example, where as -- as I said, the

 5 expectation is $1.4 billion will have already been

 6 spent by the end of June, that represents a thousand

 7 dollars for every man, woman, and child in the Province

 8 of Manitoba. It's -- it's the kind of expenditure that

 9 cannot be taken lightly. But those are the kinds of

10 expenditures that are often required to develop very

11 large infrastructure projects.

12   Every process is costly, but the

13 decision still can't be taken lightly -- taken lightly.

14 Private sector developers typically require a return on

15 invest -- on development capital of up to 30 percent.

16 If they're going to be investing in speculative

17 development projects that may or may not occur in the

18 future, there's a very high burden in spending those

19 kinds of funds.

20   It -- it is an issue that has to be

21 taken very seriously and very judiciously as to whether

22 real dollars, real cash, is going to be spent on

23 development projects or not; and if so, how much, and

24 what are the terms and conditions on the expenditure of

25 that cash to pursue a development opportunity? Because

7252

1 Conawapa is essentially today a development

2 opportunity.

3   And if expenditures are going to be

4 restricted on Conawapa, then the question is: What all

5 -- what should be sent? What type of investigation

6 should also occur simultaneously for alternatives?

7 Because if there is no explicit support for Conawapa,

8 it suggests that implicitly there are other options

9 that should be examined in parallel to Conawapa so that

10 an informed decision could be made in the future on

11 whether to go ahead.

12   The third option is to simply reject the

13 Preferred Development Plan in its entirety. That

14 suggests that the considerable resources that have been

15 spent on Keeyask and the associated intertie would have

16 to be written off. In addition, spending would stop on

17 Conawapa. And with respect to the future service of

18 electricity to the ratepayers of Manitoba, Manitoba

19 Hydro would then be asked to review all options in

20 order -- to determine how best to meet domestic demand.

21   Those three (3), narrowly speaking, are

22 the real options with respect to the Preferred

23 Development Plan. More broadly speaking, there is a

24 discussion of alternatives -- alternative plans which

25 has been presented by Manitoba Hydro and which has been

7253

1 discussed before this panel. But narrowly speaking,

2 with respect to the Preferred Development Plan itself,

3 these, it appears to us, are the three (3) options that

4 are on the table.

5   Moving to slide 5, just to take a closer

6 look at that part 1 package of the Preferred

7 Development Plan where there is Keeyask and the 750

8 megawatt intertie, as well as supporting export

9 agreements. It appears to us that this is actually a

10 package and should be treated as such. The three (3)

11 parts are interrelated. The export contracts cannot be

12 fulfilled without a large new generation facility. The

13 export partners do appear to be interested in receiving

14 power that is produced in hydroelectric facilities

15 predominantly. There have been terms written into most

16 of the export contracts which make it a condition of

17 execution of a contract that a new hydroelectric

18 facility be built.

19   The 750 megawatt intertie has been

20 negotiated. And as is -- as has been stated by other

21 witnesses here before you, it's not clear that a

22 different intertie, a different size or a smaller

23 intertie, could actually be negotiated with the same or

24 other parties. It's possible, but the commercial

25 opportunity that's on the table before you is one that

 1 has been negotiated already at a 750 megawatt level.

 2   It might be possible to change

 3 specifications of this plan. It could be possible to

 4 change timing for aspects of the plan, to delay Keeyask

 5 or to delay the construction of an intertie. However,

 6 it's not clear that such delay or changes to the plan

 7 would not in the end effectively be equivalent to

 8 cancellation.

 9   Commercial negotiations are just that;

10 they're negotiations between independent parties. And

11 while all in -- all of us external experts and all

12 Intervenors and -- and commentators and analysts

13 external to the situation, to the transactions between

14 Manitoba Hydro and its -- and its partners, can

15 question whether those particular transactions may or

16 may not be the best transactions which could have been

17 negotiated, the reality is those are the contracts and

18 arrangements that have been negotiated. And they can

19 either be accepted or rejected. And it shouldn't be

20 presumed that amendment can be easily or achieved at

21 all.

22   If that package of arrangements of

23 Keeyask, and the intertie, and the export agreements is

24 cancelled; if, for example, amendments were -- were

25 suggested -- were not accepted and the parties walked

7255

1 away from the table, there are significant cost -- cost

2 consequences that must be borne. Not only the $1.4

3 million of expenditures as of the end of June, but

4 there is also an issue of the commercial reputation of

5 Manitoba Hydro and its ability to do business in the

6 future.

7   It has been working for a number of

8 years on the Keeyask project, the intertie project, and

9 the export contracts. It's been working with a wide

10 variety of parties who have come to the table in good

11 faith and negotiated these arrangements on the

12 assumption that there was an ability to actually

13 execute on them.

14   That is not determinative. Deals fail

15 all the time in the world. But when deals fail there

16 are consequences to deal failure. And those are --

17 consequences are not always easily calculated in dollar

18 terms. There is a loss of reputation, and there is a

19 loss of the ability to do business. None of the

20 alternative plans of the many different alternative

21 plans that have been put before the panel address that

22 issue. There is a cost consequence in terms of the

23 writing off of some costs, but there is no additional

24 cost burden that is understood to be related to the

25 commercial consequences of the collapse and

7256

1 cancellation of the plans.

2   So from our perspective, looking at

3 Keeyask and the 750 megawatt intertie and the export

4 contracts through a commercial lens, the -- you know,

5 we -- we look to almost a cliche, but it -- it's very

6 much relevant in a commercial context. These are

7 actually negotiated commercial agreements. This a bird

8 in the hand. And if they are going to be rejected in

9 favour of an alternative, there is a very high burden

10 on alternatives to be demonstrated to be significantly

11 superior to the real package and the real opportunity

12 that -- that is before us in completing the Keeyask

13 construction and in the 750 megawatt intertie and all

14 the associated export contracts.

15   It's not good enough for an alternative

16 to be mathematically or technically or theoretically

17 equivalent. There has -- it has to be demonstrated to

18 be superior for it to be commercially interesting as

19 compared to a real, actionable opportunity. And by all

20 of the information that we've prov -- been provided as

21 part of this process and -- and in our position as

22 advisors in this process, as inde -- independent

23 experts, we have seen that, you know, this is a real

24 commercial, viable opportunity and is -- is in fact on

25 the verge of, you know, commencing construction,

7257

1 potentially, if the final approvals are given to it.

2   When we turn to look at Conawapa, it's a

3 very, very different situation. Conawapa has been a

4 known and understood option for many, many years. It's

5 been the subject of review processes in the past. At

6 different times over the past twenty-five (25) years,

7 it has been the next project about to be done, and then

8 no longer. It is a development opportunity. It's a

9 very significant development opportunity.

10   In Manitoba Hydro's submission, they

11 provided information on more than a dozen different

12 sites across the province that are potential

13 opportunities for new hydro power, and for a wide

14 variety of reasons, they consider Conawapa to be one of

15 the better ones. That's common knowledge.

16   But just because something is a

17 development opportunity, it doesn't mean that it should

18 be developed or that it should be developed right now.

19 It's an available option, and that option will not go

20 away. The only question is: Should additional money

21 be spent on that option, and, you know, should there be

22 support for pursuit of Conawapa as the primary option

23 for Manitoba Hydro?

24   The -- the -- you know, in

25 contradistinction to our view of Keeyask and the 750

7258

1 megawatt intertie, with respect to Conawapa, the burden

2 is very much, we think, on Manitoba Hydro and on the

3 proponents of the Conawapa process to justify that it

4 is worth spending the next dollar on, that it is worth

5 keeping on the table, that, you know, considerable

6 resources should be focussed on that opportunity as

7 opposed to other opportunities which are also available

8 to Manitoba Hydro and to the province as a whole.

9   So how did we proceed to analyze what --

10 what these opportunities were and -- and to test the

11 burdens and -- and benefits and -- and risks that were

12 -- that we -- that Manitoba Hydro is facing in making

13 these decisions? And I'll move quickly through this --

14 this section of the presentation.

15   In our report, we identified the

16 critical stakeholders that we perceive to be relevant

17 to this decision. The two (2) primary parties are the

18 government and domestic ratepayers. There are a number

19 of other parties that are affected by this decision.

20 There are First Nations; there are environmental

21 considerations, to some extent; there are commercial

22 parties on the other side of the various transactions,

23 and export markets, and what have you. But when we

24 come right down to it, in our view, domestic ratepayers

25 are responsible over time for all of Manitoba Hydro's

7259

1 costs. Net of export revenues, but fundamentally, if

2 exports go away, ratepayers are still responsible for

3 all the costs. So they are -- the residual -- they are

4 residually responsible for the costs of Manitoba Hydro.

5   Secondly, the government -- the

6 government is, nominally speaking, the owner of

7 Manitoba Hydro. And, you know, the government does

8 benefit from a certain stream of direct revenues and

9 water rentals and capital tax. Very importantly, the

10 government also provides a debt guarantee to Manitoba

11 Hydro, and that is a subject that we'll be addressing

12 in a -- in greater detail later.

13   But that debt guarantee amounts to a

14 contingent assignment -- a part of its total access to

15 and cost of capital. And by that, what we mean is the

16 -- the debt guarantee ensures that Manitoba Hydro

17 achieves effectively the same cost of capital as the

18 Government of Manitoba does and forms part of its

19 ability to access the capital markets.

20   Having said that, it's contingent,

21 because, as has been discussed before in our report and

22 many other documents, Manitoba Hydro is viewed by the

23 capital markets and the representatives of the capital

24 markets, in terms of credit rating agencies, as a

25 financially self-supporting entity. If Manitoba Hydro

7260

1 were ever, for whatever reason, to lose that status as

2 being perceived as financially self-supporting, then

3 the outstanding debt of Manitoba Hydro, or some portion

4 of it, would be seen to be the responsibility of the

5 Government of Manitoba, and that would affect the

6 Government of Manitoba's access to capital markets and

7 -- and its ability to raise capital in the debt

8 markets.

9   However, as long as Manitoba Hydro

10 continues to be perceived as financially self-

11 supporting, there should be no impact on the

12 government.

13   The provincial economy is also a primary

14 concern of the Government of Manitoba, and hence, the

15 question is: Does the Preferred Development Plan or

16 some of its alternatives have impacts on the provincial

17 economy as a whole?

18   You heard just earlier today before this

19 presentation a -- a presentation by some significant

20 users of electricity in Manitoba, and they care very,

21 very deeply about the prices for electricity that are

22 charged here. It affects their business and it affects

23 their decisions about where to invest.

24   The government, in its turn, cares very

25 much about those kinds of decisions, not only because

7261

1 businesses pay taxes, but they also employ Manitobans,

2 and there is a multiplier effect on the impact on -- on

3 the changes in -- in the cost of electricity.

4   We noted through the process that this

5 is one (1) issue that we don't believe has actually

6 been addressed as part of the NFAT. We understand that

7 a -- a review of the economic impact of the Preferred

8 Development Plan and its alternatives on the economy on

9 multi-factor basis was done, but we asked specifically

10 the question, whether the analysis that was -- the

11 economic analysis that was done covered the issue of

12 the impact of rate changes.

13   So in some sense, if electricity rates

14 rise, it's equivalent to a loss of efficiency for

15 existing economic actors, be they businesses or

16 residential consumers. If they have to spend more on

17 electricity, they have less disposable income to spend

18 elsewhere. So there is a multiplier effect on that

19 change in disposable income.

20   As far as we know, that issue was not

21 addressed by any other expert or -- or consultant. We

22 are not competent to do that. The broader economic

23 impacts of cost changes are not our expertise, but it

24 is part of the -- the question before the government as

25 to whether this is a good decision or not a good

7262

1 decision to make to understand if different plans have

2 different economic impacts, not through jobs directly,

3 but indirectly, because they cause prices to rise, more

4 or less, at different times in the time horizon that's

5 being addressed.

6   So having to find the stakeholders, just

7 moving on to slide 8, it's important to identify what

8 can actually be examined. I mean, from a commercial

9 perspective, we deal in cashflows. Fundamentally,

10 that's -- that's what's important to us, what are the

11 expectations around cashflows?

12   And so for the -- from the government's

13 perspective, we can measure revenues that go to water

14 rentals and capital taxes. We can also measure the

15 revenues that flow from the guarantee fee, and then, in

16 a much trickier and more difficult way, we can estimate

17 the likelihood and magnitude of consequences that arise

18 from the fact the government is providing the -- the

19 guarantee.

20   For ratepayers, there are two (2)

21 critical elements. One (1) is what the -- the rates

22 are expected to be over time, and the second is the

23 expected total rate revenue that will be generated over

24 time by Manitoba Hydro from domestic ratepayers.

25 Excuse me.

7263

1   It's important to note that we did not

2 attempt to parse rate revenue between customer classes.

3 We -- in all of our modelling, we simply looked at rate

4 revenue as a homogenized cashflow. However, in

5 reality, rate responsibility is divided between

6 customer classes, and, you know, decisions can be made

7 in the future with respect to the appropriate

8 allocation of rate revenue amongst customer classes,

9 and that would have economic consequences of its own.

10 But the analysis that we did simply treated the

11 customer as an undifferentiated mass.

12   We identified six (6) critical risks in

13 discussing the Preferred Development Plan and its

14 alternatives, only five (5) of which are critical to

15 the Preferred Development Plan itself. These are

16 hydrology interest rates, export and import prices,

17 project capital costs, domestic -- and domestic demand.

18 In addition, natural gas prices are particularly

19 relevant to some of the other options and alternatives

20 to the Preferred Development Plan, but not particularly

21 irrelevant to the Preferred Development Plan itself.

22   I would only pause on one (1) point, and

23 that is with respect to -- well, two (2) points, but

24 first on interest rates. All of our analysis is done

25 in nominal dollar terms. You have been provided with a

7264

 1 tremendous amount of analysis that's done in so-called

 2 real dollars from the perspective of Hydro One. All of

 3 our analysis ignores real dollars, and ignores Hydro --

 4 sorry, Manitoba Hydro. Did I say, "Hydro One"?

 5   The -- from our perspective, the only

 6 financial cashflows that are relevant are the cashflows

 7 that direct affect stakeholders. Manitoba Hydro is, in

 8 essence, a black box. Cashflows come in, cash spins

 9 around inside the -- the black box, and eventually

10 cashflows go out. What happens in that black box is

11 largely irrelevant to stakeholders. What matters to

12 stakeholders is the cashflows they are responsible for

13 or they are receiving. And so we examined -- all of

14 our examination focussed on ratepayers and government.

15   The theoretical construct of economic

16 analysis that uses real dollars from the perspective of

17 a project is useful in decision making, but it's not

18 what we do. And there are other experts that have come

19 before you to discuss that. But our focus is on

20 nominal dollars, because nominal dollars are what

21 actually are used as currency by all of the various

22 stakeholders that are relevant.

23   The second point that we would make is

24 that we focussed very much on hydrology and -- both as

25 a -- as a risk and as an inherent part of the

7265

1 discussion of the Preferred Development Plan. It was

2 somewhat surprising to us that, in a review of many

3 different potential scenarios and futures, Manitoba

4 Hydro did not provide very much analysis or information

5 on the potential impact of hydrology across the various

6 plans and options that they were reviewing.

7   The information was clearly there. It

8 was available. But Manitoba Hydro chose to use the

9 financial average of ninety-nine (99) possible

10 hydrology scenarios in each year of all of the plans

11 that it was reviewing. And I think, in part, that

12 decision was a consequence of the fact that they chose

13 to use a seventy-eight (78) year time horizon for their

14 analysis, because over the course of seventy-eight (78)

15 years hydrology has a way of averaging out. And so

16 it's legitimate to say, Well, since hydrology averages

17 out over seventy-eight years, we don't need to spend a

18 lot of time looking at multiple different future

19 scenarios related to hydrology.

20   However, part of our view is that

21 shorter time periods are very important to

22 stakeholders. Individual events can be very important

23 to a stakeholder if -- if they are -- particularly

24 where there is the potential for a financial crisis.

25   It is no salve or balm to someone going

 1 through a financial event if they're told, Well, things

 2 will eventually go back to normal, because that won't

 3 help you during the midst of your crisis. And if

 4 hydrology is a critical part of understanding the

 5 cashflows of Manitoba Hydro, then we wanted to

 6 understand how hydrology interacted with all of the

 7 different plans.

 8   So looking at page 10, based on all of

 9 the data that was made available to us, we tested

10 various scenarios to calculate a range of potential

11 outcomes for the cashflows that we deemed to be

12 relevant. We looked at the twenty-seven (27) scenarios

13 that Manitoba Hydro developed. And they are a com --

14 you know, various combinations of a variety of economic

15 energy and capital cost variables.

16   We took those twenty-seven (27)

17 scenarios, and we multiplied them by the ninety-nine

18 (99) hydrology patterns that were proved to us by

19 Manitoba Hydro, which creates almost three thousand

20 (3,000) potential futures. And across those, we

21 examined several different alternative plans.

22   In addition, Manitoba Hydro provided

23 some information around future domestic load growth

24 ranges, as well as DSM plans. And on our own

25 initiative, we tested the consequences of, for lack of

7267

1 a better term, runaway or extra high project costs.

2 There have been many large infrastructure projects

3 around the world that have gone grossly over budget.

4 And doing so in Manitoba, while would obviously be

5 regrettable, would not be unique. And so we thought it

6 would be useful to look at what would happen if the

7 cost of one (1) of these projects went dramatically

8 over budget.

9   Doing all of that analysis, which is

10 described in our report and -- and also which -- for

11 which we provided additional information and a variety

12 of interrogatories, we came to a couple of conclusions.

13 Going back to our original understanding of what the

14 Preferred Development Plan actually is, we looked at

15 the two (2) different parts that are relevant, the

16 first part being Keeyask, the 750 megawatt intertie,

17 and the exports.

18   And our view is we found no compelling

19 commercial reason to reject that package, that

20 commercial opportunity. For all of the -- the

21 scenarios, for all of the hydrology patterns, for all

22 of the -- the alternative possibilities that we

23 examined, nothing stood out as being so dramatically

24 better than going ahead with that commercial

25 opportunity that it was worth the cost in resources and

7268

1 commercial reputation that would result from

2 cancellation of those, because, as -- as I said

3 earlier, it's not good enough to throw doubt on a real

4 commercial opportunity, because if you cancel a

5 commercial opportunity, you have to have an alternative

6 for it. And that alternative should be dramatically

7 better.

8   On the other hand, with respect to

9 Conawapa as a development opportunity, we didn't find

10 compelling commercial reasons to support Conawapa as

11 being the exclusive development opportunity that

12 Manitoba Hydro should be pursuing in the future. There

13 are a number of different things, a number of different

14 development opportunities, that could be pursued. And

15 it seems to us that there are good commercial reasons

16 to pursue a variety of different possible options and

17 make a decision when a decision is really required.

18   There -- there appear to be no reason to

19 us, at least, to make a decision in favour of Conawapa

20 today, but a variety of -- of reasons why looking at

21 other opportunities -- be that DSM, be that additional

22 imports, be it gas plants, be it wind plants, be it

23 other technologies that are currently developing-- that

24 range of options, that range of possibilities should be

25 examined to see whether one (1) of those in fact is

7269

1 superior to Conawapa when it actually matters.

2   And so the -- the question is: To what

3 extent should spending continue on Conawapa, at what

4 level, and under what terms and conditions? Because it

5 is a development opportunity, but it's one (1) amongst

6 a variety of development opportunities.

7   All of that was based on the data that

8 we had available to us over the last number of months.

9 Now, in the last several weeks some new information has

10 come to light: different load growth expectations,

11 project costs, forecasts for DSM, et cetera, et cetera.

12 MPA has not had the opportunity to test the new data

13 that's been provided. The financial data was just

14 released last Friday. And we -- we have not, in

15 particular, received SPLASH data that is similar to the

16 SPLASH data that -- that we had received earlier. And

17 that forms a pretty important part of our financial

18 analysis.

19   As a result, our conclusions with

20 respect to Keeyask and the 750 megawatt intertie and

21 export contracts are provisional. This new data is

22 important, and we believe it should be reviewed.

23 However, with respect to Conawapa, given the nature of

24 the new data that's come out with respect to higher

25 costs and so on, our belief at this point is that it's

7270

1 unlikely that our view of Conawapa is going to change.

2 We do believe that it would be worthwhile to carefully

3 examine the data that's been released with respect to

4 Keeyask and the 750 megawatt intertie.

5   We -- there are a number of issues that

6 we would raise with respect to methodology. I -- I'm

7 not 100 percent certain where we are in time. But many

8 of the issues that we have, have also been raised by

9 others before the panel. So just in -- in briefest

10 form, we do have questions about the scenario -- the

11 construction of scenarios and -- and the imposition of

12 probabilities.

13   In our report we -- and in some of the

14 IRs, we address the issue of whether, you know, it

15 might be useful in future decision-making to make use

16 of Monte Carlo models, rather than the probability

17 models that Manitoba Hydro has -- has chosen to use.

18   Obviously, we would suggest that

19 scenarios and probabilities include hydrology, as we

20 have in our financial analysis.

21   Another issue is the question of the

22 model horizon and the term, and also how to address

23 terminal value. The financial model that we prepared

24 was forty-eight (48) years. That is very long.

25 Virtually all of the financial models that we ever

7271

1 prepare for any of our clients are twenty-five (25)

2 years or less. Typically fifteen (15) to twenty (20)

3 years is common for a financial model.

4   We would note that Manitoba Hydro's own

5 financial forecasts are twenty (20) years, which is

6 reasonable and typical in the industry. Forty-eight

7 (48) years is very long. And seventy-eight (78) years,

8 which is the term that was used in the economic models,

9 frankly, in our view, is simply another way of

10 expressing terminal value. To even call it a model

11 when it's seventy-eight (78) years long and virtually

12 all of the variables that are being tested have only

13 five (5) to twenty (20) year time horizons on them, the

14 construction of a seventy-eight (78) year model is --

15 is simply just another way of saying a terminal value,

16 putting a range on terminal values. So, you know, we

17 do have some -- some questions and issues to raise on

18 how those -- the -- the modelling exercise has been

19 undertaken.

20   On cost of capital, specifically

21 interest rates, the equity premium, and inflation,

22 again, we address this issue in our report. There are

23 some IRs where we discuss these issues in greater

24 detail. It appears to us that there's been a bit of a

25 bias in Manitoba Hydro's evidence with respect to

7272

1 recent history, particularly with respect to inflation

2 and interest rates. Economic data in Canada is

3 available for about one hundred (100) years in reliable

4 forms, both from the Bank of Canada and from Statistics

5 Canada and other reputable sources.

6   And as I said earlier, our focus is on

7 nominal rates. And nominal rates historically have

8 been all over the map. There is no good reason, in our

9 view, to believe that over a long period of time -- and

10 since Manitoba Hydro's focus is seventy-eight (78)

11 years, or forty-eight (48) years, over that span of

12 time to believe that a very narrow range of -- of

13 interest rates and inflation rates should be tested is

14 somewhat suspect, because historically we know the

15 range has been quite broad.

16   There is also a question around the

17 equity premium that was included in the weighted

18 average cost of capital by Manitoba Hydro. It was

19 simply a fixed equity premium of 3 percent above the

20 cost of debt. In the context of scenarios which

21 include different interest rates and different

22 inflation rates, it's not necessarily reasonable to

23 examine a single equity rate under all cases. It would

24 perhaps be more logical, given historical experience,

25 for the equity premium itself to be tested as a range.

7273

1   Then there's the issue of discount rate,

2 or the time value of money as we focussed on it.

3 Typically and traditionally for investors discount rate

4 and the weighted average cost of capital are one and

5 the same. And that is entirely appropriate. However,

6 that relationship does break down when you are talking

7 about stakeholders other than investors. And in the

8 case of Manitoba Hydro, where there are, nominally

9 speaking, no investors. No one is putting equity into

10 Manitoba Hydro, except for the retained earnings that

11 come from customer rates.

12   It is questionable whether discount rate

13 should equal WACC. And, you know, a number of points

14 have been made in the information provided to the panel

15 through this process about different takes on -- on

16 discount rate. That, you know, what discount rate

17 should be used for which stakeholder, and frankly, we

18 believe that it's appropriate to test a range of

19 discount rates and question which discount rate would

20 be applicable to which stakeholder, because we -- we

21 think their answers are -- are various across different

22 stakeholders.

23   The -- the next-to-last issue is

24 calculating rates of return. The question of the rate

25 of return, or the potential rate of return that could

1 be achieved from the various plans and alternatives

2 that have been presented to the panel is one that,

3 frankly, we found very difficult. Traditional methods

4 and metrics, such as the, you know, internal rate of

5 return, or the rate of return on equity, or the rate of

6 return on capital employed, don't appear to fit very

7 well to the analysis that's required of the Preferred

8 Development Plan and its alternatives.

9   A fundamental issue in calculating rates

10 of return is the assumption, which is a reasonable

11 assum -- assumption for investors, that a business is

12 actually seeking to maximize returns, and therefore, if

13 you are measuring the rate of return, you are making

14 assumptions that the rate of return is the best return

15 that can be achieved by that business in its expected

16 conditions.

17   However, Manitoba Hydro's mandate is to

18 minimize ratepayer costs. It's actually minimized

19 returns in some sense. Yes, Manitoba Hydro is supposed

20 to achieve a 25 percent equity ratio, and if its equity

21 ratio is below 25 percent, it should generate returns

22 that are in excess of costs temporarily in order to

23 achieve that equity ratio. But over the long-term, it

24 is a -- a non-profit maximizing entity, and therefore,

25 the concept -- or the traditional concept of return on

7275

 1 equity doesn't appear to apply appropriately.

 2   So in our view, some other kind of

 3 measure is going to have to be considered to test the

 4 alternative plans that are actually meaningful to the

 5 critical stakeholders, and as we said in our view, the

 6 critical stakeholders are government and -- and

 7 ratepayers.

 8   A potential one (1) to examine would be

 9 the net present value of incremental government revenue

10 per incremental capital employed. And by that we mean,

11 What is the total capital that's employed by Manitoba

12 Hydro in a particular development plan, and how much

13 revenue does the government get in that plan?

14   In a different plan, a different

15 quantity of capital is going to be utilized. That

16 quantity of capital is relat -- relevant to the

17 government, because the government is guaranteeing the

18 debt of Manitoba Hydro, and ultimately, capital is not

19 endless. There are restrictions on the availability of

20 capital. And so, if additional capital is used, is the

21 government getting additional revenues and benefits,

22 and what are the relationships between those

23 increments?

24   That's a -- a notion or a concept of

25 return that would be applicable to government,

7276

1 notwithstanding the fact that Manitoba Hydro is a not-

2 for-profit -- a -- a fundamentally economically a not-

3 for-profit entity.

4   For ratepayers, the relevant metric is

5 not, in fact, returns, but ratepayer savings.

6 Ratepayers are interested in Manitoba Hydro's

7 decisions, because they want to pay the lowest possible

8 rates, as we've heard, you know, from presentations

9 this morning, from industrial consumers.

10   Well, in order to achieve those rates,

11 how much capital has to be employed? Because, again,

12 that capital denotes risk. It denotes cost and it's

13 not endlessly available. Or, potentially, if it's --

14 if it's not incremental capital, it could be

15 incremental retained earnings, because retained

16 earnings are fundamentally provided by ratepayers, and

17 so, ratepayers would seek to minimize the amount of

18 retained earnings that Manitoba Hydro would have in

19 order to achieve the lowest possible rates.

20   So, a -- a traditional IRR, or a

21 traditional ROE metric, or a return on capital metric

22 is not something that we think, in the end, is very

23 applicable to this process, and -- and searching for

24 different metrics, I think -- we think, is a useful

25 exercise.

7277

 1   The final piece -- the point that we

 2 would want to make is around the assumption of existing

 3 legislative and regulatory policies. Currently, the

 4 debt guarantee fee is 1 percent. But we noted in the

 5 course of this process that, in the past, the net

 6 guarantee fee was at different levels. I believe it

 7 was as low as twenty-five (25) basis points at one (1)

 8 point.

 9   That is a fee that is set by

10 governments. It's by fiat. Manitoba Hydro has no

11 participation in that decision-making process. The

12 assumption through all of the analysis that's been done

13 is that the 1 percent fee is permanent. However,

14 government is the decision maker in this process

15 ultimately, and a variety of economic consequences are

16 going to arise out of their decision.

17   It's not necessarily appropriate to

18 assume that the government is going to refrain from

19 considering the 1 percent debt guarantee fee in the

20 future. It might make sense for the government to

21 consider a different guarantee fee, either because

22 they, you know, they have concern with the potential

23 for a risk to the government from a -- a proposal, or

24 because they want to encourage the use of a greater

25 amount of capital in -- in a development plan for a

7278

1 variety of reasons, if they believe it's better for the

2 economy. So it -- you know, it may be reasonable to

3 examine the consequences of futures where the debt

4 guarantee fee is different from what it is today, at 1

5 percent.

6   Similarly, a lot of our analysis assume

7 that rates in the future and -- and rate design would

8 continue to be structured exactly the same way as it is

9 today, and we noted that in Manitoba, electricity rates

10 are largely charged on an all-in basis. There is no

11 differentiation between transmission costs and

12 distribution costs versus generation costs. That kind

13 of differentiation occurs in many other markets.

14   Keeyask and the intertie, Conawapa, gas

15 fired plant alternatives, wind, all of those are

16 generation options. What we're largely talking about

17 in this NFAT process is generation, and yet all of that

18 generation presumes that transmission and distribution

19 is largely the same in -- in any of the different

20 cases, but for ratepayers, all of those costs are

21 compressed into a single charge.

22   It has a profound effect on the

23 relationship of DSM programs to the generation

24 alternatives on the sensitivity of Manitoba Hydro to

25 cashflow changes that result from demand if the rate

7279

1 design is an all-in rate design.

2   If transmission and distribution were

3 charged separately from generation, a drop in demand

4 would have less impact on Manitoba Hydro. The

5 relationship between revenues it receives domestically

6 versus revenues it receives from exports would be

7 different in a different rate design environment.

8   None of those kinds of options have been

9 addressed through this process. It's a consideration

10 that potentially could be taken into account in the

11 future when other major generation options are -- are

12 being considered by Manitoba Hydro, because those kinds

13 of policy changes, whether they're public policy or

14 regulatory policy, can have profound impacts on the

15 economics of any of the different opportunities.

16   With that, I end our presentation, and

17 we're happy to take as many questions as there are.

18   THE CHAIRPERSON: You know what, the --

19 the panel has been sitting for about two (2) hours, so

20 I think that what we'll do is we'll take a break and --

21 right now for about ten (10) minutes, and come back at

22 three o'clock for -- for further consideration of your

23 report and presentation, and -- and probably, the

24 questions will be a lot more refined.

25   So see you in ten (10) minutes.

7280

1 --- Upon recessing at 2:49 p.m.

2 --- Upon resuming at 3:05 p.m.

3

4   THE CHAIRPERSON: Hopefully everybody

5 is in position and ready to commence. I notice that we

6 have some -- a document before us. Mr. Boyd, could you

7 talk to us about this?

8   MS. MARLA BOYD: Certainly. Thank you.

9 I have distributed Manitoba Hydro's response to

10 Undertaking number 80, which is from transcript page

11 4,317. It was a request to advise in writing why

12 amounts redacted in Exhibit 137 are commercially

13 sensitive. And we would propose that it be marked as

14 Manitoba Hydro Exhibit 178.

15   MR. KURT SIMONSEN: So noted. Thank

16 you.

17

18 --- EXHIBIT NO. MH-178:   Response to Undertaking 80

19

20   THE CHAIRPERSON: Thank you. I don't

21 believe there's any other matters to attend to before

22 we continue with the -- the proceedings. I know that

23 Ms. Kapitany has some -- some questions for the

24 witnesses.

25   MS. MARILYN KAPITANY: Thank you. Mr.

7281

1 Colaiacovo, I'm looking at your slide 11 from your deck

2 this morning. And the first part there, where you talk

3 about no compelling commercial reason to reject part 1

4 of the PDP, and in particular, the last bullet. And

5 there's two (2) parts of it that I want to ask you.

6   One is around the whole concept of sunk

7 costs and how you treat them when you're advising your

8 clients. And the second is just a little bit more

9 explanation about what you say here:

10   "This despite the fact that

11   commercial consequences, other than

12   sunk costs, are not taken into

13   account in alternative plans."

14   I didn't quite understand what you meant

15 by that.

16   MR. PELINO COLAIACOVO: So to our

17 understanding, as of the end of June, about $1.4

18 billion will have been sunk on Keeyask and -- and

19 related projects. Those are currently costs that are

20 sitting on Manitoba Hydro's balance sheet in their CWIP

21 account, in their work in progress account. So they

22 are not charged to ratepayers. They're -- they're

23 attracting interest charges. It's real money that was

24 spent, and -- and therefore they're paying interest on

25 -- on that money. But it has not affected ratepayers

 1 yet.

 2   If the Company decides to proceed with

 3 Keeyask, then it's going to spend a lot more money on

 4 that project, and the total amount will ultimately be

 5 put to use. It will, you know, be transferred into

 6 property, plant, and equipment eventually, rather than

 7 work in progress.

 8   If however, Manitoba Hydro does not go

 9 forward with it, that real money that was spent still

10 has to be addressed somewhere in the Company's

11 financial statements. And typically it's expensed. It

12 -- it becomes an expense item and in the year or years

13 in which it's expensed, then Manitoba Hydro will have

14 either no profit, or negative profits, or less profit

15 than it otherwise would have, which will have an impact

16 and a consequence on its equity ratio, because it will

17 reduce retained earnings.

18   The -- there is no way around it. It --

19 it's real money, real cash that was spent. And so it

20 has to be taken into account somehow. And if Manitoba

21 Hydro is expected to maintain a 25 percent equity

22 ratio, ratepayers are going to pay that money one way

23 or the other. Typically, in this kind of a situation,

24 when people say, Well, there are different alternatives

25 and we can pursue different alternatives; we can go

1 ahead with the project or not go ahead with the

2 project. There is an inclination to say, Well, let's

3 evaluate our options not including sunk costs. What is

4 our go-forward option?

5   However, the reality is if you don't go

6 forward with the Keeyask project, you still have to pay

7 the $1.4 billion. So that $1.4 billion loss, if you

8 will, in certain circumstances has to be addressed and

9 taken into account. So is that in some sense unfair to

10 other options? Well, I suppose. If an alternative

11 option only costs $4 1/2 billion and Keeyask all-in

12 costs 5 1/2, once you add the sunk costs of Keeyask

13 onto the other option, suddenly it doesn't look so

14 attractive.

15   Fair or not, that's reality. Right?

16 And that's how you have to address the attractiveness

17 of the different options, because it's what ratepayers

18 have to pay. And -- and what we're -- the way we've

19 looked at this from day 1 is the focus exclusively on

20 ratepayers and, to a lesser extent, government. We're

21 not considering them independently as projects. We're

22 considering them as consequences for ratepayers.

23   But one point that we do make here is

24 that sunk costs are not the only consequence. There

25 are consequences other than sunk costs if you walk away

7284

1 from a deal. Entrepreneurs are fond of saying, you

2 know, that their word is their bond and their

3 reputation is fundamental to their ability to do

4 business. And all of that is actually true, and it's

5 true not only for entrepreneurs; it's also true for

6 institutions and corporations. And, you know, your

7 ability to do favourable deals does depend on

8 commercial relationships.

9   And given the number of commercial

10 relationships that have been built up and formed on the

11 basis of Keeyask and the 750 megawatt intertie, and the

12 export agreements over the past number of years, there

13 is commercial value in all of that work that is not

14 necessarily well represented just by the metric of sunk

15 costs.

16   None of that commercial value has been

17 addressed in the alternative plans. Nowhere in a -- in

18 an alternative plan does it say, We're going to write

19 off the $1.4 billion and we accept the fact that there

20 are commercial consequences to Manitoba Hydro. Right.

21 It -- it's not been taken into account.

22   So in our view, it's -- it's not good

23 enough for an alternative plan to be equal in cost, or

24 maybe just slightly a little bit better than the

25 Keeyask commercial opportunity, even taking into

7285

1 account the $1.4 billion in sunk costs. It should be

2 clearly superior, because there are costs to be borne

3 by Manitoba Hydro beyond just the sunk costs. And

4 those ultimately will affect ratepayers, as well,

5 because it -- it will affect the ability of Manitoba

6 Hydro to do business in the future.

7   MS. MARILYN KAPITANY: So you had

8 talked about the importance of establishing a proper

9 metric here to make that evaluation.

10   What would you use to determine whether

11 or not an alternative plan was clearly superior?

12   MR. PELINO COLAIACOVO: I think it's --

13 it's difficult to try and quantify commercial

14 relationships, to be honest, which is why we described

15 it simply as a higher burden. One dollar ($1) of

16 superiority will certainly not make another plan more

17 attractive than Keeyask. Will a half a billion or a

18 billion dollars of -- of superiority make another plan

19 more attractive, notwithstanding the loss of the

20 commercial relationships? Well, perhaps, right.

21   And I just picked those -- those numbers

22 essentially out of the air, but -- but it's -- it's

23 more a question of qualitative seriousness. You can't

24 just do a bunch of math and come out one dollar ($1)

25 ahead and say, Another option is superior. It -- it

7286

1 has to be clearly superior, because there -- there are

2 -- there is a commercial reality, and there are

3 relationships at stake.

4   MS. MARILYN KAPITANY: Okay. That

5 helps. My economist heart is still bruised by how

6 you're treating sunk costs, but I'll have to try and

7 move past that now that I understand your reasoning.

8   DR. HUGH GRANT: What economists have a

9 heart? I don't know what that's all about. I'd just

10 like to say, I think you're a very dangerous man

11 because I think you have a real capacity for framing

12 issues and problems in a way that I think lend a lot of

13 guidance. I'm just not sure if you're seducing me down

14 a dangerous path or not.

15   But one thing I really did appreciate in

16 the report was this -- just sort of the distinction

17 between designing models with great precision versus

18 use of judgment and things of that nature. And I think

19 we all want some quick fix. We want some simple metric

20 that's going to remove all discretion from things. So

21 the other thing I think is appreciated is the search

22 for some other metric; and this has come up several

23 occasions. I don't think anyone's proposed any clear

24 alternative.

25   The only thing I was going to comment on

7287

1 what you did suggest, so I think there's sort of a

2 tempting avenue to pursue in terms of incremental

3 benefits to governments or ratepayers is wouldn't you

4 like to think that you should be able to come up with a

5 measure of the benefits of a project independent of the

6 distributional aspects? Because in certain respects

7 it's almost a one (1) to one (1) tradeoff between

8 government and ratepayers in some instances. And so --

9 anyway, it was food for thought.

10   But what I wanted to ask you about,

11 aside from being dangerous I think you -- you also

12 terrified me because you -- you didn't talk much about

13 the hydrology stuff in the report. And I was

14 wondering, I mean, the takeaway I drew from that is

15 that we're so far down a hydro road now, there's really

16 not -- even if you switched entirely into All Gas or

17 something at this stage, you're still so -- your

18 portfolio is so heavily into one (1) area that it's not

19 going to matter a heck of a lot.

20   And so I -- I guess my question was: Is

21 it -- you made the point that going further into hydro

22 deepens your vulnerability if there was a hydro -- a

23 drought -- a severe drought in the next little while.

24 But maybe -- maybe put it to you again.

25   Could you sort of restate your overall

 1 sense of the hydrology material?

 2   MR. PELINO COLAIACOVO: Sure. As we

 3 said in our report, Manitoba is one (1) of a half dozen

 4 jurisdictions in the world that is for all intents and

 5 purposes 100 percent hydro, or thereabouts.

 6   You know, there -- there's Quebec and

 7 there's British Columbia, and -- and soon to be

 8 Newfoundland once they close the oil-fired facility

 9 there. There's Iceland, and Norway is another one, and

10 -- and Uruguay in South America. I mean there's --

11 there's a select club of places around the world that

12 are effectively 100 percent hydro.

13   And as you said, if you were to chose

14 from this day forward to build nothing but gas plants

15 to address incremental demand in the province, you

16 frankly would still be more or less all hydro for a

17 very, very long time to come. It's just the nature of

18 those kinds of facilities. They -- they are built

19 because of the energy that they produce; and -- and

20 from a capacity perspective, they have to be over --

21 overbuilt.

22   And -- and so the province isn't really

23 going to have a portfolio in the way that New York has

24 a portfolio, which is made up of some hydro and some

25 nuclear and some gas and some coal, and Ontario has a

7289

1 portfolio and, you know, a few selected other

2 jurisdictions actually have portfolios of a variety of

3 different sources of generation.

4   But I would actually point out to you

5 that Illinois doesn't have a portfolio either.

6 Illinois is like 98 percent coal, as is Indiana and a

7 few other jurisdictions. I mean, not everybody has

8 portfolios.

9   When we started this process, it was

10 notable to me, coming from Ontario, that there was not

11 a discussion of portfolio theory in the consideration

12 of these generation options. You know, portfolio

13 theory gets you to talk about it in almost an insurance

14 way, that you're -- you're hedging your best by

15 building different kinds of assets and balancing the

16 risks of one sort of asset against the risks of a

17 different asset.

18   And that discussion isn't really on the

19 table, but it's -- it's not on the table because it's

20 not practical. I mean, going from 95 percent hydro to

21 a point where you actually have a functional portfolio

22 that -- that does hedge a -- you know, cross-hedge the

23 different assets would require you to build an awful

24 lot of other stuff. You know, you have 5,500 megawatts

25 in total here, and about five thousand (5,000) of that

 1 is hydro already. So the -- the language of portfolio

 2 theory just doesn't really apply very well because, you

 3 know, you're talking about building, you know, Keeyask

 4 at -- at six hundred (600) and Conawapa at a thousand

 5 (1,000). Even if you were building 600 megawatts of

 6 gas, you'd still have 5,000 megawatts of hydro, and 600

 7 megawatts of gas. It's not a portfolio in the

 8 traditional sense of the word.

 9   So, you know, hydrology is a risk. It's

10 a risk that your system faces, and will continue to

11 face, you know, for the next hundred (100) years. And

12 that's not necessarily a terrible thing, right. In

13 some years, it produces a lot more. In some years it

14 produces a lot less, which is why you have the ability

15 to make up in capacity, you know, by having imports and

16 some gas assets.

17   But as we referred to in our report, if

18 you have, you know, the drought of the century, it

19 doesn't matter which choice you make between the

20 Development Plans of the fifteen (15) plans presented

21 to Manitoba Hydro. If you have the drought of the

22 century, it's a severe blow to Manitoba Hydro

23 regardless of the Development Plan chosen, right,

24 because you have 5,000 megawatts of hydro capacity

25 already mostly on, you know, the same group of river

7291

1 systems. They're affected by the same water flows.

2 You can't actually change that, right -- unless there

3 were a fundamental restructuring of the network -- the

4 generation fleet in Manitoba, which doesn't make sense,

5 right.

6   So you know, the discussion around Hydro

7 risk is more incremental. It's -- but fundamentally,

8 you are a Hydro province and you're going to remain

9 that way with all of the benefits that that brings,

10 because it does bring a lot of benefits: the fact that

11 your rates over the last twenty (20) years have been

12 much lower than most other jurisdictions. Part of that

13 is happy circumstance, because the last twenty (20)

14 years have been fantastic from a water flow

15 perspective, right. The last twenty (20) years have

16 been amongst the best twenty (20) year periods of the

17 last hundred years. So it's no wonder that Manitoba

18 Hydro had really good export revenues and was able to

19 keep rates low. It's a happy circumstance.

20   It becomes an interesting problem to

21 look at: Well, what if the next twenty (20) years or

22 not good, right, and what would that mean. And would

23 it actually make a difference which plan you choose if

24 the next twenty (20) years are as bad as the last

25 twenty (20) years are good, right. But that's a

7292

1 question that should be asked, but it might not make a

2 difference. And you -- you know, which is why we

3 actually try to analyze that and look at it in detail.

4 You know, does it actually matter which choice you make

5 if you have a really bad twenty (20) year hydrology

6 stretch?

7   And as it turns out, what we found was

8 that as between the All Gas option and the Keeyask

9 option, it actually doesn't make that much of a

10 difference. Whether -- whether you -- you go the All

11 Gas route or the Keeyask route and you have a really

12 bad twenty (20) years of hydrology, there's not that

13 much to -- to be chosen between those two (2) options

14 from a ratepayer perspective. Right? And that's how

15 we were looking at it.

16   It's potentially a different issue if

17 you layered Conawapa on top of that, because it's

18 another $10 billion and another massive slug of debt.

19 And if you had a really bad twenty (20) years and you

20 had spent that $10 billion, it does appear like there

21 is a greater sensitivity. But that sensitivity only

22 comes up at that point, which is one (1) of the reasons

23 why, you know, in -- in our report we refer to the fact

24 that was largely no differentiation in the impact by

25 choosing Keeyask versus not Keeyask.

7293

 1   DR. HUGH GRANT: This is -- this is why

 2 you're dangerous, because you just said that I'm in

 3 this risky position, but there's nothing I can do about

 4 it so don't worry, so relax.

 5   Just to follow up, the one (1) thing

 6 that I'm not clear on -- I'm sure everybody else in the

 7 room is -- but part of this 750 transmission line is

 8 particularly serving export markets and being part of

 9 the Preferred Development Plan. Does it have any

10 incremental value in terms of insurance against

11 drought?

12   I mean, is there any -- or is there

13 already sufficient import capacity, or can we assign

14 any benefit to it from that respect?

15   MR. PELINO COLAIACOVO: I think that

16 the current rules here in Manitoba limit imports.

17 There's a 10 percent rule. The other limit is a

18 physical limitation, right, to the interties that you

19 currently have. You are not an enormously

20 interconnected jurisdiction.

21   Adding an additional 750 megawatts of

22 intertie capacity, I would argue -- and I think it's

23 been argued by other experts that have come before you

24 -- adds value separate and apart from the ability to

25 export. They're -- and -- and I've -- I've put it

 1 separate and apart from the ability to increase your

 2 net exports, which is what adding that 750 megawatt

 3 intertie would do.

 4   It does increase your import capacity.

 5 It does incread -- increase the physical limits. And

 6 if Manitoba Hydro were to change its policies, you

 7 know, to a higher policy limit rather that 10 percent,

 8 it -- it could provide that much more value.

 9   In addition, having that intertie

10 capacity could allow Manitoba to sell more ancillary

11 service, for example. South of the border, there's a

12 lot of wind development and the northern tier of states

13 in the United States, in -- in Minnesota and the

14 Dakotas and what have you, which causes enormous

15 challenges for their system. There -- there are issues

16 about, you know, timing of energy sales. If you have

17 more import and export capacity, it's not a matter of

18 having better net exports, but potentially just to

19 export at certain times and import at other times and

20 balance it out on a -- on a megawatt hour basis. But

21 on a dollar basis it could be very advantageous.

22   I mean, Manitoba has lots of storage.

23 The system has about six (6) months' worth of water

24 storage. That's an incredibly valuable asset. And I

25 know Manitoba Hydro spends time trying maximize the

 1 value of that storage asset. It's one of the things

 2 that Hydro -- that Hydro-Quebec does very well, is make

 3 use of its storage asset.

 4   And I know that Nalcor is fully

 5 intending to make as much use as possible in their

 6 market activities after they build Muskrat Falls of

 7 their storage ability. But you can only make use of

 8 your storage asset if you have a transmission capacity

 9 that allows you to make use of that storage asset.

10   So, I mean, I think, again, the -- La

11 Capra that came before you made a point about the

12 optimization of the use of different assets that are in

13 each plan. Optimization is something that you can only

14 do once the assets are actually there. And

15 transmission assets are very flexible and allow you to

16 make optimization decisions after the fact. There is a

17 reason that transmission assets commercially command

18 very high premiums: because you can make money on

19 transmission assets in a variety of different ways.

20   THE CHAIRPERSON: I think that's part

21 of the problem that the panel is facing, is that the

22 transmission option, the 750 megawatt, is kind of a

23 black box. You know, we haven't had much information

24 to be able to weigh in on the merits of that -- of that

25 transmission line, other than qualitative assessments

1 that have been given to us by Manitoba Hydro.

2   So does that change your perspective on

3 that reality? Does it change your perspective on the

4 merits of that line?

5   MR. PELINO COLAIACOVO: Our view --

6 well, let me put it to you this way. We did modelling

7 on Plans 1, 4, 6, 12, and 14. We could have also

8 modelled Plan 2. And Plan 2 includes the construction

9 of Keeyask in 2023 but no transmission line.

10   We did not model Plan 2 partly because

11 when we reviewed Manitoba Hydro's own analysis, they

12 determined that Plan 2 was not as attractive as Plans 4

13 and 6, which do include transmission interconnections

14 at two (2) different levels. But the other reason that

15 we didn't review Plan 2 is because, in our view,

16 transmission is very valuable. And foregoing the

17 opportunity to expand interties doesn't really make

18 commercial sense.

19   You know, it -- it relates back to the

20 point that I was making earlier about there are

21 commercial consequences to cancellations. And it's

22 difficult to build interties. It's very difficult to

23 successfully build interties. I think you only have to

24 go and -- and talk to Enbridge and the developers that

25 were working on the new intertie between Alberta and

7297

1 across the border into the United States, in North

2 Dakota, the -- at the difficulty -- sorry, that's the

3 Montana one, Alberta and Montana -- at the difficulty

4 of successfully building an intertie.

5   And so, you know, there is, we believe,

6 significant value in that such that pursuing an option

7 like Plan 2, where there's no intertie but you're still

8 adding more hydro capacity to the province in an

9 islanded fashion, just doesn't make sense over the long

10 term.

11   THE CHAIRPERSON: With respect to the

12 capital -- not so much the capital tax but the -- the

13 debt guarantee fee, did you do -- did you turn your

14 mind to the quantum of the -- of the debt guarantee

15 fee?

16   MR. PELINO COLAIACOVO: Yes, we -- we

17 calculated the amount of the debt guarantee fee under

18 all the different scenarios because the -- the quantity

19 of debt changes depending on the cashflow performance

20 in the scenarios.

21   THE CHAIRPERSON: It wasn't so much

22 that, but the -- you know, right now, the debt

23 guarantee fee is 1 percent. And I guess the question I

24 have in my mind is whether that represents too high a

25 fee? Too low a fee?

7298

1   Could you -- could you give us your

2 professional opinion on that?

3   MR. PELINO COLAIACOVO: We didn't do

4 the analysis to try and determine whether the 1 percent

5 fee is the economically or commercially appropriate fee

6 for the province to be charging Manitoba Hydro. In

7 order to come to that kind of a conclusion, you would

8 have to make a determination about the likelihood and

9 magnitude of a call on that guarantee in quantitative

10 terms, and it goes beyond the kind of analysis that we

11 were doing.

12   The other piece of it is in some measure

13 it is another alternative form of taxation for the

14 government. It's -- it's structured as debt guarantee

15 fee. And there is clearly a component of the debt

16 guarantee fee which is a true guarantee -- an economic

17 cost for the potential consequences of a failure at

18 Manitoba Hydro.

19   But if you look around at other

20 jurisdictions, in some cases that fee is twenty (20)

21 basis points, or thirty (30) basis points, or fifty

22 (50) basis points. But governments can arbitrarily

23 increase those, and they just become another form of

24 tax equivalent to a capital tax. There's nothing wrong

25 with a government making that determination. They can

1 set the fee at whatever level they want. But an

2 economic analysis of the proper level of that fee is

3 not necessarily the only ingredient in the choice.

4   But to your question: Did we try to

5 make that determination? No, we didn't. And -- and I

6 think it would require, you know, a significant study

7 on its own, which the government potentially should ask

8 for if they -- if they want to, to review the setting

9 of that fee.

10   We do note that historically it's been

11 changed a few times. It was not originally imposed at

12 1 percent. It was less than that. And then it was

13 increased a couple of times, and -- and it's been at 1

14 percent for a while. But there is no hard and fast

15 rule about why it should be there.

16   THE CHAIRPERSON: Now, as you know that

17 Manitoba Hydro has locked in some future revenues.

18 Assuming that Keeyask gets done, has locked in future

19 revenues by virtue of fixed price contracts and so on.

20 So that nonetheless remains a portion of the

21 electricity production available for export that isn't

22 locked in -- hasn't got a locked-in price, and it

23 depends on the fortune of the marketplace, I guess, as

24 to the future.

25   Have you -- have you got any opinions

 1 about whether the quantum of the fixed price contracts

 2 entered into by Manitoba Hydro is adequate for

 3 advancing the construction of Keeyask relative to the

 4 projected need for fulfilling domestic requirements?

 5   MR. PELINO COLAIACOVO: So Keeyask,

 6 like all other hydro projects, will produce different

 7 amounts of electricity in any given year, depending on

 8 water flows. The dependable energy is nothing other

 9 than the estimate of what Keeyask would produce during

10 the worst year on record. There is no reason why in

11 the future there couldn't be a worse year than the

12 worst year on record, except it hasn't happened. So,

13 you know, those -- the -- the question of dependable

14 energy in a -- in a hydrological environment is a bit

15 arbitrary.

16   If -- because our records only go back a

17 hundred years, that's the frame in which -- in which we

18 operate. If we had records that went back five hundred

19 (500) years, as they do in Europe, then, you know,

20 that's probably the -- the data that people use when

21 they're looking at hydro plants in Europe.

22   But when you're talking about the sale

23 or the use of that dependable energy going forward,

24 you're making a judgment, right. Should you sign

25 contracts all the way up to your full limit of

7301

1 dependable energy, or should you give yourself some

2 leeway below that limit? Are people -- is the market

3 prepared to sign those contracts? And can you continue

4 to sign contracts up until the date of construction or

5 -- or thereafter, at the date of completion?

6   The decision about whether to go ahead

7 with a project is, in the case of a project like

8 Keeyask, only partly related to the number of export

9 contracts that you've signed. I mean, it -- as we've

10 pointed out in our report, the difficulty is Keeyask is

11 a hundred (100) year asset. You're signing ten (10)

12 year contracts, or fifteen (15) year contracts.

13   Fundamentally, you are taking merchant

14 risk on -- on an enormous portion of the future output

15 of that facility. Yes, a ten (10) year or -- or a

16 fifteen (15) year contract is a good thing to sign.

17 Given the choice of having no contract or having a

18 contract, having a contract is better, but you're

19 selling system power. You're adding Keeyask to a

20 preexisting 5,000 megawatts of hydroelectric generation

21 capacity.

22   In -- the contracts are not specific to

23 Keeyask, and the terms and conditions of the contracts

24 bear no direct relationship to Keeyask itself, either

25 in terms of its costs or its production, right? So,

7302

1 the fact that they are signing those contracts is a

2 good thing, but fundamentally, Keeyask is going to

3 produce more power than is required in Manitoba, and it

4 will be sold.

5   And if water is good, there will be a

6 lot more power than is required in Manitoba, and it

7 will be sold at whatever price it can command at the

8 time. It's a -- it's -- it's merchant power,

9 effectively. There's nothing wrong with it being

10 merchant power, but it has to be considered in -- in

11 that respect.

12   To put a condition that says, Manitoba

13 Hydro, you must sell 'X' percent of the available

14 dependable energy in ten (10) year contracts or fifteen

15 (15) year contracts, prior to giving the construction

16 go-ahead on the project, is a bit arbitrary given the

17 relatively small fraction of the total output of the

18 plant that that actually represents.

19   You know, the -- the project should go

20 ahead on its merits as a total project, much of which

21 is not going to be in the form of dependable energy

22 contracts.

23

24   (BRIEF PAUSE)

25

7303

1   MR. RICHARD BEL: You were careful in

2   new data so that it didn't change the Conawapa

3   scenario, but you said that your conclusions for

4   Keeyask were provisional, based on the fact that we had

5   new data coming in.

6   What -- what constraints would -- would

7   we find -- or what would change our view of that

8   project? So capital cost, for example. There must be

9   some point where it becomes problematic?

10   MR. PELINO COLAIACOVO: Yeah, the --

11   the increase in capital cost is definitely a concern,

12   there's no question about that. The fact that Manitoba

13   demand is expected to be lower than was previously

14   assumed. Interest rates are -- the view on interest

15   lat -- rates is slightly higher than it was before.

16   All of those are relatively small changes in the -- in

17   the scheme of things, but nonetheless, small changes

18   add up, and in our financial analysis on the data

19   previously provided, the plan -- the All Gas Plan that

20   did not include Keeyask, and the Keeyask Plan were not

21   that far apart.

22   So our -- our point was earlier that,

23   you know, would you pass up a commercial opportunity, a

24   real practical commercial opportunity that -- that you

25   have available to you in exchange of a theoretical

7304

1 opportunity? Well, you wouldn't do it if the math is

2 the same, because one is real, and the other one's not.

3   But if the new data actually means that

4 the math works out significantly in favour of not

5 building Keeyask, then I think you have to ask the

6 question. And -- and it can be a combination of

7 different issues. It's -- it's domestic demand, and

8 capital cost, you know, and interest rates. It -- it's

9 the gamete, but it appears that almost every single

10 variable is being tweaked a little bit in the new data,

11 and that's -- and that's why we think it bears some

12 scrutiny.

13   MR. RICHARD BEL: There was an

14 interesting option that came up with La Capra, and that

15 option was to split the 750 and Keeyask. It's -- it's

16 one (1) project, but in effect, from that analysis, the

17 so-called La Capra No Gen Case, La Capra was careful to

18 say that their analysis was you risk take in the sense

19 that it would help us look at streaming or adding

20 resources.

21   So there -- two (2) cases seem to jump

22 out. The first case would be 750 and Gas, say Gas to

23 '30, or -- or some optim -- optimal year of need, which

24 would mean that we could still satisfy exports or those

25 contracts, or most of those contracts going forward.

7305

1 And the second one would be 750, say, Keeyask26 or '30

2 to satisfy the 308 Wisconsin plan.

3   Would that be a useful model to run, and

4 could that show -- show us -- or give us guidance on

5 whether or not we should advance Keeyask to '19 or not?

6   MR. PELINO COLAIACOVO: I -- I think

7 the question comes down to whether the pieces are

8 amenable to change. The reason why there is a

9 commercial agreement on the table for a new intertie is

10 because somebody on the other side of the border wants

11 some power, and the belief is that a new facility is

12 going to be required to get that power.

13   Their desire, I think, on the other side

14 of the border is not for undifferentiated power. It's

15 not for any old kilowatt hour that someone's willing to

16 sell, because they have access to lots of kilowatt

17 hours in their own market, MISO being twenty (20) times

18 the size of Manitoba and including a huge amount of new

19 wind power and new solar power, and -- and other stuff.

20   The desire, I think, is for hydro power,

21 and right now, someone buying power from Manitoba is

22 pretty much guaranteed to get 95 percent hydro-based

23 electricity. If Manitoba is building new gas-fired

24 facilities, do export markets still want that? Yes.

25 Manitoba still has 5,000 megawatts of hydroelectric,

7306

1 and it's going to be 90 percent or 85 percent, or

2 whatever it is, hydroelectric.

3   But it's actually still a question,

4 because in the minds of the people buying the power,

5 you know, when they speak to their own regulators, or

6 they speak to their own shareholders, what they're

7 going to say is, We're buying hydro power from

8 Manitoba. That's why we're -- we're doing this

9 contract. We're getting hydro power. We're getting

10 dependable hydroelectric energy to complement our own

11 portfolio, and our own portfolio requirements.

12   If, at the same time, there's an

13 announcement in the press that Manitoba is building gas

14 plants to manage its demand, what does that do to the

15 part -- the counterparty on the other side? Are they

16 still attracted -- you know, do they still want to

17 stand up and say, We're buying new incremental power

18 from Manitoba when Manitoba is announcing it's building

19 gas plants to satisfy demand, even though you still

20 have 5,000 megawatts of hydroelectric energy, and on a

21 pooled basis, the system is producing 90 percent

22 hydroelectric energy, but the question is: Is the

23 export arrangement still there or not?

24   I'd just -- I guess my -- the -- the

25 point -- one of the points that we were trying to make

7307

1 around the commercial reality is you don't know unless

2 you try, right? And so if you try to change the

3 arrangements, the arrangements might fall apart, right?

4 And that's -- that's a risk. You know, then -- and

5 that's the bird in the hand argument, and it might be

6 worth trying if the alterative is still attractive.

7   I mean, it -- it goes -- it's the

8 commercial concept of a best available alternative, a

9 BATNA, right? If the best available alternative to

10 changing the arrangements around the 750 intertie and -

11 - and Keeyask is All Gas, and that's okay, well then,

12 maybe you try. But if the best available alternative

13 is to continue with the existing plan, and you try to

14 change it, and it doesn't work, and you can't go ahead

15 with the existing plan anymore, because it's now too

16 late after you try to negotiate changes, well, then

17 you're stuck with your second-best option.

18   And so I guess it may well be worth

19 examining La Capra's approach, presuming there's enough

20 data, because, I mean, they were very clear about the

21 fact that, you know, they were presenting this as -- as

22 a thought experiment. It's not commercially tested,

23 but it may be worth examining that more closely,

24 bearing in mind that, you know, what's on the table

25 right now might go away.

 1   So to spend the time to look at those

 2 kinds of alternatives does risk the -- the current

 3 plan, and that alternative better be darn attractive if

 4 -- if you're going to jeopardize the existing

 5 commercial opportunity. That was the point that we

 6 were making earlier on our presentation.

 7   DR. HUGH GRANT: I want to ask you

 8 about the sort of ratepayer -- how -- how rates are

 9 set, or -- because I -- I struggled when Hydro first

10 presented it, but I -- if I understand it correctly,

11 there's stages in the argument there. You have to deal

12 with these credit rating agencies, despite the

13 ambivalence you might express about their consistency

14 at times, and -- and the goal of their perception of

15 Manitoba Hydro's debt as self-supporting is important.

16   That then leaves Hydro to come up with

17 these targets of debt-equity or the interest payment

18 scheme or whatever, and then that sort of -- given

19 that, that leads to the sort of rates you need to sort

20 of create the revenue stream.

21   I guess I was wondering of the -- how

22 flexible you saw things like the debt-equity ratio, you

23 know, because when Hydro presents it as a sort of

24 pretty hard target that they want to get back to a 25

25 percent level in a certain time period.

7309

1   And the one (1) thing that's come up in

2 discussion has also been if -- if it was quite a

3 constraint on Hydro, at what point should the province

4 then say, We have this flexibility in perhaps deferring

5 some -- some water rate increases, and so that there's

6 actually some flexibility there to try to ease the

7 burden on -- on ratepayers?

8   MR. PELINO COLAIACOVO: So debt-equity

9 ratios and -- and interest coverage ratios and so on

10 are not just a construct of Manitoba Hydro, obviously.

11 Those are pretty standard kinds of metrics that are

12 used in -- in business and by banks and credit rating

13 agencies and all the rest of it.

14   I -- I think the focus on credit rating

15 agencies is a -- potentially a bit extreme, because

16 it's not really -- I mean, credit rating agencies don't

17 make decisions. It -- it's the capital markets. It's

18 buyers and sellers of bonds. They're either willing to

19 buy bonds at a certain price or not.

20   Credit rating agencies are effectively

21 giving advice to people in the capital markets, which

22 is why the decisions of credit rating agencies

23 sometimes don't actually have any impact in the capital

24 markets. Sometimes they do. It depends how much

25 people are valuing the particular advice that the

7310

1 credit rating agencies are giving, but in some ways,

2 they're an easy proxy for the capital markets.

3   And so when we talk about the fact that

4 the credit rating agencies view Manitoba Hydro as

5 financially self-supporting, and that this is an

6 important thing for them to be financially self-

7 supporting, it says something about the willingness of

8 people in the capital markets to lend money to the

9 province of Manitoba. That's really what the -- the

10 question is.

11   You know, they -- they looked at the

12 province of Manitoba, and they looked at the

13 performance of the economy, and they looked at how much

14 debt is outstanding in the government, and -- and they

15 looked at the relationships that Manitoba has with the

16 federal government, and they look at the tax rates in

17 Manitoba, and all those things, and they -- they

18 determine at what rate they're willing to lend money to

19 Manitoba, knowing that a bunch of that money ends up in

20 Manitoba Hydro, all right?

21   And so the question is, Well, if that

22 money ends up in Manitoba Hydro, are electricity

23 ratepayers paying for it, or are taxpayers paying for

24 it? And the -- all of those metrics, the equity ratio,

25 and the interest coverage ratio, and the -- the capital

7311

1 ratio are all just indications that electricity

2 ratepayers are actually paying for that debt, all

3 right, that the government isn't subsidizing it by

4 sleight of hand.

5   Now, one (1) point that we do make in

6 our report is that electricity companies everywhere

7 have to pay tax in one (1) form or another, and in

8 Manitoba, the way that Manitoba Hydro is paying tax is

9 that it's -- it's paying water rental fees, which is a

10 tax on the use of water, and they're paying capital

11 taxes. And to some degree, the debt guarantee fee, a

12 portion of that, may actually be a proxy tax, all

13 right?

14   And so, they're not paying income tax.

15 They're not paying dividends back to the government,

16 which is okay, because there are not-for-profits in --

17 in lots of -- of different parts of the economy, but

18 they are paying some tax, at least under these

19 different headings.

20   If Manitoba Hydro were in difficulty and

21 the government said to them, Okay, you don't have to

22 pay tax temporarily because there's a drought, all

23 right? You don't have to pay water rental fees, or

24 something like that, because there's a drought, and

25 it's temporarily reducing a hardship on ratepayers

7312

1 because of that kind of a circumstance, capital markets

2 would probably say, Yeah, sure, that's reasonable.

3 It's a reasonable response to a difficult situation.

4 Governments make those kinds of decisions all the time.

5   But if the government were to say, on a

6 permanent basis, Well, you're no longer going to pay --

7 or for twenty (20) years, you're no longer going to pay

8 water rental fees and you're no longer going to pay

9 capital taxes, you know? We're going to cut the debt

10 guarantee fee back to a lower level, then suddenly,

11 electricity would no longer be paying any tax, which,

12 to any observer or analyst in a credit rating agency or

13 a capital markets, would be very strange.

14   And -- and then the question would start

15 to come up, Well, okay, this is not really financially

16 self-supporting. This is being supported by the

17 government. It's taxpayers that are supporting

18 electricity, and if taxpayers are supporting it, then

19 we have to start to include some portion of that

20 Manitoba Hydro debt as part of the provincial debt,

21 which then gets included in calculations about the cost

22 of credit that the government has to pay, all right?

23   So the -- there -- there, I think, has

24 been some commentary around using a metric -- a

25 specific metric to talk about financially self-

7313

1 supporting. Is it the equity ratio? Is it the

2 interest coverage ratio? Is it any single metric?

3   I think our point is the capital markets

4 are not that simple. They're not that straightforward.

5 They're messy and they're complicated, and they're

6 often -- there's lags and there's confusion, and so the

7 -- the capital market's perspective, the credit rating

8 agency perspective of Manitoba Hydro is going to be a

9 judgment about a bunch of different things.

10   It'll be about those metrics. It'll be

11 about cash flows between Manitoba Hydro and the

12 government. It'll be about whether it happens to be a

13 good water year or a bad water year, and all of those

14 different things together will underlie the perception

15 of whether Manitoba Hydro is financially self-

16 supporting or not.

17   DR. HUGH GRANT: Just one (1) last

18 thing, and it -- it's shifting gears a bit, but just to

19 draw upon some of your experience as a policy advisor.

20 I'm not sure hydro in Ontario is the experience we want

21 to draw on, but it -- it strikes me that there's a real

22 political constraint here in some respects, where I

23 think it would be possible to argue -- if you could

24 come up and really define what the market value of the

25 electricity has been in Manitoba the past little while,

1 I think you could construct an argument that we've had

2 this incredibly valuable resource that's produced all

3 of these economic rents, and a big chunk of them have

4 been privatized through very cheap electricity rates

5 rather than, you know, royalty taxes or higher water

6 rental fees.

7   But that era is, you know, rapidly

8 coming to a close perhaps, or at least that the -- the

9 gap may be shrinking a bit, and so you have sort of

10 ratepayers used to fairly low electricity rates, and

11 yet may be seeing some fairly steep increases. So it's

12 -- I guess it's -- my question is about how people

13 perceive the situation.

14   I mean, you talked about trying to come

15 up with these metrics in terms of the ratepayer. Does

16 the ratepayer think about the percentage change from

17 last year, or do they think about where they are in --

18 in absolute terms? And I don't know if I have an exact

19 question in that respect, but if you had a response I'd

20 like...

21   MR. PELINO COLAIACOVO: Yeah, I -- this

22 is well out of scope of us as investment bankers. But

23 as you noted, I, at one (1) point in my career, I was

24 in a government and dealing with these issues.

25   And I can tell you that the ratepayer

 1 reaction to electricity rates has more to do with

 2 volatility and competitiveness than it does any sense

 3 of absolute cost. What matters to people is the -- is

 4 the price changing, and if it's changing, by how much

 5 is it changing, and can they manage that change easily?

 6 Do they know what it is, and is it predictable? And

 7 the other piece is: What is it compared to everybody

 8 else?

 9   Now, I know from being in government

10 that, you know, often people are frustrated because

11 electricity is relatively cheap compared to many other

12 goods. You only have to compare your monthly

13 electricity bill to the amount that you spend on

14 gasoline for your car, or your cable bill, or your

15 telephone bill, you know, to try and put it in context.

16   But consumers don't look at it that way,

17 all right? They only look at: How much did I pay for

18 it last year, and how much is somebody someplace else

19 down the road paying for it? Are we getting a good

20 deal?

21   And so the challenge with all of the

22 plans that are being considered in the NFAT is,

23 regardless of the plan, it includes years of rate

24 increases for a variety of reasons. So as a policy

25 choice, it's difficult, because ratepayers are not

7316

1 going to be happy about many years of increases. But

2 the mitigating factor is that in other jurisdictions,

3 there are rate increases as well. Ontario has had

4 nothing but rate increases for the past fourteen (14)

5 years. Quebec is facing rate increases. Newfoundland

6 is facing rate increases. British Columbia is facing

7 rate increases.

8   There are a select few jurisdictions in

9 North America that have gone the other direction,

10 because they were predominantly natural gas fired, and

11 the price of natural gas has come down with shale gas,

12 and coal prices have been depressed as a result of gas

13 prices declining. That's a very happy accident for

14 those particular jurisdictions that have that physical

15 plant already in place.

16   But if somebody's trying to build a new

17 coal plant, forget about it. The cost of a new coal

18 plant is very high. A new natural gas plant is not

19 that costly, but nobody really knows what the price of

20 gas is going to be ten (10) years from now. I can buy

21 a five (5) year hedge contract for natural gas today,

22 and it's going to be at a pretty attractive price.

23 There's nobody out there in the market willing to sell

24 me a ten (10) year hedge, so I'm going to be taking a

25 flyer on that, right?

7317

1   I mean, that's always been the argument

2 around natural gas, and the market is looking really,

3 really good right now because of the shale gas

4 development, but it's still a risk. And -- and I can

5 remember sitting in the Minister's office in 2004, when

6 natural gas prices were eight dollars ($8) and looking

7 at going up, and no forecaster anywhere was talking

8 about three fifty (350), which is what it was last

9 winter, all right?

10   It's just not predicable, so you have to

11 be willing to deal with that. Now, if you have the

12 plants already, it's a great thing, and, you know, your

13 customers are happy about that, but if tomorrow, the

14 price of natural gas rises and electricity rates go

15 along with it, their customers will be complaining

16 about the volatility.

17   THE CHAIRPERSON: One of the things

18 that has surfaced in these proceedings in the notion

19 that we are facing grid parity, and it's particularly

20 an American phenomena, as you know -- phenomena as you

21 know. Do you have any comments in regards to that

22 issue, given the time horizon that we're addressing?

23   You know, we're building, say, for

24 example, that the Keeyask, it gets built, it will be

25 selling power into a -- a market potentially facing

7318

1 grid parity within the next ten (10) or fifteen (15)

2 years.

3   MR. PELINO COLAIACOVO: There are lots

4 of forecasts about the costs of different generation

5 technologies in ten (10) years' time, and the grid

6 parity argument looks at solar photovoltaic prices

7 coming down. It looks at distributed energy prices

8 coming down, combined heat and power for industrial

9 users, and so on.

10   And in higher cost jurisdictions, I

11 think it's a very real and significant possibility.

12 You know, where in a place like Ontario, the pure

13 electricity commodity separated from transmission and

14 distribution is an average of seven (7) to eight (8)

15 cents, and during daytime peaks, will be substantially

16 higher than that.

17   Grid parity starts to look like a real

18 issue, because if the cost of distributed generation of

19 whatever sort it happens to be is cheaper, well, you

20 know, then -- then it makes sense, as long as you

21 continue to have access to the grid for backup.

22   And so for Manitoba, in a -- in a

23 Keeyask scenario, or in a Conawapa scenario where

24 you're selling into the MISO market, are prices going -

25 - are grid prices going to be depressed by all of, you

7319

1 know, the potential for distributed generation? It's a

2 complicated thing, and across North America,

3 electricity system operators and large utilities are

4 getting more and more concerned about the "threat,"

5 quote/unquote, from distributed generation.

6   One (1) of the things that's likely to

7 happen as a result of that is changes to rate

8 structures, changes to cost responsibility, because the

9 reality is, there's enormous investments in iron in the

10 ground, whether those are distribution or transmission,

11 and -- or -- or generation, and people are going to

12 benefit from those things. And, you know, you can't

13 just put solar panels on your roof, use them for six

14 (6) hours a day, and not have any cost consequences,

15 which is the way it's working today, because it's a

16 cottage industry.

17   But if it becomes a real competitive

18 threat to utilities, will there be changes in the

19 market to compensate for that, to -- to react to that?

20 I think there has to be. It's the number 1 issue in

21 the United States amongst utilities, is: How do we

22 deal with the distorted incentives of distributed

23 generation and sol -- solar panels on the roof, because

24 it is changing the utility business and it's having

25 consequences?

7320

 1   By building a long-term, effectively,

 2 merchant facility, are you exposing yourself to that

 3 risk? Absolutely, you are exposing yourself to that

 4 risk. However, there are billions and billions of

 5 dollars of utility shareholders in the United States

 6 who are also exposed to that risk and are planning to

 7 do something about it. So in -- in some measure, you

 8 have to try and put it in that broader context.

 9   THE CHAIRPERSON: I'd like to explore

10 the -- the notion of the propo -- proposition that you

11 suggested, that -- namely that the electricity rates be

12 separated out for the components, transmission,

13 distribution, and -- and the power generation.

14   Now, let's walk through that one in

15 terms of Manitoba's situation. Effectively, it would

16 mean that investments made in distribution would --

17 would bear one (1) rate subject to rate appr -- sor --

18 rate increases by itself and distribution and so on.

19 So effectively, it would mean that investments in

20 generation would -- would carry a separate charge, or

21 at least it would be reflected in the generation

22 charge.

23   So the client would be seeing a dramatic

24 increase in the generation charge reflecting the

25 investment that you're -- that's being made in the

7321

1 generation. Now, is that going to -- is that going to

2 -- in the mind of the consumer, is that going to make a

3 difference?

4   MR. PELINO COLAIACOVO: It's not clear

5 to me that -- that there would actually be that

6 significant increase that you're describing. The --

7 the real question is the relationship between selling a

8 kilowatt hour domestically and selling it for export.

9 Currently, if demand falls in -- in Manitoba, the

10 Manitoba Hydro loses -- for that 1 kilowatt hour

11 decline, it loses the total cost of that kilowatt hour,

12 yet it's still maintaining the transmission and

13 distribution grid to provide the rest of the kilowatt

14 hours.

15   But it's -- it's lost the income that

16 would apply to both generation and to wires. If that

17 demand falls by that 1 kilowatt hour, then Manitoba

18 Hydro has to export that kilowatt hour instead of using

19 it domestically, but if the export price happens to be

20 lower than the all-in price for power in Manitoba,

21 Manitoba Hydro's revenues have fallen. Since it's a

22 cost-of-service enterprise, it has to get those

23 revenues back from someplace else, which is raising the

24 price in Manitoba for that -- that extra kilowatt hour.

25 This is -- it's more a question of dynamically how

7322

1 investments get made and -- and paid for going -- going

2 forward, and that applies to DSM investments as well.

3 The economic value of DSM has to be

4 compared to the economic value of generation

5 individually, because DSM won't change the need for

6 distribution or transmission wires. So including the

7 cost of the distribution and transmission system into

8 the analysis, the comparison between DSM and new

9 generation of different types is actually kind of

10 unfair to all the other types of generation. It's --

11 it's unfair to Manitoba Hydro that's trying to run its

12 business.

13 Separating the bill between wires on the

14 one hand and generation on the other hand allows for

15 better economic decisions to be made, you know, is --

16 because if DSM expenditures reduce the bill by 1

17 kilowatt hour, it should only be offs -- you know, it

18 should only be done if it's cheaper than 1 kilowatt

19 hour of generation -- not cheaper than 1 kilowatt hour

20 of the entire system, because the entire system should

21 be there. You know, you're not going to take away the

22 transmission and distribution wires because demand has

23 fallen. Falling demand will have no impact whatsoever

24 on the cost of transmission and distribution. It's

25 fixed overhead.

7323

1   So the -- the analysis about whether

2 it's good or not good to build for export, and, you

3 know, if some years you're going to have to use the

4 output for domestic purposes versus export purposes,

5 would be much clearer analytically if the rate payer's

6 bill in Manitoba was divided between wires and

7 generation.

8   THE CHAIRPERSON: The panel has no

9 further questions for the time being, so Mr. Williams,

10 are you up to -- up to starting your examination of

11 these witnesses?

12   MR. BYRON WILLIAMS: I'm at the

13 pleasure of the panel, sir.

14

15 CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

16   MR. BYRON WILLIAMS: I do have to warn

17 you, I -- I believe, Board member Grant talked about

18 seductive or terrifying evidence. I'm not sure I would

19 go that far, but the evidence has been very

20 interesting, and I -- I think usually you have less

21 questions after they've given their direct, and in --

22 in my case, I may have a few more, so I'll -- I'll

23 apologize for that.

24   And to Morrison Park, Mr. Kinder and Mr.

25 Cola

7324

 1 -- Colia -- just a minute, I'm going to get this right

 2 -- Colaia -- Colaiacovo. I'm going to just call the

 3 two (2) of you 'Morrison Park'. You decide who wants

 4 to talk, if that's all right. You won't think I'm

 5 being too impersonal or anything like that? That's

 6 okay? You're nodding your head?

 7   You describe Manitoba Hydro as a non-

 8 profit maximizing entity, was that right?

 9   MR. PELINO COLAIACOVO: That's correct.

10   MR. BYRON WILLIAMS: Now do you have a

11 copyright on that term, sir, because I'm thinking I may

12 use it to describe my operations to my boss? You have

13 no copyright?

14   MR. PELINO COLAIACOVO: No, no

15 copyright. Go right ahead.

16   MR. BYRON WILLIAMS: Thank you. Let's

17 start where the -- the Chairperson -- or close to where

18 the Chairperson finished off. Well, we'll go back to

19 grid parity for a moment. As I understood your -- your

20 response to the panel earlier, you suggested that from

21 a regulated utility perspective, the number one (1)

22 issue is distortions in the marketplace related to

23 distributed generation. Was that your -- your point?

24   MR. PELINO COLAIACOVO: Yeah, that's

25 correct.

7325

 1   MR. BYRON WILLIAMS: And so certainly,

 2 it's a -- a risk that is real -- more real than

 3 apprehended in the American marketplace?

 4   MR. PELINO COLAIACOVO: I think in the

 5 United States context, where the federal government is

 6 providing tax subsidies to build distributed

 7 generation, which is resulting in a reduction of grid

 8 consumption, which is costing regulated utilities

 9 money, it is very much a concern. And the distortion

10 is -- is largely coming from the fact that it's -- the

11 -- the dramatic expansion of distributed generation is

12 happening through subsidies.

13   MR. BYRON WILLIAMS: And you anticipate

14 in the American marketplace changes to the rate

15 structure in response to grid parity as represented by

16 the phenomena of dramatically increasing distributed

17 generation?

18   MR. PELINO COLAIACOVO: My view is that

19 it's inevitable that there -- there are going to have

20 to be changes in the economic arrangements between

21 utilities and ratepayers to protect the businesses of

22 the utilities. These are -- electricity is not -- it's

23 a required good, and it's a required good 24/7, not

24 just when it's convenient.

25   So fundamentally, the economic health of

7326

 1 the utilities is important, and if recent events are

 2 undermining those economics, then they have -- you

 3 know, there has to be a response.

 4   MR. BYRON WILLIAMS: And based upon

 5 your experience in the American marketplace, would you

 6 be familiar with utilities running risk scenarios,

 7 anticipating, for example, zero growth in demand?

 8   MR. PELINO COLAIACOVO: I -- I think

 9 that's a current discussion. Any review of, you know,

10 literature coming out of the American utilities

11 industry, and unfortunately for me, I subscribe to a

12 lot of that, they, you know, will tell you that it's a

13 top-of-mind issue. That, you know, the risk of a zero

14 growth future in a number of jurisdictions is putting

15 enormous pressure on businesses to adapt.

16   MR. BYRON WILLIAMS: And, sir, would

17 you be familiar with the work of the State Utility

18 Forecast Group out of Purdue University?

19   MR. PELINO COLAIACOVO: Not

20 particularly.

21   MR. BYRON WILLIAMS: Dr. Gotham will be

22 a little hurt by that, but we'll -- we'll forgive you.

23   But part of the American dialogue is

24 focussed on that potential future of zero growth for

25 the utilities?

7327

 1   MR. PELINO COLAIACOVO: Yes, I think

 2 that's very true.   I mean, in some jurisdictions,

 3 there's growth.   Like in -- in Texas, there is lots of

 4 growth.   In -- in certain jurisdictions, there is -- is

 5 growth, but in some parts of the United States, there

 6 is very little growth.   Inherent -- like in the

 7 underlying economy, there's very little growth, and

 8 then that's being exacerbated by the growth of

 9 distributed generation.

10   MR. BYRON WILLIAMS: And we might find

11 that phenomena particularly apparent in heavily

12 industrialized states?

13   MR. PELINO COLAIACOVO: I think it's --

14 well, you know, a place like Louisiana, for example, is

15 heavily industrialized, but it's growing like gang

16 busters right now.   So I -- you know, I think you might

17 want to be careful about the generalization.

18   MR. BYRON WILLIAMS: Let me -- let me

19 rephrase it.   We might find it in heavily

20 industrialized states, like Indiana?

21   MR. PELINO COLAIACOVO: In the Midwest,

22 they are facing some challenges, yes.

23   MR. BYRON WILLIAMS: And that

24 phenomena, as you've noted, is not restricted to

25 Indiana, it's in a number of jurisdictions in the

 1 Midwest. Would that be fair?

 2   MR. PELINO COLAIACOVO: Yes.

 3   MR. BYRON WILLIAMS: All right, if we

 4 could pull up MPA Exhibit 4, the PowerPoint slide 17?

 5

 6   (BRIEF PAUSE)

 7

 8   MR. BYRON WILLIAMS: Directing your

 9 attention, MPA, or Morrison Park, to the second bullet.

10 You -- you talk about potential rate designs involving

11 separate identification and -- and pricing of

12 generation, transmission, and distribution.

13   Is that correct?

14   MR. PELINO COLAIACOVO: Yes.

15   MR. BYRON WILLIAMS: And in terms of

16 Canadian jurisdictions, would I be correct in -- or

17 would it be correct to suggest that among the Canadian

18 jurisdictions currently, via rate design separately

19 identifying and pricing the costs associated with

20 generation, transmission, and distribution, one (1)

21 example would be Alberta?

22   MR. PELINO COLAIACOVO: Alberta,

23 Ontario both do it, and --

24   MR. BYRON WILLIAMS: Nova Scotia?

25   MR. PELINO COLAIACOVO: -- I believe,

 1 Nova Scotia, as well.

 2   MR. BYRON WILLIAMS: Okay. Now, you

 3 suggest in the bullet underneath the second bullet that

 4 -- that this might have profound effects on the

 5 desirability of DSM programs.

 6   Do I have that right?

 7   MR. PELINO COLAIACOVO: Yes.

 8   MR. BYRON WILLIAMS: And I wonder if

 9 you could articulate that a little more precisely for

10 me?

11   MR. PELINO COLAIACOVO: Sure. I think

12 when you are considering an integrated resource plan

13 where DSM opportunities are being measured against

14 generation opportunities obviously the question that is

15 being asked is whether one (1) is more economically

16 attractive than another.

17   The impact of a change in demand on

18 Manitoba Hydro's cashflows does depend on how its

19 output is priced. Manitoba Hydro provides

20 distribution, transmission, and generation services,

21 but DSM and generating -- DSM is an alternative to

22 generation. DSM will have very limited impact on the

23 transmission grid or on the distribution grid.

24   So if you are deciding whether to spend

25 money on DSM, or to spend money on generation, you have

1 to understand what the -- the economic impact is going

2 to be on the cost side, as well as the revenue side.

3 Currently because electricity is charged on an all-in

4 basis in Manitoba, if a consumer uses 1 kilowatt hour

5 less then they will save that -- that consumer will

6 save, for example, seven and a half (7 1/2) cents.

7   If there was a separation between

8 transmission and distribution, then the consumer would

9 only save the generation portion of it because they

10 would still be paying for their transmission and

11 distribution service. So should you spend -- how much

12 should you be willing to spend on DSM is affected by

13 how much cash flows will change through that DSM

14 expenditure.

15   MR. BYRON WILLIAMS: Let me see if I've

16 -- I've got it. Currently if through a three (3) cent

17 -- let's not say Manitoba specifically but at least the

18 -- the general thrust of your argument. If through a

19 three (3) cent DSM investment I -- I save a kilowatt

20 hour, the utility in question hypothetically would be

21 losing seven (7) cents and would have to find somewhere

22 else to sell it, and if it's only getting three (3)

23 cents back it might not prove to be an efficacious

24 deal. Is that your --

25   MR. PELINO COLAIACOVO: That's right.

7331

1   MR. BYRON WILLIAMS: Okay.

2   MR. PELINO COLAIACOVO: So -- so I --

3   and maybe I can put this better. In terms of --

4   MR. BYRON WILLIAMS: Better than me, I

5   assure you.

6   MR. PELINO COLAIACOVO: No. Better

7   than I did before. So Manitoba Hydro's options in

8   terms of selling power are to sell it domestically or

9   to sell it for export. If MISO prices were, let's say,

10 six (6) cents and domestic prices -- domestic rates

11 were seven (7) cents, then it would make sense for

12 Manitoba Hydro to try and sell that kilowatt hour

13 domestically because if it sold it domestically it

14 would receive seven (7) cents whereas selling it in the

15 MISO market it would receive only six (6) cents, right.

16   If it was -- if you were talking about

17 selling a kilowatt hour of production, would you

18 encourage Manitobans to reduce their consumption if the

19 alternative is to sell the power for six (6) cents in

20 MISO versus seven (7) cents in Manitoba? It wouldn't

21 actually make sense for Manitoba Hydro to do that, to

22 encourage Manitobans to use less power because Manitoba

23 Hydro's costs are in a large measure fixed. So if it

24 was selling the power -- exporting it for six (6)

25 cents, it would still have to make up that extra cent

 1 of cost, right.

 2   And on the other hand, if the rate -- if

 3 the rate design was separated between wires on the one

 4 (1) hand and generation on the other hand, then the

 5 cost of generation -- the -- the revenue for selling a

 6 kilowatt hour in Manitoba for generation, the

 7 generation revenue would only be, for example, four (4)

 8 cents, or five (5) cents. And it would actually make

 9 sense for Manitoba to -- to encourage Manitobans to use

10 less so they could sell it for six (6) cents in -- in

11 the export market. Right.

12   MR. BYRON WILLIAMS: Okay. I have

13 your -- I understand your point. And, of course, that

14 analysis would all depend on -- on actually how we

15 calculate the -- the cost of -- of DSM, and -- and its

16 comparables on -- in Manitoba?

17   MR. PELINO COLAIACOVO: That's right.

18 Just -- I think Board member Bel took you here right in

19 his very first question, page 12 of your Exhibit MPA-4.

20 You make the point that there's been a number of

21 changes in terms of the information available to all

22 parties to this proceeding over the last few weeks.

23   Is that right?

24   MR. PELINO COLAIACOVO: That's correct.

25   MR. BYRON WILLIAMS: And you've not had

7333

1 the opportunity to review that information, would that

2 be fair, in any detail?

3   MR. PELINO COLAIACOVO: That's --

4 that's true. The -- the financial data came out on

5 Friday. And we have not yet received the SPLASH data

6 that is associated with that financial data.

7   MR. BYRON WILLIAMS: And so that was my

8 -- my -- and -- and as a consequence of that, your

9 current opinions with regard to part 1 of the PDP, as

10 you define it, are provisional, correct?

11   MR. PELINO COLAIACOVO: Yes.

12   MR. BYRON WILLIAMS: And are we -- 'we'

13 being MPA, Morrison Park -- are you expecting the

14 SPLASH data?

15   MR. PELINO COLAIACOVO: We've been told

16 that we're going to be getting it soon.

17   MR. BYRON WILLIAMS: And can we presume

18 then that additional work will be undertaken by MPA and

19 Mr. Kinder et al?

20   MR. PELINO COLAIACOVO: We'll need

21 direction from the PUB, obviously, but pending that, we

22 -- we could do the work.

23   MR. BYRON WILLIAMS: And Me. Monnin

24 will -- will squash me if I ask too much, but in terms

25 of logistically performing additional analysis, are we

7334

1 talking a heroic effort, a modest effort?

2   What kind of sense, sir, to -- to get a

3 handle on -- on these changes?

4   MR. CHRISTIAN MONNIN: I'm going to

5 object to that question. When you lead off the way you

6 did I think I have to object.

7   MR. BYRON WILLIAMS: Well, I thought it

8 was going to be the question after this, Mr. Monnin.

9 Well, I -- I think I'll -- I -- I think you won't find

10 it that objectionable.

11

12 CONTINUED BY MR. BYRON WILLIAMS:

13   MR. BYRON WILLIAMS: Is it -- is it a

14 great big job, sir, or a medium job?

15   MR. PELINO COLAIACOVO: We developed

16 financial modelling tools to work through our report.

17 And so new data would simply be an -- it would be an

18 update to what we already have. It's -- it's not a

19 small endeavour, given the size and the complexity of

20 the models, given the quantity of data, but it is an

21 achievable endeavour. And as I said, pending

22 discussions with the PUB directly, it's something that

23 we could do.

24   MR. BYRON WILLIAMS: Okay. And one (1)

25 of the -- I forget whether it was Board member Kapitany

7335

1 or Board member Bel, but one (1) of the members of the

2 panel was pressing you on how big of a change it would

3 need to be to alter your provisional opinion.

4   Do you recall that discussion?

5   MR. PELINO COLAIACOVO: Yes.

6   MR. BYRON WILLIAMS: And later on in

7 the conversation with another of the Board members you

8 suggested it would have to be significantly in favour

9 of an alternative in order for that provisional opinion

10 to be altered.

11   Do you recall that?

12   MR. PELINO COLAIACOVO: That's fair,

13 yes.

14   MR. BYRON WILLIAMS: I know, sir, that

15 at your firm you deal in many millions. Is there a

16 dollar figure attached to -- in terms of NPV, in terms

17 of significance, that comes to mind?

18   MR. PELINO COLAIACOVO: I don't think I

19 can give you off the top of my head a number. It was a

20 -- the reference that I was making was a qualitative

21 judgment that, you know, there -- there should be a

22 significant difference to walk away from a set of

23 actionable commercial agreements.

24   MR. BYRON WILLIAMS: Okay. So usually

25 when I hear the word 'significant' in these

 1 proceedings, I -- I assume that there's some stati --

 2 it's -- it's a statistical terms of art.

 3   You're using it in the judgmental

 4 manner, not in a --

 5   MR. PELINO COLAIACOVO: I'm -- you

 6 know, is it going to be -- is it a 5 percent

 7 difference. Is it a 10 percent difference? Is it a 15

 8 percent difference? Or is it measured in -- in 'X'

 9 millions of dollars? I'm not sure, partly because

10 we're operating in a world of net present values based

11 on discount rates which themselves are in ranges, you

12 know.

13   So at a 6 percent discount rate, it

14 would be what, and at a 7, or an 8, or a 9, or a 10

15 percent discount rate, it would be something very

16 different. So pinning it down to an arbitrary

17 distinction I think is very difficult, but our point

18 all along has been, you know, it has to be a clear

19 difference, because not all of the commercial

20 considerations are being captured just by counting the

21 dollar flows.

22   MR. BYRON WILLIAMS: Thank you for

23 that. In the course of your -- your work, you would

24 have had reference to the terms of reference for the

25 Public Utilities Board?

7337

1   MR. PELINO COLAIACOVO: Yes.

2   MR. BYRON WILLIAMS: And you -- you

3 would have seen there the -- the term 'macro-

4 environmental'.

5   Would that ring a bell, sir?

6   MR. PELINO COLAIACOVO: Yes.

7   MR. BYRON WILLIAMS: And I wouldn't

8 expect you to be conversant with it, but you're -- at a

9 high level, you have a sense of the way that term has

10 been used in the course of this proceeding, agreed?

11   MR. PELINO COLAIACOVO: I do.

12   MR. BYRON WILLIAMS: And so in terms of

13 the -- your opinions with regard to -- if we -- if we

14 flip back a page, for example... Excuse me. No,

15 actually stay in -- yeah, back a page to page 11.

16 Let's go to there for a second.

17   When you're pol -- your original opinion

18 that there was no compelling commercial reason to

19 reject Part 1 of the Preferred Development Plan as you

20 defined it, that was based exclusively on commercial

21 and financial considerations.

22   MR. PELINO COLAIACOVO: That's correct.

23   MR. BYRON WILLIAMS: Yeah. Okay.

24   MR. PELINO COLAIACOVO: Yeah. As in

25 our report, when we were talking about referring to the

7338

1 interests of different stakeholders, clearly the

2 government has an interest in environmental policy and

3 social policy, and other stakeholders have interests in

4 environmental and social policy, and -- and First

5 Nations policy, et cetera, et cetera, et cetera. All

6 of that is outside of our scope, and so -- I mean,

7 there are other people who have come before the panel

8 to talk about those kinds of issues. We make no

9 commentary on those, and we're limiting ourself to just

10 commercial considerations.

11   MR. BYRON WILLIAMS: And thank you.

12 That -- that's -- just so I'm clear, then, that opinion

13 does not reflect macro-environmental considerations,

14 because those would be outside the scope of your work?

15   MR. PELINO COLAIACOVO: That's correct.

16

17   (BRIEF PAUSE)

18

19   MR. BYRON WILLIAMS: And similarly, it

20 would not reflect socioeconomic considerations apart

21 from the government stakeholder perspective in terms of

22 revenues?

23   MR. PELINO COLAIACOVO: That's correct.

24 We looked at the direct flows to the government that --

25 that are in the models, water rentals, and capital

7339

1 taxes, and debt guarantee fees, and so on. In our

2 view, there's another layer of economic flows that are

3 important that arise from rates themselves, and then

4 obviously, then there are other economic flows that

5 arise from jobs and construction contracts and so on.

6   Other experts have dealt with the jobs

7 in construction contracts issued, not us, and so, you

8 know, there's a whole section of analysis that goes

9 there, and -- and then the question about the

10 macroeconomic impacts of rate increases I don't

11 actually believe were covered by anybody, but that's

12 not our specialty, and that we simply recognize that

13 that's an issue that's out there.

14   MR. BYRON WILLIAMS: And just -- I was

15 going to come to that point later, but now that you

16 mention it, you recognize that there may be chilling

17 effects to the Manitoba economy as a result of the rate

18 increases.

19   Would that be fair?

20   MR. PELINO COLAIACOVO: One (1) of the

21 points that we do raise in the report, and -- and -- I

22 mean, we raised it in the context that we thought it

23 needed additional study at some point, is the -- the

24 question of competitiveness.

25   The government does care very much about

7340

1 the competitiveness of the province, the

2 competitiveness -- the attractiveness of the province

3 to investment. I think the presentation that was here

4 earlier today was very much on that point. From an

5 industrial company that has facilities across North

6 America, around the world, when they're making

7 investment decisions, they care about current rates,

8 but also the direction of future rates.

9   And so to the extent that different

10 plans have an impact on rates, then competitiveness is

11 a legitimate concern. What we found in our own

12 analysis was that there is relatively little impact --

13 the choice of plan has relatively little impact on near

14 term rates. Near term rates appear to be rising

15 amongst all of the different plans. However, after a

16 certain number of years, there's a divergence between

17 the plans, and the -- the cost pressures that -- that

18 the plans are putting on the system.

19   And so, it would be legitimate to

20 consider the competitiveness aspect of the plans. If

21 rates go in a certain direction, what does that mean

22 for the broader economy?

23   MR. BYRON WILLIAMS: And the -- in --

24 in your view, or to your knowledge, the implications of

25 the relative chilling effect, if any, of -- of the

7341

 1 different plans has not been well studied in this

 2 record?

 3   MR. PELINO COLAIACOVO: It's -- it's

 4 very difficult to get a handle on relative

 5 competitiveness. I mean, we know what it is today.

 6 There -- there were some surveys that were cited and

 7 some reports that were cited which have -- they're --

 8 they're not perfect. I mean, I -- I think the

 9 presentation earlier today, the gentleman pointed out

10 that, yes, there are posted rate plans, but then there

11 are special programs, and that affects the total cost

12 of doing business in different jurisdictions. So it's

13 not necessarily easy to compare jurisdictions today.

14   The problem and the challenge of

15 comparing jurisdictions ten (10) years from now is

16 multiplied, because you have to actually, you know, try

17 to understand the direction that costs are going to go

18 in in competitive jurisdictions. So it's -- it's not a

19 simple thing, but there is potentially some useful

20 analysis that could be done there, and we just didn't

21 see it anywhere on the record.

22   MR. BYRON WILLIAMS: Okay. Thanks. If

23 we can scroll to page 12 of the prefiled evidence of

24 Morrison Park, which is MPA Exhibit 3?

25   And to Morrison Park, just while we're

7342

1 scrolling there -- that's good right there -- it sounds

2 like your team has been paying relatively close

3 attention to the record of -- of this proceeding?

4   MR. PELINO COLAIACOVO: Not all of it,

5 but, yes.

6   MR. BYRON WILLIAMS: And you would be

7 keeping your eye on the economic updates that -- that

8 have been provided by Manitoba Hydro in terms of the

9 economic comparison of the plans, taking into account

10 DSM chan -- scenarios, as well as significantly

11 increased capital costs?

12   MR. PELINO COLAIACOVO: So you're

13 referring to the exhibits that -- that were brought

14 forward a couple of week -- the economic analysis

15 exhibits on DSM that were brought forward a few weeks

16 ago?

17   MR. BYRON WILLIAMS: I'm referring --

18 yeah, changes in capital --

19   MR. PELINO COLAIACOVO: Right.

20   MR. BYRON WILLIAMS: -- and --

21   MR. PELINO COLAIACOVO: Yes.

22   MR. BYRON WILLIAMS: -- and DSM. At a

23 high level, you're familiar with those.

24   I -- I note at the time of the writing

25 of your pre-filed evidence, if there were two (2) plans

 1 that Morrison Park was more attracted to than others,

 2 would it be fair to suggest they were Plans 4 and Plan

 3 6?

 4   MR. PELINO COLAIACOVO: Yes, that's

 5 correct. It's essentially consistent with what we said

 6 today. We've sharpened our expression today. Plans 4

 7 and 6 include Keeyask. Plan 4 included a 250 megawatt

 8 intertie. Plan 6 is the 750 megawatt intertie. Since

 9 then, Manitoba Hydro has indicated that they have a

10 real opportunity for the 750, and not a real

11 opportunity for the 250.

12   But our view, based on our analysis, was

13 that Plans 4 and 6 appeared to be the most attractive,

14 and are consistent with going ahead with Keeyask and

15 the opportunity that's on the table for it.

16   MR. BYRON WILLIAMS: And strictly --

17 just in terms of those plans, and strictly from the

18 financial or commercial perspective, common to those

19 plans was an intercon -- connection to the United

20 States, Keeyask, and the sale to Minnesota Power?

21   MR. PELINO COLAIACOVO: Yes, that's

22 correct.

23   MR. BYRON WILLIAMS: And of course,

24 it's arguable that things have -- events have -- have

25 left the 250 megawatt interconnection in the past, so

7344

1 out of the plans in your first analysis, Plan 6

2 involving the 750 megawatt interconnection, the sale to

3 Minnesota Power, and the advancement of Keeyask was

4 looking relatively attractive.

5   MR. PELINO COLAIACOVO: Yes.

6   MR. BYRON WILLIAMS: And you've

7 indicated that you, at least at a high level, have some

8 finan -- familiarity with the updated economic analysis

9 put forward by Manitoba Hydro?

10   MR. PELINO COLAIACOVO: That's correct.

11   MR. BYRON WILLIAMS: And if we could --

12 and if you start to feel uncomfortable, you'll --

13 you'll let me know, sir, but if we could turn to

14 Manitoba Hydro Exhibit 129-7 just for a moment, and in

15 particular, to slide 2?

16   MR. CHRISTIAN MONNIN: I'll also let

17 you know if I feel uncomfortable, as well, Mr.

18 Williams.

19

20 CONTINUED BY MR. BYRON WILLIAMS:

21   MR. BYRON WILLIAMS: Of course, Mr.

22 Monnin. I don't think you will though. I'm not -- I'm

23 not warning you this time.

24   Sir, you -- you see here under the Level

25 2 DSM that Manitoba Hydro has presented an analysis of

7345

1 updated capital costs, 2013 information, and in terms

2 of some of the plans, a look at Level 2 DSM.

3   Do you see that, sir?

4   MR. PELINO COLAIACOVO: Yes.

5   MR. BYRON WILLIAMS: And you'll see the

6 results for Plan 6 at a net present value of 386

7 million. Would that be right?

8   MR. PELINO COLAIACOVO: Yes.

9   MR. BYRON WILLIAMS: And for Plan 14,

10 we see a net present value of 45 million?

11   MR. PELINO COLAIACOVO: Yes.

12   MR. BYRON WILLIAMS: And so, sir, in

13 terms of looking at that, would it be fair to suggest

14 that while it's not determinative, that would maintain

15 your interest in Plan 6?

16   MR. PELINO COLAIACOVO: Yes. That's

17 consistent with -- with what we said. Our preliminary

18 review of the information that came out of the new data

19 that was available to us leads us to believe that our

20 sceptical view of Conawapa on its commercial -- on --

21 on commercial -- on a commercial basis is not likely to

22 change with the new information.

23   If anything, you know, our view of -- of

24 the Conawapa portion of the Preferred Development Plan

25 is to become even more sceptical based on what we've

7346

1 seen so far.

2   MR. BYRON WILLIAMS: And, sir, just

3 while we're on this page, you see the Plan 6 and Plan 5

4 under Level 2 DSM in a -- a fairly trite spread with

5 Plan 5 somewhat higher?

6   MR. PELINO COLAIACOVO: Yes.

7   MR. BYRON WILLIAMS: And the

8 distinction between the two (2) plans, one (1) would --

9 would be the Winnipeg -- the -- the Wisconsin Public

10 Service sale, and the other would be the timing of gas?

11   MR. PELINO COLAIACOVO: Yes. And in

12 the -- yeah, the -- the Public Service sale, an

13 attractive export contract should be delivering

14 incremental value, and so it's logical to see that

15 difference.

16   MR. BYRON WILLIAMS: But we still see

17 these two (2) plans pretty -- pretty close proximity on

18 the economic evaluation at Level 2 DSM.

19   Would that be fair?

20   MR. PELINO COLAIACOVO: Yes, I think

21 that's fair, which -- which is also consistent with the

22 results of our earlier modelling between Plans 4 and 6,

23 which were also quite close together across a variety

24 of -- of different circumstances.

25   The Plan 4 is not here. It's -- it's

7347

1 fallen by the wayside, as you said, because it -- it

2 included a 250 megawatt intertie instead of 750. I

3 would note, however, that Plan 2 -- there -- there are

4 some legitimate questions that I think arise about Plan

5 2, and while I stated earlier today, in our view,

6 transmission interties are very valuable, and

7 typically, you know, the -- they -- they command a

8 significant commercial premium, there is a legitimate

9 question as to whether going the route of building

10 Keeyask at a later date would be sensible for

11 ratepayers, even if they had to forego transmission.

12   That -- that is -- in some sense, it's a

13 -- a capex minimizing strategy, spend the money only

14 when you have to, and it indis -- in -- in comparison

15 to Plan 1, which focusses only on gas, Plan 2 includes

16 Keeyask, but with DSM, it could potentially include it

17 a number of years into the future.

18   Now, I -- I understand that Manitoba

19 Hydro has not provided additional financial information

20 on Plan 2 with DSM, so it may be difficult to do

21 analysis on -- on that option.

22   MR. BYRON WILLIAMS: That being said,

23 sir, what I'm hearing from you in terms of competitive

24 plans to the Preferred Plan is that ones that you would

25 want to take a -- a more detailed look at with the new

7348

1 information would include Plan 5, Plan 6, and Plan 2.

2   Would that be fair?

3   MR. PELINO COLAIACOVO: If the

4 information that is available then, yes. I think,

5 that's the fair comparison is to look at plans which

6 include Keeyask with and without transmission.

7   As I understand, Manitoba Hydro has --

8 has prepared information on Plans 1, 5, and 14, I

9 believe. So we will obviously -- you know, it would --

10 it would be simplest to look at information that's

11 already there given the time constraints.

12   MR. BYRON WILLIAMS: But from an

13 analytical perspective, sir, the plans in -- to your

14 knowledge that are likely still in play would be 5, 6

15 and -- and 2.

16   MR. PELINO COLAIACOVO: Looking solely

17 at the numbers that -- that were re -- that -- from an

18 economic perspective, that's what I would appear to us.

19   MR. BYRON WILLIAMS: So let me just

20 follow through on your discussion of Plan 2 for a

21 moment. Perhaps, follow up a bit of discussion from

22 Panel member Bel.

23   When you're talking about Plan 2 today,

24 in essence, are you talking about the La Capra pathway

25 2, i.e., a plan -- a Keeyask deferral?

7349

 1   MR. PELINO COLAIACOVO: No, because I

 2 think Plan 2 is never -- so -- so La Capra was arguing

 3 in favour -- if I understood them correctly, La Capra

 4 was arguing in favour of transmission first, followed

 5 by a new development subsequently which could be either

 6 Gas or Keeyask, depending on which one made sense.

 7   The -- if I understand Plan 2 correctly,

 8 there is no expenditure in the near term; no -- no

 9 expenditure on transmission. There is expenditure

10 potentially on DSM. And then eventually a Keeyask

11 development.

12   Notionally, what might be attractive in

13 that scenario is that you would not be writing off a

14 substantial portion of the existing sump costs on

15 Keeyask. The -- those would -- you would continue to

16 pay interest on -- on the work in progress, but

17 eventually it would become used and useful. And so it

18 may in fact be -- Plan 2 may in fact be more attractive

19 than Plan 1. But you would not be spending additional

20 capital on transmission.

21   As I said earlier, as La Capra pointed

22 out we're dealing with unoptimized plans and we do have

23 strong commer -- opinions on the commercial value of

24 transmission. So I say this with some reluctance

25 because, in general, my instinct is that plans with

7350

 1 include transmission are the ones that are -- are --

 2 should be expected to be more attractive.

 3   However, Plan 2 which does not include

 4 transmission could potentially be an option and -- and

 5 may merit analysis if the data is actually available to

 6 do that analysis which it may not be.

 7   MR. BYRON WILLIAMS: And just -- and I

 8 -- I thank you for your candour and your -- your

 9 willingness to step beyond your initial reluctance.

10   Just so I understand the way you use

11 Plan 2 is it a K23/Gas or is there -- is -- what -- is

12 it Plan 2 in -- in that name or -- or you putting

13 Keeyask back a bit, just so I understand, sir.

14   MR. PELINO COLAIACOVO: I think you

15 would time Keeyask with depending on your DSM decision,

16 right. If I understood the analysis that's been done,

17 it -- it looked at a few different levels of DSM

18 spending and adjusted timing according to that DSM

19 spending.

20   And so, I think, Plan 2 would

21 conceivably have to be adjusted the same way. If

22 you're spending more on DSM, you may not need Keeyask

23 in '23, Keeyask might be in '25 or '26. In the same

24 way that in Plan 1, if you spend on DSM you may not be

25 building a gas plant in '23. It may be in '25 or '26,

7351

1 or what have you.

2   MR. BYRON WILLIAMS: Okay. Thank you

3 for that. You -- you mentioned that you'd had a chance

4 to take a quick look at the financial information filed

5 by Manitoba Hydro last Friday?

6   MR. PELINO COLAIACOVO: Very cursory.

7   MR. BYRON WILLIAMS: Fair enough. You

8 noted that based on your cursory glance the -- the

9 plans for which additional financial analysis was --

10 was done were restricted to three (3), being Plan 14,

11 Plan 5, and Plan 1.

12   Is that right?

13   MR. PELINO COLAIACOVO: Yes, that's

14 correct.

15   MR. BYRON WILLIAMS: And if as we take

16 a quick glance at this page, being slide 2 of Hydro

17 Exhibit 129-7, a clear notable omission would be Plan

18 6?

19   MR. PELINO COLAIACOVO: Yes, and the --

20 originally last August Manitoba Hydro provided

21 financial data for seven (7) plans. Those were 1, 2,

22 4, 6, 12, 13, and 14. Now, they have provided update

23 financial information for 1 and 14, but have focussed

24 on 5 instead of 2, 4, or 6.

25   MR. BYRON WILLIAMS: Is your point --

7352

1 sir, was 5 even in that --

2   MR. PELINO COLAIACOVO: No, 5 was not

3 in the original group of financial data; that -- that's

4 my point. In -- in the original financial data that

5 was provided, 5 was not one of the plans that had

6 financial data. And so now it's -- in effect, it's a -

7 - a whole new set of financial data that -- it's not an

8 update, it's -- it's created new.

9   MR. BYRON WILLIAMS: I have a funnel

10 from my second week of cross-examination I'd like to

11 show you, but is the other plan that you just

12 referenced, Plan 12, is a plan that, again, would --

13 would give some insight into the -- the merits with and

14 without the WPS sale?

15   MR. PELINO COLAIACOVO: Plan 12, off

16 the top of my head, was a plan which included Keeyask

17 but included a later development of Conawapa. It was

18 Conawapa 31. And so the Plan 12 was compared to Plan

19 14 because of the timing of Conawapa. If -- if it was

20 Conawapa in '26 versus '31.

21   MR. BYRON WILLIAMS: And I'll suggest

22 to you, subject to check, that one (1) additional

23 difference between the two (2) plans was that Plan 12

24 did not contain the WPS sale?

25   MR. PELINO COLAIACOVO: That's correct.

 1 Because Conawapa was being delayed there was no WPS

 2 sale as part of that.

 3   MR. BYRON WILLIAMS: So again, if one

 4 were seeking insight into the relative value of the WPS

 5 sale, that might be a mechanism to --

 6   MR. PELINO COLAIACOVO: That's right.

 7 Yeah.

 8   MR. BYRON WILLIAMS: Now, on that

 9 point, sir, and I will do my best not to venture into

10 confidential information so. But -- but the WPS sale

11 was announced in late February.

12   Is that right? To your knowledge.

13   MR. PELINO COLAIACOVO: I can't speak

14 to the timing. I just -- I honestly don't recall.

15   MR. BYRON WILLIAMS: It's -- it's

16 relatively new?

17   MR. PELINO COLAIACOVO: Yes. Well,

18 yeah, and be -- be careful about this. The -- I think

19 a WPS sale has been contemplated for a long time and it

20 was under negotiation and so on. And originally we

21 were under confidentiality terms. We were made party

22 to draft term sheets and -- and the like and I think

23 there was an announcement, subsequently that there was

24 a firmer agreement.

25   MR. BYRON WILLIAMS: Okay.

7354

 1   MR. PELINO COLAIACOVO: That's the --

 2 the course of events.

 3   MR. BYRON WILLIAMS: Now, if we could

 4 go to slide 3 of your PowerPoint, MPA Exhibit 4.

 5   Sir, as a third element of Part 1 of the

 6 Preferred Development Plan, as you define it, you

 7 identify a set of export contracts, correct?

 8   MR. PELINO COLAIACOVO: That's right.

 9   MR. BYRON WILLIAMS: And under your

10 definition -- or your -- in terms of the export

11 contracts that you contemplated under Part 1,

12 presumably Minnesota Power's sale is in there?

13   MR. PELINO COLAIACOVO: Yeah, there's -

14 - there's a number of different contracts that Manitoba

15 Hydro has successfully negotiated and they continue to

16 add to that stable. And there have been a number of

17 announcements since this process started last August.

18   But I think that the point we're making

19 there is that they have -- there are a number of

20 commercial parties that they've come to agreement with.

21   MR. BYRON WILLIAMS: Recognizing that

22 you've had a chance earlier on to look at graphs of the

23 WPS sale and that the sale came after that, for the

24 purposes of your definition of Part 1, are you

25 including the WPS sale?

7355

 1   MR. PELINO COLAIACOVO: I'm not sure

 2 that the issue there is an exact list. I mean, we're

 3 not -- agreements can also fall apart, right. So just

 4 because they have a particular set of agreements today

 5 some of them will have provisions that mean they don't

 6 ultimately get executed, things change, et cetera.

 7   But they have put a lot of effort and

 8 time and resources into negotiating a number of

 9 contracts with a number of different parties. And

10 hopefully will negotiate some more, right, before

11 Keeyask actually comes into service.

12   MR. BYRON WILLIAMS: And the reason I'm

13 -- I'm asking, sir, is: Can you point me to anything

14 on the public record which would demon -- demonstrate

15 that Part 1, as you define it, is demonstratively

16 better with the WPS sale or without it?

17   MR. PELINO COLAIACOVO: So a number of

18 the plans assumed the WPS sale, but the assumptions

19 weren't necessarily equivalent to reality. And so what

20 would be required to have a definitive understanding

21 that is a comparison of the same plan then and with the

22 new information, so.

23   MR. BYRON WILLIAMS: And so you're not

24 in a position in terms of evidence on the public record

25 to make that judgment?

7356

 1   MR. PELINO COLAIACOVO: No.

 2   MR. BYRON WILLIAMS: I have to think if

 3 I want to go one (1) step further, but I'll put that

 4 note aside for a moment.

 5   THE CHAIRPERSON: Mr. Williams, we've

 6 gone beyond what we originally had anticipated as far

 7 as close for the day, namely before 3:00 (sic) but, you

 8 know, is -- have you got a line of questioning that

 9 you'd like to finish before we -- we adjourn? I'm just

10 trying to be mindful of -- of the time available to us

11 tomorrow, as well, so...

12   MR. BYRON WILLIAMS: That's not a bad

13 point to stop, sir. I have --

14   THE CHAIRPERSON: Okay.

15   MR. BYRON WILLIAMS: -- about

16 notionally what might only be six (6) or seven (7)

17 minutes but it -- it's a little more argumentative, so

18 it might turn into a bit more, so.

19   THE CHAIRPERSON: Well, it might be

20 refreshing, you know. So if it's only six (6) or seven

21 (7) minutes, why don't we do it, and then we can finish

22 at five o'clock.

23   MR. BYRON WILLIAMS: I don't expect the

24 witness to be argumentative, but...

25

7357

1 CONTINUED BY MR. BYRON WILLIAMS:

2   MR. BYRON WILLIAMS: Turning to slide 5

3 of your PowerPoint today, sir, and I recognize that the

4 conclusion at the bottom of the page was pre new

5 information, but you make the suggestion based on the

6 information that you had prior to the new information.

7   That would be a high burden to dem -- to

8 demonstrate that alternatives were preferable to the

9 bird in the hand, correct?

10   MR. PELINO COLAIACOVO: That's correct.

11   MR. BYRON WILLIAMS: And you cite a

12 number of factors, including the billion plus in sunk

13 costs?

14   MR. PELINO COLAIACOVO: That's correct.

15   MR. BYRON WILLIAMS: And you also speak

16 of the lost -- the risk of lost commercial reputation

17 for Manitoba Hydro?

18   MR. PELINO COLAIACOVO: That's right.

19   MR. BYRON WILLIAMS: And I believe in

20 your direct evidence you made a suggestion that when

21 one enters into a contract the party on the other side

22 is assuming that you've got the ability to execute a

23 con -- that contract.

24   MR. PELINO COLAIACOVO: I think that's

25 fair, yes.

7358

1   MR. BYRON WILLIAMS: And I believe in

2 your discussion with the panel you said, Your word is

3 your bond.

4   Do -- do you recollect those words?

5   MR. PELINO COLAIACOVO: The -- the --

6 what I was quoting was a typical cliche that applies to

7 entrepreneurs but it's an important commercial reality

8 for corporations and institutions as well.

9   MR. BYRON WILLIAMS: Okay. And for

10 lawyers. Oh, you'll know that as well, won't you.

11   Now, in terms of your understanding of

12 the export contracts that Manitoba Hydro has executed,

13 I would be correct in suggesting that a number of them

14 are -- are premised. There was a condition precedent

15 that there be regulatory approval?

16   MR. PELINO COLAIACOVO: Yes, that's

17 correct, which is standard. It's -- it's typical in --

18 in all these kinds of agreements.

19   MR. BYRON WILLIAMS: So would it be

20 correct to interpret Hydro's word in that context as

21 being, if we get regulatory approval we will build it?

22   MR. CHRISTIAN MONNIN: I don't --

23 sorry, I don't think Mr. -- I don't think the witness

24 is here to be able to speak to what Hydro's position

25 would be with respect to the contract.

7359

 1   MR. BYRON WILLIAMS: Well, I think this

 2 witness has invited this line of questioning because

 3 he's made the suggestion that there's a risk to their

 4 commercial reputation, and he said it's because it's

 5 based upon an assumption to execute it.

 6   So let me try my language a little bit

 7 differently.

 8   MR. CHRISTIAN MONNIN: Well, let me

 9 just expand my reticence here. You're referring to

10 conditions prec -- condition precedence within the

11 contract. And I just caution that going any further

12 within the intent and meaning and language of the

13 contract may be swaying into commercially sensitive

14 information. And I just put that flag out there as you

15 proceed.

16   MR. BYRON WILLIAMS: I'll -- I'll

17 recognize a pink flag. And...

18   MR. CHRISTIAN MONNIN: I -- I prefer

19 salmon.

20   MR. BYRON WILLIAMS: I accept that,

21 sir.

22

23 CONTINUED BY MR. BYRON WILLIAMS:

24   MR. BYRON WILLIAMS: But my point, sir,

25 is that if -- if a regulator, in its no doubt infinite

7360

1 wisdom, decided not to approve a plan, that wouldn't

2 really be breaking Hydro's bonded word because -- do

3 you understand my point, sir?

4   MR. PELINO COLAIACOVO: Absolutely.

5 There are standard terms and conditions that are

6 typically used in a variety of different kinds of

7 contracts and arrangements. And in -- in all cases

8 where you're dealing with endeavours that are regulated

9 in some manner, be they economic regulation or

10 environmental regulation or, you know, any other type

11 of administrative oversight, contracts are going to

12 have out clauses that say the contract will not operate

13 if it can't operate because a government body has

14 intervened.

15   That's a normal requirement. And so

16 from a legal perspective would there be a consequence

17 if a project was turned down? No, absolutely not. But

18 the reality is, in the course of entering into long

19 negotiations where parties expend substantial resources

20 over a long period of time they try to come to an --

21 both parties try to come to an understanding of the

22 other party's situation and you form expectations and

23 make assumptions about the ability to execute.

24   And so even if the legal contract says

25 obviously the contract is null and void if 'X' happens,

7361

1 commercially, you're going to be sending signals about

2 whether 'X' is realistically a risk or not. And the

3 other party on the other side is going to be making --

4 is going to be looking for those signals and making

5 assumptions.

6   It's -- legally, there would be no

7 consequence. Commercially, there would be a

8 consequence. Because I think it's fair to say that the

9 assumption of commercial partners is going to be that

10 Manitoba Hydro would only be knocking on the door if it

11 was realistic to do these things.

12   MR. BYRON WILLIAMS: I hear you, sir.

13 I'm a little puzzled. First of all, you're -- you're

14 not suggesting that you -- you are not suggesting that

15 Manitoba Hydro made any representations that it had a

16 regulatory fait accompli?

17   MR. PELINO COLAIACOVO: No.

18   MR. BYRON WILLIAMS: And you're not

19 suggesting that its counterparties would be so

20 imprudent that they would assume that Hydro had a

21 regulatory fait accompli, are you?

22   MR. PELINO COLAIACOVO: No. The -- how

23 should I put this? There is always a risk that

24 commercial enterprise in a certain jurisdiction goes

25 sour, all right? Until it actually goes sour, the

 1 assumption -- the natural entrepreneurial assumption is

 2 to be optimistic.

 3   Once it goes sour, and there is a piece

 4 of evidence that, you know, things don't work in that

 5 place, there is a natural commercial view to expect the

 6 possibility -- the downside possibilities to be greater

 7 than they objectively are, right? So commercial

 8 reality is not necessarily about objective calculations

 9 of probability. It's about perception.

10   MR. BYRON WILLIAMS: Fair enough.

11   MR. PELINO COLAIACOVO: So the -- the

12 point that I was making here is that if the

13 arrangements don't go ahead for whatever reason, it's

14 going to be harder to get new arrangements in the

15 future, because -- and -- and there will be a cons -- a

16 cost consequence to that over the long-term, right?

17   The commercial view of doing business

18 with Manitoba Hydro will change. There will be

19 consequences, particularly if, you know, the perception

20 is that the decision was made without very, very good

21 reasons, which goes to the burden issue. If another

22 alternative is much better, then people would

23 understand that, all right? If another alterative is

24 only equally as good, well then, people may not

25 understand it, and -- and may not see the logic of it.

7363

1   MR. BYRON WILLIAMS: Okay. This is

2 helping, and just a couple last questions on this.

3 Just to be clear, you're not suggesting that a -- a

4 regulator acting in good faith is somehow obliged to

5 uphold Manitoba Hydro's professional reputation?

6   MR. PELINO COLAIACOVO: No. But what I

7 was trying to get at is what -- what are the -- under

8 what grounds commercially would it be worth walking

9 away from this real commercial opportunity? And an

10 alternative, which is one dollar ($1) better is not

11 going to be sufficient grounds, and it wouldn't be

12 perceived to be sufficient grounds by the market.

13   MR. BYRON WILLIAMS: So without getting

14 into the judgmental call of significance, a change in

15 major assumptions --

16   MR. PELINO COLAIACOVO: Yeah.

17   MR. BYRON WILLIAMS: -- would be

18 legitimate grounds.

19   MR. PELINO COLAIACOVO: That's right.

20   MR. BYRON WILLIAMS: Okay. Okay, Mr.

21 Chair, that was -- salmon and pink flags

22 notwithstanding, fairly painless, and I thank the

23 witness.

24   THE CHAIRPERSON: Thank you. Just to

25 confirm that there's no other additional business

1 before we adjourn for the night? There not being any

2 hands being raised, I would suggest that we rec -- we

3 adjourn for the day, and we'll see each other again --

4 I'm sorry, Mr. Williams...?

5   MR. BYRON WILLIAMS: I just wonder if

6 it might be prudent to have a little chat about time.

7 I believe Mr. Orle has no questions. My -- My Learned

8 Friend Ms. Saunders, I think, has five (5) to ten (10)

9 minutes of questions. My -- My Friend to my physical,

10 if not ideological left has more than a few questions.

11   So I -- there is some -- just in terms

12 of timing, I've -- I wrote up quite a few just in the

13 course of listening to the direct, and I -- do we have

14 a -- I believe Ms. Boyd has about an hour on the -- the

15 public record. I -- I think the panel may need some

16 guidance in terms of what you expect for CSI.

17   MR. BOB PETERS: The question of CSI

18 has been discussed to some extent, and I believe the

19 entire MPA report is on the public record, and there

20 would have been some CSI generated as a result of some

21 of the IRs, including Mr. Kinder's model runs on some

22 of the answers, I believe.

23   I can indicate that in what would only

24 be, at this point, tangential discussions with My

25 Friend Ms. Mur -- Ms. Boyd. We don't expect to have

7365

1 very many questions at this point, if any, in CSI, and

2 we would need to hear from Mr. Monnin as to whether he

3 -- his witnesses will be making a CSI presentation.

4   So to answer your question, Mr.

5 Williams, the afternoon that we had booked three (3)

6 hours for CSI, we're probably closer to an hour, if

7 any. And it would be subject to what Mr. Monnin is --

8 is intending to do with his witnesses, which they may

9 be finalizing tonight for all we know.

10   MR. BYRON WILLIAMS: If I had the

11 permission of the panel I'd probably want somewhere

12 between thirty (30) and forty (40) more minutes

13 tomorrow morning, in that ballpark.

14   THE CHAIRPERSON: Okay. So thank you

15 for that discussion. So I -- with that, I think we're

16 adjourned for the evening and have a good evening,

17 everyone. We'll see each other again tomorrow morning

18 at nine o'clock. Thank you.

19

20 --- Upon adjourning at 5:06 p.m.

21

22 Certified correct

23

24 _____

25 Cheryl Lavigne, Ms.

$

$1 7216:12
7285:15,24
7363:10

$1.4 7251:5
7255:2
7281:17
7283:7
7284:19
7285:1

$10
7292:18,20

$20,000
7183:4

$224 7181:18

$290 7248:9

$4 7283:11

$4.2 7204:19

$400 7208:4

$457 7203:16

$8 7317:6

$80,000
7182:24

$850 7247:15

1

1
7113:9,15,
23 7118:6
7123:10
7126:6
7129:13,22
7132:25
7133:1
7145:9,10,
11 7168:1
7175:18
7180:16
7187:7,23
7188:19,21
7190:6
7191:12
7195:12
7196:6
7199:3,4
7202:11
7206:16
7211:18

7212:13
7216:1
7223:19
7231:19
7233:8
7239:11
7250:18
7253:6
7261:5
7262:21
7263:22
7267:7
7268:25
7269:5
7275:8
7277:4,7,1
3,19
7278:4
7281:3
7283:19
7287:7,18
7288:3
7292:22
7293:5
7296:7
7297:23
7298:4
7299:12,13
7304:16
7309:1
7311:5,7
7313:17
7314:23
7319:6,20
7320:17
7321:10,17
7322:16,18
,19
7324:21
7328:20
7329:15
7330:4
7332:4
7333:9
7334:24
7335:1
7337:19
7339:20
7346:8
7347:15
7348:8
7349:19
7350:24
7351:11,21

,23
7352:22
7354:5,11,
24 7355:15
7356:3

1,000 7290:5

1,300
7203:20

1.2 7145:11

1.2H 7240:21

1/2
7235:13,24
7283:11,12
7330:6

1:00 7195:21
7196:22

1:15 7222:3

1:25 7222:4

10 7158:12
7186:5
7187:20
7194:15
7203:10
7206:4
7213:15,17
,21 7217:3
7266:8
7279:21,25
7293:17
7294:7
7301:11,15
7302:14
7316:20,24
7318:1,5
7336:7,14
7341:15
7364:8

10:00
7112:17

10:29
7158:14

10:45
7158:15

100
7200:13,14
7270:7
7272:3
7288:5,12

7290:11
7301:11

107 7210:14

109 7247:14

11 7281:1
7337:15

11:27
7196:25

113 7210:9

114 7213:19
7217:1

12 7150:12
7190:17
7210:12
7224:4
7296:7
7332:19
7341:23
7351:22
7352:12,15
,18,23

12:45
7196:16

12:46 7197:1

129-7
7344:14
7351:17

13 7176:6,18
7186:1,18
7190:13
7351:22

13.5 7186:1

13.6 7183:8
7186:17
7187:25

137 7280:12

14 7223:19
7240:21
7249:6,10
7296:7
7316:4
7345:9
7348:8
7351:10,22
,23
7352:19

15 7194:16

7197:21
7271:2
7290:20
7301:12,16
7302:15
7318:1
7336:7

150 7211:1

16 7108:24
7170:17
7215:25

160 7188:3

17 7328:4

175 7177:1
7185:24

178 7280:14

18 7213:19

180 7177:2

182 7183:6

19 7214:6
7305:5

1900 7205:2

1907 7210:13

1988 7201:1

1990 7201:3

1990s 7205:2

1st 7206:1

2

2 7129:23
7130:10,18
,20
7131:8,9
7143:17
7153:17
7183:24
7197:13
7208:1
7218:1
7221:14
7232:15
7233:14
7235:16
7239:11
7246:19
7258:17

7262:20
7263:23
7267:15
7279:19
7281:5
7292:13
7296:8,10,
12,14,15
7297:7
7304:21
7324:3
7342:25
7344:15,25
7345:2
7346:4,8,1
7,18
7347:3,5,1
5,20
7348:1,15,
20,23,25
7349:2,7,1
8
7350:3,11,
12,20
7351:16,21
,24
7352:23

2.3 7204:21

2:49 7280:1

20 7114:2
7155:22
7156:4
7197:21
7207:23
7208:3
7271:2,5,1
3
7291:11,13
,15,16,21,
24,25
7292:5,12,
19 7298:20
7305:17
7312:7

2000 7200:2

2004 7205:25
7213:14
7317:5

2012 7200:3
7203:14

2013

7111:3,8
7198:1,4
7214:4
7228:5,9
7229:15
7234:4
7345:1

2014 7108:24
7111:4
7176:15
7198:7,9
7206:1
7210:10

2016 7214:5

2018 7120:22
7121:10,19

2019 7185:8

2023 7296:9

2042
7249:12,14

20th 7111:7
7228:5,9
7229:15
7234:4

22 7160:25

23 7138:16
7350:23,25

23-1 7198:2

24/7 7325:23

25 7114:1
7152:2
7211:2
7233:10
7257:6
7271:1
7274:20,21
7277:7
7282:21
7308:24
7350:23,25

250
7343:7,11,
25 7347:2

25th 7185:4

26
7350:23,25
7352:20

260 7204:6

261 7204:2

27
7266:12,16

28 7152:21
7153:13
7154:12
7155:1

2H 7132:17

_____

_____
3
_____

3 7124:2
7135:7
7137:12
7139:20
7150:25
7151:6
7155:4,15
7204:2
7223:19
7244:8
7246:9
7252:21
7253:3,10
7272:19
7330:16,19
,22
7341:24
7351:10
7354:4
7365:5

3,000
7266:20

3.5 7170:7
7207:24

3.9 7207:23

3.95 7206:1

3:00 7356:7

3:05 7280:2

30 7145:1
7147:19
7170:6
7200:13
7251:15
7298:21
7304:23
7305:1
7365:12

308 7305:2

31
7352:18,20

31st 7247:15
7248:10

330 7108:22

34 7167:24

350 7317:8

360 7164:24

37 7214:5

38 7150:11

386 7345:6

39 7190:9

_____

_____
4
_____

4 7135:7
7139:20
7168:18,24
7184:2
7227:25
7249:24
7296:7,12
7328:4
7332:7
7343:2,6,7
,13
7346:22,25
7351:22,24
7354:4

4,300
7203:18

4,317
7280:11

4.1.1
7151:16

40 7152:13
7153:8
7177:11
7182:12
7205:25
7213:15
7231:24
7365:12

400 7108:22
7208:2

400,000

7210:20

42,000
7203:24

45 7177:11
7182:12
7345:10

45,000
7210:11

48 7270:24
7271:7
7272:11

499e 7131:9

_____

_____
5
_____

5 7133:18,20
7135:7
7139:20
7207:21,23
7223:19
7228:5
7235:13
7253:5
7263:14
7271:13
7283:12
7316:21
7332:8
7336:6
7346:3,5
7348:1,8,1
4
7351:11,24
7352:1,2,5
7357:2
7364:8

5,000 7217:3
7289:25
7290:6,24
7301:20
7305:25
7306:20

5,500
7289:24

5:06 7365:20

50 7298:22

500 7211:3
7300:19

51 7213:18

7217:1

52
  7113:10,15

53 7113:20

6
---
6 7228:13
  7230:22
  7235:1
  7263:12
  7294:23
  7296:7,13
  7319:14
  7331:10,15
  ,19,24
  7332:10
  7336:13
  7343:3,7,8
  ,13 7344:1
  7345:6,15
  7346:3,22
  7348:1,14
  7351:18,22
  ,24
  7356:16,20

6.3.2
  7159:19

60 7213:4

600
  7290:4,5,6

630 7217:4

65 7115:15
  7120:18
  7121:7

65,000
  7145:2

67 7159:19

67/'13
  7197:14

7
---
7 7211:19
  7235:24
  7237:17
  7245:23
  7318:14
  7330:6,21
  7331:11,14

,20
7336:14
7351:21
7356:16,21

70 7177:10
7213:4

7108 7108:25

7111 7110:3

7113 7110:9

7132 7110:10

7144 7110:11

7158 7110:12

7175 7110:13

7198
  7111:3,4

7199 7110:15

72 7203:16

7210 7110:16

7228
  7111:5,8,1
  1

7229 7110:22

7280 7111:12

7323 7110:23

7365 7108:25
  7110:25

74 7125:10

75 7114:1

75:25
  7114:13,17

750 7246:22
  7247:6
  7253:7,19
  7254:1
  7256:3,13
  7257:25
  7267:16
  7269:20
  7270:4
  7284:11
  7293:7,21
  7294:2
  7295:22
  7304:15,22
  7305:1

7307:10
7343:8,10
7344:2
7347:2

77 7126:22

78 7249:7
  7265:13,14
  7271:7,11,
  14 7272:10

7a 7230:21

7b 7234:24

8
---
8 7230:21
  7231:23
  7232:3,10,
  21 7234:24
  7237:17,25
  7262:7
  7318:14
  7336:14

80 7111:12
  7140:10
  7280:10,18

800 7211:12

83 7135:5

85 7306:1

9
---
9 7126:22
  7203:9
  7231:23
  7336:14

9:16 7112:1

9:40 7130:23

9:43 7130:24

90 7306:1,21

91,000
  7203:22

95 7289:20
  7305:22

98 7289:6

99 7265:9
  7266:18

A
---
a.m 7112:1
  7130:23,24
  7158:14,15
  7196:25

ability
  7114:23
  7190:2
  7224:24
  7225:5
  7241:13
  7255:5,12,
  19 7259:19
  7260:7
  7284:3,7
  7285:5
  7290:14
  7293:24
  7294:1
  7295:7
  7357:22
  7360:23

able 7133:17
  7137:2
  7141:12
  7166:20
  7171:11
  7208:18
  7224:12
  7287:4
  7291:18
  7295:24
  7358:24

Abor 7162:25

Aboriginal
  7132:20
  7133:8,19
  7134:3,16,
  19 7135:1
  7136:24
  7137:6
  7138:12
  7139:2,16
  7144:10
  7146:19
  7147:6,10
  7162:25
  7165:16
  7166:5
  7167:6,12,
  18

7170:8,10
7172:9

Aboriginals
  7120:12
  7147:12

absolute
  7314:18
  7315:3

absolutely
  7171:21
  7187:10
  7189:2
  7320:3
  7360:4,17

absorbed
  7127:6
  7189:18

academic
  7170:13
  7171:12

accept
  7239:5
  7244:6,23
  7284:19
  7359:20

acceptable
  7198:12,13

accepted
  7236:10
  7254:19,25

access
  7139:25
  7230:15
  7237:9
  7243:15,23
  7259:14,19
  7260:6
  7305:16
  7318:21

accident
  7316:13

accommodate
  7113:4
  7122:17

accompli
  7361:16,21

accomplish
  7195:10

accord
  7236:12

accordance
  7229:13
  7234:3

according
  7236:12
  7350:18

account
  7142:11,12
  7148:21
  7176:7
  7177:19
  7188:22
  7223:22
  7279:10
  7281:13,21
  7282:20
  7283:9
  7284:21
  7285:1
  7342:9

accurate
  7129:8

achievable
  7128:22
  7157:6
  7334:21

achieve
  7165:16
  7207:2,16
  7217:8
  7274:20,23
  7276:10,19

achieved
  7207:4
  7217:12
  7254:20
  7274:1,15

achieves
  7259:17

achieving
  7239:22

acknowledge
  7188:1

acquisition
  7235:21

acquisitions

  7231:10
  7235:22

across
  7129:12
  7152:16
  7154:1
  7156:3
  7257:12
  7265:5
  7266:20
  7273:21
  7297:1
  7319:2
  7340:5
  7346:23

across-the
  7206:5

Act 7134:7

acting
  7363:4

action
  7112:15
  7124:9
  7228:23

actionable
  7249:19
  7256:19
  7335:23

actions
  7208:7

activities
  7165:25
  7174:4
  7295:6

activity
  7203:7

actors
  7261:15

actual
  7171:16
  7187:15
  7193:23
  7246:20

actually
  7138:17
  7145:14
  7148:10
  7172:21

7173:8,19
7176:24
7177:24
7185:14
7188:23
7190:20
7191:19,25
7192:6
7207:2
7218:17
7237:12
7241:17
7243:2
7253:9,23
7255:12
7256:7
7261:5
7262:8
7264:21
7267:14
7269:1
7274:12,18
7275:4
7284:4
7289:2,4,2
1
7291:2,23
7292:3,4,9
7295:14
7302:18
7304:3
7306:3
7309:6,23
7311:2,12
7321:5
7322:9
7331:21
7332:8,14
7337:15
7339:11
7341:16
7350:5
7355:11
7361:25

adapt
  7326:15

add 7206:11
  7234:19
  7236:5
  7283:12
  7303:18
  7354:16

added 7207:3

adding
  7217:5
  7293:21
  7294:2
  7297:8
  7301:19
  7304:19

addition
  7204:4,8
  7211:3
  7216:25
  7230:6,22
  7232:18,25
  7233:2
  7234:24
  7241:1
  7246:5
  7247:12
  7249:1
  7252:16
  7263:18
  7266:22
  7294:9

additional
  7133:12,18
  7171:18
  7216:2
  7217:4,13
  7225:10,11
  ,24
  7242:15
  7245:25
  7255:23
  7257:20
  7267:11
  7268:21
  7275:20,21
  7293:21
  7333:18,25
  7339:23
  7347:19
  7349:19
  7351:9
  7352:22
  7363:25

additionally
  7250:8

address
  7112:11
  7117:25

7126:11
7128:6
7141:19
7143:6
7164:2
7168:6
7175:6
7190:5
7192:24
7193:1
7200:8
7245:19,21
7255:21
7270:14,22
7271:22
7283:16
7288:15

addressed
  7116:16
  7118:4
  7123:3
  7126:16
  7143:2
  7174:20
  7189:21
  7230:14
  7261:6,21
  7262:5
  7279:9
  7282:10
  7283:8
  7284:17

addresses
  7161:6
  7246:3

addressing
  7113:24
  7126:15
  7259:11
  7317:22

adds 7293:24

adequate
  7300:2

adequately
  7124:12

adjourn
  7356:9
  7364:1,3

adjourned
  7365:16

adjourning
7365:20

adjusted
7350:18,21

administrati
ve 7227:10
7242:24
7360:11

Administrato
r 7232:15

advance
7305:5

advancement
7344:3

advances
7205:16

advancing
7300:3

advantage
7213:12

advantageous
7294:21

Adverse
7184:2,7

advice
7222:16
7231:12
7232:12,13
7237:14
7243:9
7245:25
7246:12
7309:21,25

advise
7184:6
7195:5
7240:9
7280:11

advised
7112:16

advising
7281:7

advisor
7191:13
7313:19

advisors
7110:18

7111:7,10
7112:15
7193:6
7227:8,17
7228:4,8,1
6
7229:6,25
7231:4
7233:20
7235:6,12,
17 7241:23
7245:12
7256:22

advisory
7162:13
7167:25
7168:5
7231:7
7232:9
7237:3

Affairs
7148:10

affect
7127:3
7140:23
7141:3
7204:22
7241:12
7260:5
7264:7
7285:4,5

affected
7127:5
7128:4
7163:6
7258:19
7281:25
7291:1
7330:12

affecting
7207:7

affects
7260:22
7341:11

Affirmed
7110:19,20
7227:18,19

afford
7143:13

afternoon

7112:14
7193:5,18
7222:8
7242:21
7365:5

against
7289:16
7293:10
7329:13

agencies
7114:6,13,
14 7168:15
7239:13,19
,21
7240:2,13,
15 7259:24
7308:12
7309:13,15
,16,20,22
7310:1,4

agency
7116:20
7312:12
7313:8

agenda
7226:2

aggressive
7162:8

aggressively
7140:4
7250:14

ago 7153:17
7210:14
7213:21
7243:2
7247:13
7342:16

agreed
7197:24
7337:10

agreement
7118:19,20
7119:12
7122:25
7169:17,24
7183:23
7184:1,7
7305:9
7353:24

7354:20

agreements
7122:23
7126:2
7131:18
7169:10
7171:8
7184:2
7185:18,19
7253:9
7254:23
7256:7
7284:12
7335:23
7355:3,4
7358:18

ahead
7123:4,16
7250:8
7252:11
7267:24
7283:1
7285:25
7301:6
7302:20
7307:14
7324:15
7343:14
7362:13

air 7285:22

al 7206:14
7333:19

alarming
7216:10

Alberta
7179:14
7181:19
7232:15
7296:25
7297:3
7328:21,22

alive
7250:25

alleviate
7115:6

all-in
7213:25
7278:10
7279:1
7283:11

7321:20
7330:3

allocated
7178:8
7182:7

allocation
7263:8

allow 7113:4
7117:24
7188:25
7201:14
7214:18
7294:10
7295:15

allowed
7187:8

allowing
7210:3

allows
7243:9
7295:9
7322:14

alone
7220:25

already
7113:12
7131:22
7174:8
7216:12
7245:10
7246:1
7251:5
7254:1
7290:1,25
7293:13
7316:15
7317:12
7334:18
7348:11

alter 7335:3

alterative
7307:6
7362:23

altered
7335:10

alternative
7133:5
7136:4

7172:17
7206:14
7207:14
7252:24
7255:20
7256:9,15
7266:21
7267:22
7268:5,6
7275:4
7281:13
7283:10
7284:17,18
,23
7285:11
7286:24
7298:13
7307:8,9,1
2 7308:3
7329:21
7331:19
7335:9
7362:22
7363:10

alternatives
7108:8
7122:6
7123:20
7132:19
7208:4
7209:21
7216:1
7229:8
7230:4,9
7233:22
7250:2
7252:6,24
7256:10
7260:16
7261:8
7263:14,19
7274:1,8
7278:15,24
7282:24,25
7308:2
7357:8

am 7118:21
7129:16
7147:23
7151:25
7157:24
7164:23
7171:10

7172:17
7184:3
7187:8
7199:15

ambivalence
7308:13

amenable
7305:8

amendment
7254:20

amendments
7254:24

America
7151:1
7199:21
7200:18
7207:18
7209:14
7211:6
7212:12
7213:23,24
7221:5
7288:10
7316:9
7319:2
7340:6

American
7198:21
7214:6
7215:12
7317:20
7325:3,14
7326:5,10,
23

among
7190:24
7207:10,13
7208:14
7328:17

amongst
7220:4
7263:8
7269:5
7291:16
7319:21
7340:15

amount
7155:16
7178:15
7193:12

7194:1
7216:14
7264:1
7276:17
7277:25
7282:4
7297:17
7305:18
7315:13

amounts
7155:9
7164:24
7248:20
7259:13
7280:12
7300:7

Amsted
7200:19

analysis
7122:9
7123:22
7124:3
7127:21
7133:4
7135:6
7136:3,8,2
1 7142:12
7145:15,18
,20,22
7146:13,14
7147:5,9
7148:21
7150:3,22
7154:13
7156:9,24
7157:11
7172:15
7176:8
7177:19
7178:11
7187:5
7223:11,17
,22
7237:14
7238:8,20
7241:9
7245:19
7249:8
7261:10,11
7263:10,24
7264:1,3,1
6

7265:4,14
7267:9
7269:18
7270:20
7274:7
7277:12
7278:6
7296:11
7298:4,10
7299:2
7303:18
7304:16,18
7322:8
7323:1
7332:14
7333:25
7339:8
7340:12
7341:20
7342:14
7343:12
7344:1,8,2
5 7347:21
7350:5,6,1
6 7351:9

analyst
7235:15,19
7312:12

analysts
7254:12

analytical
7348:13

analytically
7323:5

analyze
7258:9
7292:3

ancillary
7294:10

and/or
7167:13

Anderson
7109:20

announced
7353:11

announcement
7247:9
7306:13
7353:23

**announcement
s** 7354:17

announcing
7306:18

annual
7140:5
7186:2

annually
7203:16

answer
7117:11
7130:14
7179:7
7191:1
7200:9
7365:4

answered
7133:16

answers
7273:21
7364:22

anticipate
7194:25
7325:13

anticipated
7356:6

anticipating
7326:7

Antoine
7109:17
7197:11
7198:6,11,
15 7224:1
7239:9,24
7240:19
7241:19
7242:13

anxious
7223:21

anybody
7244:8
7339:11

anymore
7307:15

anyone's
7286:23

anything

7132:1
7133:19
7142:25
7192:24
7193:1
7195:7
7226:5
7238:17
7324:5
7345:23
7355:13

anyway
7287:9

anyways
7214:12

anywhere
7213:18
7317:7
7341:21

apart
7293:24
7294:1
7303:21
7307:3
7338:20
7355:3

apologies
7153:22
7164:11

apologize
7113:11
7121:4
7131:17,20
7185:2
7196:17
7197:6
7323:23

apology
7153:16

apparent
7249:3
7327:11

appear
7131:18
7193:19
7196:16
7222:24
7253:13
7268:18
7274:6

7275:1
7292:20
7340:14
7348:18

appearance
7113:7

APPEARANCES
7109:1

appeared
7242:25
7343:13

appears
7140:9
7216:14
7224:5
7247:2
7253:3,9
7271:24
7304:9

Appendix
7135:5

applicable
7230:7
7273:20
7275:25
7276:23

applications
7153:12
7199:25

applied
7125:21
7158:3
7177:21
7237:18

applies
7322:2
7358:6

apply 7237:6
7275:1
7290:2
7321:16

appointed
7112:10

appr 7320:17

appreciate
7130:3
7191:24
7195:21

7221:18
7245:1
7286:15

appreciated
7286:21

appreciation
7221:15

apprehended
7325:3

approach
7123:23
7125:13
7126:5
7161:4
7163:18
7170:10,19
7307:19

approached
7215:14

appropriate
7118:7
7158:11
7215:15
7263:7
7273:5,18
7277:17
7298:5

**appropriatel
y** 7275:1

approval
7358:15,21

approvals
7247:5
7248:13
7250:17
7257:1

approve
7117:6
7360:1

approving
7250:6,11

**approximatel
y** 7145:2
7181:18
7203:18
7210:20

April
7108:24

7111:4
7198:7,9
7206:1

arbitrarily
7298:22

arbitrary
7300:15
7302:16
7336:16

arc 7212:20
7219:16

area 7131:20
7134:8,9,1
4,17
7138:25
7139:1,17
7141:5,25
7159:5
7233:5
7241:3,23
7287:18

areas
7123:18
7128:10
7132:11,13
7134:13,14
7135:2
7136:13,18
7137:21
7138:18
7139:2
7159:3
7189:8
7204:12
7215:24
7220:23
7229:24
7231:18,20
7234:17

aren't
7179:15

arguable
7343:24

argue
7293:22
7313:23

argued
7293:23

arguing
7108:24

7349:2,4

argument
7179:11
7209:18
7307:5
7308:11
7314:1
7317:1
7318:6
7330:18

**argumentativ
e**
7356:17,24

arise
7118:13
7168:7
7262:17
7277:16
7339:3,5
7347:4

arisen
7245:23

arrangement
7306:23

arrangements
7248:14
7254:18,22
7255:11
7307:3,10
7325:20
7360:7
7362:13,14

arrived
7195:18

art 7336:2

articles
7129:23
7153:23

articulate
7329:9

artificially
7167:18

ascertain
7126:7

aside
7220:25
7287:11
7356:4

aspect
  7166:19
  7182:15
  7188:9
  7241:8,15
  7340:20

aspects
  7114:19
  7164:5
  7229:16
  7234:5
  7254:4
  7287:6

assessment
  7134:7
  7136:23
  7138:4
  7139:13
  7161:11,13
  7177:17
  7187:1
  7203:14

assessments
  7250:16
  7295:25

asset
  7238:24
  7289:16,17
  7294:24
  7295:1,3,8
  ,9 7301:11

assets
  7232:24
  7238:15,25
  7289:15,23
  7290:16
  7295:12,14
  ,15,17,19

assign
  7293:13

assigned
  7195:20

assignment
  7232:14
  7233:9
  7259:14

assignments
  7231:11
  7232:10,15
  ,21

  7233:13
  7237:23
  7238:13,19
  7240:6
  7242:1,10

assist
  7143:24
  7166:21
  7170:13
  7171:17
  7229:7
  7233:21
  7239:21

associate
  7235:17,19

associated
  7116:9
  7142:16
  7151:19
  7161:7
  7179:4
  7209:2
  7246:22
  7247:18
  7252:15
  7256:14
  7328:19
  7333:6

association
  7152:4
  7200:11

association'
  s 7201:4

assum
  7274:11

assume
  7151:10
  7160:8
  7168:23
  7181:20
  7182:1,3
  7189:15
  7191:7
  7277:18
  7278:6
  7336:1
  7361:20

assumed
  7122:14
  7136:14

  7146:8
  7159:13
  7180:16
  7181:21
  7188:5
  7250:13
  7303:14
  7355:18

assumes
  7178:1
  7180:2

assuming
  7170:12
  7299:18
  7357:22

assumption
  7125:25
  7159:12,24
  7160:1
  7169:3
  7178:25
  7255:12
  7274:10,11
  7277:2,12
  7359:5
  7361:9
  7362:1

assumptions
  7123:19
  7160:14
  7178:12,22
  7180:3,17,
  23 7216:23
  7274:14
  7355:18
  7360:23
  7361:5
  7363:15

assure
  7331:5

assured
  7225:22

attached
  7335:16

attempt
  7118:8
  7127:15
  7263:2

attempted

  7192:6

attend
  7222:22,23
  ,25 7245:2
  7280:21

attended
  7197:20

attention
  7145:9
  7168:25
  7328:9
  7342:3

attracted
  7211:4
  7306:16
  7343:1

attracting
  7281:23

attractive
  7201:14
  7283:14
  7285:17,19
  7296:12
  7307:6
  7308:3
  7316:22
  7329:16
  7343:13
  7344:4
  7346:13
  7349:12,18
  7350:2

attractivene
  ss 7283:16
  7340:2

August
  7224:7
  7249:10
  7351:20
  7354:17

authority
  7116:15
  7117:20

availability
  7275:19

available
  7143:6
  7145:23,25
  7155:3

  7156:2,21
  7157:18
  7193:12
  7195:13
  7205:15
  7207:17
  7208:5
  7214:2
  7217:22
  7225:14
  7226:1
  7238:14
  7246:14
  7248:7
  7257:19
  7258:7
  7265:8
  7266:9
  7269:8
  7272:3
  7276:13
  7299:21
  7302:13
  7303:25
  7307:8,9,1
  2 7332:21
  7345:19
  7348:4
  7350:5
  7356:10

avenue
  7108:22
  7287:2

average
  7203:21,24
  7265:9
  7272:18
  7273:4
  7318:14

averages
  7265:16

averaging
  7211:1
  7265:15

avoid
  7214:13

avoiding
  7214:15
  7215:4

await 7227:1

awarded
  7165:12

aware
  7114:10
  7117:23
  7118:20,21
  7120:5
  7121:13
  7122:11
  7129:16,20
  7132:15
  7141:13
  7147:17,18
  ,23 7149:4
  7160:3
  7181:22
  7183:24
  7184:3
  7185:9,10
  7193:16
  7225:19

away 7168:25
  7181:5
  7216:22
  7255:1
  7257:20
  7259:2
  7283:25
  7307:25
  7322:21
  7335:22
  7363:9

awful
  7289:23

———————
B
———————
background
  7127:7
  7145:4
  7232:2
  7233:16

backup
  7318:21

bad 7291:24
  7292:5,12,
  19 7313:13
  7356:12

bait 7129:19

balance
  7281:20

  7294:20

balances
  7116:23

balancing
  7289:15

ballpark
  7365:13

balm 7265:25

band 7148:8

bank 7211:25
  7231:5
  7237:12
  7272:4

bankers
  7237:13
  7239:12
  7314:22

banking
  7233:11
  7235:15,21
  7237:4,11
  7239:2

banks
  7309:12

bark 7218:5

base
  7217:3,6

based
  7123:21
  7124:24
  7138:6,7
  7141:21
  7145:22
  7146:9
  7154:5
  7155:2,6
  7160:13
  7171:1
  7172:18
  7178:11,14
  7179:23
  7180:4
  7186:22
  7190:3
  7202:4
  7224:7
  7231:5
  7266:8

  7269:7
  7303:4
  7326:4
  7336:10
  7337:20
  7343:12
  7345:25
  7351:8
  7357:5
  7359:5

basically
  7182:23
  7197:18

basis 7140:5
  7150:21
  7206:6
  7221:20
  7226:19
  7261:9
  7277:7
  7278:10
  7284:11
  7294:20,21
  7298:21,22
  7306:21
  7312:6
  7330:4
  7345:21

batch 7182:4

BATNA 7307:9

BC 7143:14
  7153:15
  7157:16
  7160:3
  7192:2

bear 7113:13
  7191:11
  7301:24
  7320:17

bearing
  7307:24

bears
  7304:11

become
  7206:10,22
  7298:23
  7345:25
  7349:17

becomes

  7134:15
  7282:12
  7291:20
  7303:9
  7319:17

Bedford
  7109:7

begin 7112:4
  7179:15
  7195:21

Beginning
  7229:4

beh 7199:5

behalf
  7110:15
  7145:5
  7162:2
  7193:22
  7198:18
  7199:4,5,6
  ,12
  7216:20
  7223:13
  7224:2
  7229:5
  7233:20
  7244:25

Bel 7108:16
  7217:18
  7218:7,21
  7219:7
  7303:1
  7304:13
  7332:18
  7335:1
  7348:22

belief
  7269:25
  7305:11

believe
  7112:4
  7116:19
  7137:12
  7139:7
  7158:17
  7160:18
  7164:24
  7188:2
  7191:12
  7195:7

  7196:5,14
  7197:3,25
  7222:6
  7226:16
  7227:11
  7261:5
  7269:22
  7270:2
  7272:9,12
  7273:18
  7277:6
  7278:1
  7280:21
  7297:5
  7323:17
  7328:25
  7339:11
  7345:19
  7348:9
  7357:19
  7358:1
  7364:7,14,
  18,22

believes
  7114:12

bell 7337:5

belongs
  7200:13

benchmark
  7114:14

benchmarked
  7114:18

benchmarks
  7174:8

benefit
  7130:7
  7140:15
  7142:12
  7149:9,17,
  24 7166:11
  7169:10,17
  ,24 7171:8
  7176:7
  7177:19
  7181:1
  7183:3,4,2
  3 7184:8
  7188:15
  7203:25
  7214:24
  7259:8

7293:14
7319:12

benefited
7150:15

benefiting
7216:8

benefits
7115:23
7116:3,8
7120:2,11
7122:13,16
,18,22
7124:16
7125:1
7132:19
7133:4,12,
19
7136:4,9,2
2 7144:10
7148:20,22
,23
7149:14
7151:17
7159:10,23
7160:4,17
7164:14
7172:2,3,9
,16,21
7175:19,24
7177:25
7178:1
7179:15
7180:9,13,
18 7181:3
7182:6,16
7183:9,24
7184:10
7203:15,22
7204:5
7208:21
7230:7
7237:8
7258:11
7275:21
7287:3,5
7291:9,10

Benjamin
7110:20
7227:9,19
7233:25
7234:8,12,
20

7235:5,11
7236:6

bequest
7187:6,7

best 7118:25
7120:9
7122:9,10,
15
7125:13,19
,23 7126:4
7128:6
7138:6
7146:3
7162:20
7163:10,11
,12 7190:7
7202:11,13
7208:19
7238:19
7252:20
7254:16
7274:14
7289:14
7291:16
7307:8,9,1
2 7353:9

better
7187:2
7189:24
7247:20
7257:15
7267:1,24
7268:7
7278:1
7284:24
7294:18
7301:18
7308:3
7322:15
7331:3,4,6
7355:16
7362:22
7363:10

beyond
7146:1
7233:5
7239:1
7285:3
7298:10
7350:9
7356:6

bias 7271:25

bifurcated
7117:17

bigger
7116:11

bill 7198:19
7199:13,14
7217:24
7218:11,17
7219:1
7220:11
7315:13,14
,15
7322:13,16
7323:6

billets
7212:22

billion
7204:20,21
7216:12
7217:3
7247:11,19
7251:5
7281:18
7283:7,11
7284:19
7285:1,17,
18
7292:18,20
7357:12

billions
7205:10
7320:4

bills
7143:17

biomass
7232:25

bird 7256:7
7307:5
7357:9

Birds 7211:7

bit
7113:16,18
7181:5
7192:21
7193:11
7202:13
7239:25
7271:24

7281:8
7284:24
7300:14
7302:16
7304:10
7309:15
7313:18
7314:9
7348:21
7350:13
7356:18
7359:6

black 7211:8
7264:8,9,1
0 7295:23

Blades
7211:8

blow 7290:22

board
7108:3,14,
15,16,17,2
1 7109:2
7112:11
7116:14
7117:5,6,9
7118:1
7119:22
7124:11
7154:1
7176:24
7195:6
7197:14
7199:14
7200:10
7206:6
7209:10
7210:3
7224:16,17
7226:2
7227:2
7229:7,24
7232:14
7234:17
7243:1
7323:17
7332:18
7334:25
7335:1,7
7336:25

boards
7231:13,14

7232:21

Board's
7201:1,2

Bob 7109:2
7364:17

bodies
7231:17

body 7360:13

bond 7239:13
7240:7,17
7243:22
7284:2
7358:3

bonded
7360:2

bonds
7239:20
7240:18
7309:18,19

book 7176:24
7183:7
7185:24

booked
7365:5

border
7246:23
7247:8
7294:11
7297:1
7305:10,14

borne 7255:2
7285:2

borrow
7114:23

borrowing
7241:2

boss 7324:12

bottom
7150:25
7152:1
7177:7
7183:8
7357:4

box
7264:8,9,1
0 7295:23

Boyd 7109:6
7195:6
7222:23
7226:20,23
7244:17,18
,21
7280:6,8
7364:14,25

Bradley
7211:8

Brandon
7197:19
7199:18
7200:16,17
7218:2

break
7158:12
7273:6
7279:20

breakdown
7179:21

breaking
7360:2

breaks
7249:18

Brent 7233:8

bridge
7166:4

brief
7115:18
7121:1
7127:11
7131:4
7150:8
7152:10
7153:1
7154:22
7156:15
7160:22
7169:5
7173:1
7175:9
7176:11
7177:4
7183:19
7191:15
7192:16
7196:9
7199:1
7221:11

7223:6
7235:9
7245:7,15
7302:24
7328:6
7338:17

briefest
7270:9

briefly
7183:12
7191:17
7245:20

bring
7168:25
7204:5
7238:8
7291:10

bringing
7157:21
7181:19

brings
7236:22
7291:9

British
7171:4,9
7175:3
7192:10
7288:7
7316:6

broad 7161:6
7232:23
7272:15

broader
7128:10
7140:13
7261:22
7320:8
7340:22

broadly
7231:23
7252:23

broken
7138:3

brought
7134:22
7181:19
7342:13,15

bruised

7286:5

budget
7222:17
7267:3,8

budgetary
7240:24
7241:5

build
7136:19
7166:4
7187:19
7247:24
7288:14
7289:23
7295:6
7296:22,23
7316:16
7323:2
7325:6
7358:21

building
7122:16
7140:18
7188:8
7289:15
7290:3,5
7297:4
7304:5
7305:23
7306:13,18
7317:23
7320:1
7347:9
7350:25

buildings
7149:15

built
7188:18
7216:15
7249:3,12,
14 7253:18
7284:10
7288:18
7317:24

bullet
7281:4
7328:9
7329:3

bullets
7217:19

bunch
7285:24
7310:19
7313:9

burden
7243:7,10
7251:18
7255:24
7256:9
7258:1
7285:15
7309:7
7357:7
7362:21

burdens
7258:11

Bureau
7177:24
7178:5,9
7179:23
7192:3

business
7168:22
7197:15
7210:10
7212:5,7,1
0 7231:24
7241:14
7255:5,19
7260:22
7274:11,15
7284:4
7285:6
7309:12
7319:24
7322:12
7341:12
7362:17
7363:25

businesses
7202:3
7221:18
7261:1,15
7325:21
7326:15

busters
7327:16

busy 7221:17

buy 7309:19
7316:20

buyers
7309:18

buying
7305:21
7306:4,7,1
7

Byron
7109:11
7110:23
7194:4
7222:13,18
7223:2,8
7236:17
7237:15
7238:9,16
7239:4
7323:12,15
,16
7324:10,16
7325:1,13
7326:4,16,
21
7327:10,18
,23
7328:3,8,1
5,24
7329:2,8
7330:15
7331:1,4
7332:12,25
7333:7,12,
17,23
7334:7,12,
13,24
7335:6,14,
24 7336:22
7337:2,7,1
2,23
7338:11,19
7339:14
7340:23
7341:22
7342:6,17,
20,22
7343:16,23
7344:6,11,
20,21
7345:5,9,1
2
7346:2,7,1
6 7347:22
7348:12,19
7350:7

7351:2,7,1
5,25
7352:9,21
7353:3,8,1
5,25
7354:3,9,2
1
7355:12,23
7356:2,12,
15,23
7357:1,2,1
1,15,19
7358:1,9,1
9
7359:1,16,
20,23,24
7361:12,18
7362:10
7363:1,13,
17,20
7364:5
7365:10

C

cable
7315:14

CAC 7109:11
7194:10
7223:9
7225:21
7226:9

calculate
7266:10
7332:15

calculated
7255:17
7297:17

calculating
7273:24
7274:9

calculations
7312:21
7362:8

calendar
7225:7

California
7215:7

Canada
7148:11
7150:14,18

7151:3,13,
17 7153:12
7154:2
7176:1
7178:17
7180:1,7,2
5
7190:19,20
7200:17
7210:11
7211:21
7238:14
7240:15
7272:2,4,5

Canada-wide
7159:10,23

Canadian
7134:6
7152:3
7190:13
7201:21
7328:16,17

cancel
7268:4

cancellation
7254:8
7256:1
7268:2

**cancellation
s** 7296:21

cancelled
7196:7
7254:24

candour
7350:8

Canexus
7199:17
7200:3,16
7218:2,15
7219:3

canvass
7193:25
7236:15

canvassed
7193:15

cap 7219:6

capacity
7122:17

7140:6,18
7187:19
7188:8
7214:23,25
7235:19
7239:12
7241:2
7286:11
7288:20
7290:15,24
7293:13,22
7294:4,10,
17 7295:8
7297:8
7301:21

capex
7347:13

capital
7151:19
7186:14
7201:2,7
7202:3,4
7209:1
7212:4
7230:15
7231:10
7235:15,16
7237:7,9
7238:21
7239:17
7242:4
7243:15,20
7251:15
7259:9,15,
17,19,23
7260:6,7
7262:14
7263:17
7266:15
7271:20
7272:18
7273:4
7274:6
7275:10,11
,15,16,18,
20
7276:11,12
,14,21
7277:25
7297:12
7298:24
7303:8,11
7304:8

7309:17,21
,23
7310:2,8,2
5 7311:10
7312:1,9,1
3 7313:3,7
7338:25
7342:11,18
7345:1
7349:20

capped
7158:2
7206:17

Capra 7224:6
7295:11
7304:14,17
7348:24
7349:2,3,2
1

Capra's
7307:19

caps 7206:25

captured
7336:20

car 7315:14

care 7234:19
7236:5
7260:20
7339:25
7340:7

career
7235:14
7314:23

careful
7180:15
7208:16
7303:1
7304:17
7327:17
7353:18

carefully
7270:2

cares
7205:11
7260:24

Carlo
7270:16

carried

7162:14

carry 7121:4
7320:20

case 7142:6
7146:10
7190:4
7192:2,3
7213:25
7219:23
7220:14,15
7273:8
7301:7
7304:17,22
7323:22

cases
7272:23
7278:20
7298:20
7304:21
7360:7

cash
7251:22,25
7264:8
7282:19
7313:11
7330:13

cashflow
7263:4
7278:25
7297:19

cashflows
7238:7
7262:9,11
7264:6,8,1
0,12
7266:5,11
7329:18

cast 7212:22

Cat 7211:8

categories
7178:9

cause
7113:14
7262:3

causes
7294:14

caution
7359:11

CBC 7152:15
  7154:6

CEAA 7134:23
  7139:9
  7141:24

CEAA's
  7134:24

celebrating
  7210:9

cement
  7179:13

cent
  7330:16,19
  7331:25

Centre
  7112:16
  7124:9
  7162:3

cents
  7318:15
  7330:6,21,
  23
  7331:10,11
  ,14,15,19,
  20,25
  7332:8,10

century
  7290:18,22

ceremonies
  7165:25

certain
  7157:13
  7167:19
  7178:12
  7181:23
  7192:2
  7229:15
  7234:5
  7238:23
  7259:8
  7270:7
  7283:8
  7287:6
  7294:19
  7308:25
  7309:19
  7327:4
  7340:16,21
  7361:24

certainly
  7124:14
  7220:6
  7223:21
  7236:19
  7239:5
  7250:23
  7280:8
  7285:16
  7325:1

certainty
  7217:10

Certificate
  7110:25

certificates
  7188:24

Certified
  7365:22

cetera
  7224:6
  7269:11
  7338:5
  7355:6

chair 7113:3
  7117:12
  7130:3,5
  7131:1
  7132:2
  7144:23
  7173:24
  7195:15
  7196:4
  7199:15
  7200:4
  7210:2
  7222:19
  7223:8
  7236:9
  7239:4
  7242:20
  7244:5
  7245:5,9
  7363:21

chairman
  7112:7
  7158:24
  7173:4
  7175:18
  7193:16
  7199:14
  7200:1

7224:2

Chairperson
  7108:13
  7112:3,19
  7130:19
  7132:3
  7144:19
  7158:9,17
  7173:5,12,
  14,17,23,2
  5 7175:11
  7181:4,8
  7192:20
  7193:11,24
  7194:14,19
  7195:2,9,1
  6,24
  7196:21
  7197:3
  7199:6
  7217:15
  7221:13
  7222:6,20
  7225:2
  7226:13,20
  7227:4
  7236:14
  7239:7
  7242:18
  7244:11,16
  ,21
  7279:18
  7280:4,20
  7295:20
  7297:11,21
  7299:16
  7317:17
  7320:9
  7323:8
  7324:17,18
  7356:5,14,
  19 7363:24
  7365:14

challenge
  7208:13
  7224:11
  7315:21
  7341:14

challenged
  7205:24

challenges
  7205:23

7209:12
7224:19
7294:15
7327:22

Chambers
  7197:23

chan 7342:10

chance
  7351:3
  7354:22

change
  7115:3
  7131:25
  7145:19
  7243:21,22
  7254:2,4
  7261:19
  7270:1
  7291:2
  7294:6
  7296:2,3
  7303:2,7
  7305:8
  7307:2,14
  7314:16
  7315:5
  7322:5
  7329:17
  7330:13
  7335:2
  7345:22
  7355:6
  7362:18
  7363:14

changed
  7207:9
  7299:11

changes
  7121:15
  7202:10
  7206:5
  7207:6,7
  7254:6
  7261:3,12,
  23 7278:25
  7279:13
  7297:19
  7303:16,17
  7307:16
  7319:7,8,1
  8

7325:14,20
7332:21
7334:3
7342:18

changing
  7114:1
  7307:10
  7315:4,5
  7319:24

Chapter
  7176:6,18
  7186:1,18

characterist
  ics
  7137:14

charge
  7214:14
  7278:21
  7320:20,22
  ,24

charged
  7260:22
  7278:10
  7279:3
  7281:22
  7330:3

charges
  7281:23

charging
  7298:6

chart
  7185:25
  7190:11,12
  ,13

chat 7364:6

cheap 7314:4
  7315:11

cheaper
  7318:19
  7322:18,19

check
  7191:13
  7352:22

checks
  7116:23
  7168:12

Chemicals

7200:16

Cheryl
7365:25

chief 7232:4

Chiefs
7145:1

child 7251:7

chilling
7339:16
7340:25

China
7179:14

chips 7218:5

choice
7185:5
7213:20
7290:19
7292:4
7299:3
7301:17
7315:25
7340:13

choices
7225:10

choose
7291:23

choosing
7292:25

chose 7249:8
7265:8,12
7288:13

chosen
7270:17
7290:23
7292:13

Christian
7109:24
7184:21
7227:6,21
7228:3,11,
21
7229:4,12,
20,23
7230:19
7233:18
7234:1,10,
15,22
7236:1,8

7334:4
7344:16
7358:22
7359:8,18

chunk 7314:3

Churchill
7170:21

circumstance
7291:13,19
7312:1

**circumstance
s** 7283:8
7346:24

circumvented
7168:24

cite 7357:11

cited
7341:6,7

**clarificatio
n** 7122:4
7139:8
7161:25
7178:5

clarify
7159:4
7175:22
7177:17

class 7127:5
7200:13,14
7201:9

classes
7201:8
7263:2,6,8

classic
7237:11

**classificati
on** 7158:3

clauses
7360:12

Clean 7162:4
7192:9

Clean-up
7212:2

clear
7178:17
7180:8

7208:22
7249:13
7253:21
7254:6
7286:23
7293:6
7307:20
7321:4
7336:18
7338:12
7351:17
7363:3

clearer
7323:5

clearly
7142:17
7143:11
7265:7
7285:2,11
7286:1
7298:15
7338:1

cliche
7256:5
7358:6

client
7132:12
7222:19
7223:13,20
7231:19
7320:23

clientele
7236:3

clients
7221:21
7231:13
7236:18
7237:14
7239:18,22
7240:9
7242:8
7271:1
7281:8

client's
7223:16

climate
7201:16

close 7126:9
7151:12
7288:8

7314:8
7324:17
7342:2
7346:17,23
7356:7

closed
7215:17

closely
7128:25
7161:5
7307:23

closer
7247:2
7253:5
7365:6

closing
7208:20

club 7288:11

Co 7230:21
7234:24

coal 7288:25
7289:6
7316:12,17

Cola 7323:25

Colaia
7324:2

Colaiacovo
7110:19
7227:8,10,
11,15,18,2
4 7228:24
7229:5,11,
19,22
7230:1
7231:3
7234:13
7236:2,10,
22
7237:10,22
7238:12,18
7239:15
7240:5
7241:7,25
7242:25
7243:11
7244:4,23
7245:4,9,1
1,17
7281:1,16

7285:12
7288:2
7293:15
7296:5
7297:16
7298:3
7300:5
7303:10
7305:6
7309:8
7314:21
7318:3
7321:4
7324:2,9,1
4,24
7325:4,18
7326:8,19
7327:1,13,
21
7328:2,14,
22,25
7329:7,11
7330:25
7331:2,6
7332:17,24
7333:3,11,
15,20
7334:15
7335:5,12,
18 7336:5
7337:1,6,1
1,22,24
7338:15,23
7339:20
7341:3
7342:4,12,
19,21
7343:4,21
7344:5,10
7345:4,8,1
1,16
7346:6,11,
20
7348:3,16
7349:1
7350:14
7351:6,13,
19
7352:2,15,
25
7353:6,13,
17
7354:1,8,1
3

7355:1,17
7356:1
7357:10,14
,18,24
7358:5,16
7360:4
7361:17,22
7362:11
7363:6,16,
19

Colia 7324:1

collapse
7255:25

collateral
7211:15

colleague
7193:20
7233:8
7234:13,16

collected
7210:19

collectively
7205:9

Columbia
7171:4,9
7175:3
7192:10
7288:7
7316:6

com 7266:13

combination
7304:6

combinations
7266:14

combined
7204:1
7318:8

comes 7125:4
7194:6
7205:3
7292:22
7305:7
7335:17
7355:11

coming
7116:2
7172:21
7180:22

7196:19
7219:4
7245:2
7289:10
7303:5
7314:8
7318:7,8
7325:10
7326:10

command
7295:17
7302:7
7347:7

commence
7193:7
7280:5

commencement
7119:11

commencing
7112:1
7256:25

commendable
7135:18

commended
7137:4

comment
7116:13
7117:19,22
7120:18
7123:14
7125:15,17
7126:25
7127:1
7138:10
7141:12
7172:12
7188:14
7189:8
7195:4
7226:14
7241:22
7286:25

commentary
7117:18
7312:24
7338:9

commentators
7254:12

comments

7119:20
7133:25
7134:5,24
7138:12
7141:22
7194:21
7199:9
7209:7
7210:4
7217:17
7317:21

commer
7349:23

Commerce
7197:23

commercial
7230:2
7237:6
7246:3,13
7247:7
7249:20
7253:24
7254:9
7255:4,25
7256:4,6,7
,24
7258:21
7262:8
7267:19,20
,24
7268:1,4,5
,10,15
7281:3,11
7284:8,9,1
3,16,20,25
7285:13,20
7286:2
7296:18,21
7303:23,24
7305:9
7307:1,8
7308:5
7335:23
7336:19
7337:18,20
7338:10
7343:18
7345:20,21
7347:8
7349:23
7354:20
7357:16

7358:7
7359:4
7361:9,24
7362:5,7,1
7 7363:9

commercially
7250:1
7256:18
7280:12
7295:17
7298:5
7307:22
7359:13
7361:1,7
7363:8

Commission
7162:5

**commissionin
g** 7185:8

commitment
7112:16

committee
7162:14

committees
7168:1
7231:14
7232:22

commodity
7178:8
7179:21
7192:7
7318:13

common
7123:21
7154:9
7185:6
7200:24
7257:15
7271:3
7343:18

communicated
7209:17

**communicatin
g** 7200:6

communities
7120:12
7122:17
7128:24
7129:8

7131:10
7132:21
7133:8,12,
19
7134:3,16
7136:25
7137:7
7138:12
7140:8,13,
19,21
7141:1,22
7142:1,4
7144:3,11,
13 7146:20
7147:6,10,
19
7148:7,23,
24
7149:7,10,
19,23
7150:4
7157:7
7165:13
7166:3,21
7172:10
7187:20
7188:16
7189:1
7204:6,10

community
7136:15
7146:23
7147:21
7148:3
7149:15
7161:4,14,
19 7197:16
7203:12
7208:6

**community-
based**
7170:8

companies
7200:12,14
7201:21
7203:8
7204:1
7205:9
7208:5,20
7217:22,25
7219:4
7220:11

7231:7,21
7232:20
7233:1,3
7240:7
7243:21
7311:6

company
7134:20
7200:20
7202:1
7203:21
7209:6
7231:6,14
7232:3
7282:2
7340:5

Company's
7282:10

comparables
7332:16

comparative
7207:20

compare
7151:11
7153:5
7315:12
7341:13

compared
7207:24
7213:5
7220:7
7249:6
7251:3
7256:19
7315:7,11
7322:4
7352:18

comparing
7208:1
7341:15

comparison
7123:12
7150:21
7151:10
7322:8
7342:9
7347:14
7348:5
7355:21

comparisons

7192:14

compelling
7202:14
7267:18
7268:10
7281:3
7337:18

compensate
7319:19

compensation
7184:8

compete
7201:13,23
7202:3

competent
7209:8
7245:24
7261:22

competing
7221:4

competition
7201:25
7203:1

competitive
7201:15,22
7207:7
7208:22
7209:11,13
7212:9
7216:13
7220:23
7319:17
7341:18
7347:23

**competitiven
ess**
7204:23
7208:7
7216:6
7315:2
7339:24
7340:1,2,1
0,20
7341:5

complaining
7317:15

complement
7306:10

complete
7137:8

completed
7203:13

completing
7256:12

completion
7301:5

complexity
7334:19

complicated
7313:5
7319:2

component
7181:21
7214:14
7298:15

components
7320:12

compounding
7207:22

compressed
7278:21

con 7357:23

Conawap
7217:5

Conawapa
7116:6,10,
16
7117:3,6,1
0,20
7118:14,20
,24
7119:2,6,1
1,15,22,24
7120:4,11,
14,21
7121:8,17
7122:5,21
7123:2
7125:18,25
7126:17
7131:11,24
7188:18
7204:25
7217:5
7247:24
7248:5,19,

21 7249:2
7250:9,11,
15,20
7252:1,4,7
,9,17
7257:2,3,1
4,22
7258:1,3
7268:9,10,
19
7269:1,3,2
3 7270:1
7278:14
7290:4
7292:17
7303:2
7318:23
7345:20,24
7352:17,18
,19,20
7353:1

conceivably
7350:21

concept
7175:24
7178:23
7182:15
7274:25
7275:24
7281:6
7307:8

conceptually
7184:5

concern
7193:19
7200:24
7223:20
7224:23
7260:14
7277:22
7303:11
7325:9
7340:11

concerned
7193:12
7205:7
7216:18
7221:3
7226:3
7319:4

concerns

7134:25
7163:3
7164:1
7168:6
7194:1
7201:4
7209:24
7224:3
7225:3
7226:10,17

concluded
7119:2

concludes
7115:22
7132:2

concluding
7161:23
7174:25

conclusion
7116:3,17
7174:11
7298:7
7357:4

conclusions
7267:12
7269:19
7303:3

concrete
7181:11,17
,18 7182:3
7249:18

condition
7163:15,21
7253:16
7302:12
7358:14
7359:10

conditions
7251:24
7269:4
7274:16
7301:23
7359:10
7360:5

conduct
7229:8
7233:22

confidential
7242:10

7353:10

confidentiality
7353:21

confirm
7137:19,22
7138:23
7159:17
7162:1
7196:7
7363:25

confirmed
7138:9
7188:3

confusion
7313:6

congratulations
7222:14,20

connect
7218:8

connection
7343:19

connections
7205:4

cons 7362:15

consequence
7255:22
7265:12
7282:16
7283:24
7333:8
7360:16
7361:7,8
7362:16

consequences
7255:2,16,17,25
7262:17
7263:9
7266:25
7277:15
7278:3
7281:11
7283:22,25
7284:20
7296:21
7298:17
7319:14,25

7362:19

conservation
7207:15

consider
7114:1
7118:1
7129:24
7132:17
7141:5
7149:5
7162:15
7163:4
7170:3
7184:6
7209:10
7212:6
7213:25
7250:2
7257:14
7277:21
7340:20

considerable
7128:15
7134:12
7237:18
7252:14
7258:5

considerably
7153:7

consideration 7114:22
7133:18
7135:1
7141:9
7149:1,3
7184:12
7212:18
7240:22
7279:9,22
7289:11

considerations 7258:21
7336:20
7337:21
7338:10,13,20

considered
7114:5
7133:12
7141:15
7162:19

7163:9
7176:6
7184:9
7190:23
7191:3
7275:3
7279:12
7302:10
7315:22

considering
7141:24
7144:9
7220:23,24
7243:5
7246:5
7277:19
7283:21,22
7329:12

considers
7216:2
7217:11

Considine
7211:16

consistency
7308:13

consistent
7153:24
7154:1
7166:7,9,25 7167:2
7343:5,14
7345:17
7346:21

consistently
7156:3

consisting
7246:21

consists
7246:18

constantly
7171:25
7175:3

constitute
7187:14

constraint
7193:23
7309:3
7313:22

constraints
7303:6
7348:11

construct
7264:15
7309:10
7314:1

constructed
7168:17

construction
7116:4,5,8,9 7120:21
7123:17
7125:2
7164:15
7178:8
7179:19
7182:12
7183:1
7185:21,23
7186:2,5,14
7187:13,15
7188:6
7209:3
7246:21
7247:10
7248:13
7250:11,17
7254:5
7256:13,25
7270:11
7271:14
7296:8
7300:3
7301:4
7302:15
7339:5,7

consultant
7112:10
7232:6
7261:21

consultants
7117:25

consultation
7134:12
7197:17,22

consulting
7161:2,21
7197:15

7232:7

consume
7213:11

consumed
7212:22

consumer
7219:12
7220:17
7321:2
7330:4,5,8

consumers
7143:1
7261:16
7276:9
7315:16

consumption
7214:14
7215:11
7219:9
7325:8
7331:18

contain
7186:21
7352:24

contemplated
7353:19
7354:11

contenders
7223:23

CONTENTS
7110:1

context
7121:23
7123:15
7150:23,24
7190:15
7237:6
7243:17
7256:6
7272:20
7315:15
7320:8
7325:5
7339:22
7358:20

contingent
7259:14,20

continue

7269:3
7278:8
7280:22
7290:10
7301:3
7307:13
7318:21
7349:15
7354:15

continued
7110:8
7112:9
7113:1
7118:11
7181:14
7185:1
7334:12
7344:20
7357:1
7359:23

continues
7260:10

continuously
7155:22

contract
7165:21,24
7203:17,20
7247:9
7253:17
7301:16,17
,18 7306:9
7316:21
7346:13
7357:21,23
7358:25
7359:11,13
7360:12,24
,25

contractors
7181:2

contracts
7126:14
7164:20,22
7165:10,12
7166:3
7215:13
7216:21
7230:10,12
7246:24
7247:1
7248:6,22

7250:8
7253:11,16
7254:17
7255:9
7256:4,14
7269:21
7299:19
7300:1,25
7301:3,4,9
,12,22,23
7302:1,14,
15,22
7304:25
7339:5,7
7354:7,11,
14 7355:9
7358:12
7360:7,11

**contradistin
ction**
7257:25

contribute
7204:1

contributed
7204:20

contributor
7212:9

contributors
7203:9

control
7214:10
7215:18
7229:21
7234:11

controllable
7212:17

convenient
7325:24

conversant
7337:8

conversation
7335:7

copy 7227:24

copyright
7324:11,13
,15

Corey
7109:23

corporate
7235:22,24
7237:3

corporations
7170:10
7284:6
7358:8

correct
7115:25
7116:8,18
7119:7,8,1
6,17
7120:23
7121:11,12
7124:6
7125:8
7130:14
7132:22,23
7133:8,9
7134:18
7135:8,11,
21
7138:14,15
7140:11,12
7145:13
7146:24
7147:6,7
7150:12
7151:8
7152:1
7154:14,16
7159:10
7161:21,22
7164:15,25
7165:13,14
,25 7166:1
7168:7,19,
20
7171:5,7
7172:17
7182:22
7183:5
7186:24
7189:3
7190:22
7196:20
7219:10,13
7220:18
7229:10,18
7233:24,25
7234:7,9
7236:24
7237:5,10,

22 7238:12
7244:4
7324:9,25
7328:13,16
,17
7332:24
7333:10
7337:22
7338:15,23
7343:5,22
7344:10
7351:14
7352:25
7354:7
7357:9,10,
14
7358:13,17
,20
7365:22

correctly
7127:23
7161:15
7308:10
7349:3,7

corrects
7130:15

**correspondin
gly**
7210:23

cost 7119:15
7123:17
7125:2,4
7142:12
7155:5,14,
23 7176:7
7177:19
7179:20
7201:8,11,
19,23
7202:4,15
7203:3
7212:8,9,1
6
7213:6,17
7215:10,18
7216:16,24
7220:19
7243:23
7255:1,22,
24
7259:15,17
7261:3,23

7266:15
7267:7,25
7271:20
7272:18,20
7273:4
7276:12
7284:23
7298:17
7303:8,11
7304:8
7312:21
7315:3
7316:17
7318:10,18
7319:8,14
7321:11
7322:7,24
7330:2
7332:1,5,1
5 7340:17
7341:11
7362:16

cost-based
7201:14
7208:22

costing
7325:8

costly
7251:12
7316:19

**cost-of-
service**
7206:3
7321:22

costs 7127:5
7149:8
7155:4,13
7178:8
7179:21
7200:7
7201:5
7203:4
7206:4,13
7207:9,16
7212:6,7,1
7
7213:8,9,1
0,25
7214:4,10
7215:2,3,1
0,20

7216:7,25
7217:14
7220:12,25
7221:3
7230:6,17
7237:8
7247:17
7255:23
7259:1,3,4
7263:17
7267:1
7269:11,25
7274:18,22
7278:11,12
,20
7281:7,12,
19
7283:3,11,
12,24,25
7284:15
7285:1,2,3
7286:6
7301:25
7318:4
7328:19
7331:23
7341:17
7342:11
7345:1
7349:14
7357:13

cottage
7319:16

counsel
7109:2
7113:4
7176:24
7226:18

counselling
7165:24

counterparti
 es 7361:19

counterparty
7306:15

counting
7336:20

countries
7150:21
7151:7
7210:12

couple
7159:4
7197:5
7222:1
7223:12,25
7242:21
7267:12
7299:13
7342:14
7363:2

course
7170:20
7228:23
7245:23
7265:14
7277:5
7332:13
7336:23
7337:10
7343:23
7344:21
7354:2
7360:18
7364:13

court
7113:7,14
7242:23

cover
7222:12

coverage
7309:9
7310:25
7313:2

covered
7261:11
7339:11

create
7202:25
7308:20

created
7249:5
7352:8

creates
7181:9
7266:19

creating
7211:5,14

creative
7206:22

credentials
7188:24

credit
7215:8
7230:16,17
7239:19,20
,21,22,23
7240:2,10,
13,14
7241:2
7243:14,18
,19
7259:24
7308:12
7309:12,14
,16,20,22
7310:1,4
7312:12,22
7313:7

credits
7215:5

Cree 7133:13
7135:18
7167:6
7184:12

crisis
7265:24
7266:3

criteria
7123:21
7124:21
7170:9,25
7187:4

criterion
7170:14,18
7171:11,18

critical
7128:17
7129:3
7133:3
7134:9
7136:21
7137:8
7145:15,17
7146:13,14
7147:5,9
7148:21
7150:3
7157:5
7171:22
7172:15

7174:12
7189:5
7205:9
7214:15
7224:20
7230:5
7246:13
7258:16
7262:21
7263:12,14
7266:4
7275:5,6

critically
7229:15
7234:5

criticism
7209:8

cross
7196:10
7207:5

cross-
 cultural
7165:25

cross-
 examinatio
 n
7110:8,10,
11,12,13,2
3 7112:9
7113:1
7130:7
7131:2,7,1
5 7132:7
7144:22
7158:22
7175:16
7194:11,17
7195:19
7323:15
7352:10

cross-
 examinatio
 ns 7224:12

cross-
 examine
7112:13

cross-
 examining
7194:23

7195:6

cross-hedge
7289:22

crossing
7246:23

Crown
7170:10

CSI
7192:23,24
7193:1,4
7364:16,17
,20
7365:1,3,6

cultural
7140:1

curious
7139:6
7218:22

currency
7264:21

current
7113:21
7148:20
7153:12
7196:6
7200:5,14
7213:11
7217:3
7235:13
7293:16
7308:2
7326:9
7333:9
7340:7

currently
7143:9
7185:21
7235:5,11,
18 7268:23
7277:3
7281:19
7293:19
7321:9
7328:18
7330:3,16

curriculum
7230:20
7234:23

cursory

7351:6,8

curtail
7218:22

curtailable
7206:17,24
7215:16
7218:22

curtailed
7218:25

curtailing
7214:23

customer
7142:11
7143:20
7197:18
7201:8
7209:19
7263:2,6,8
,11
7273:11

customers
7113:23
7207:4,16
7209:4
7212:14
7213:16
7216:3,25
7217:13
7317:13,15

cut 7312:9

CV 7233:12

CWIP 7281:20

cycle
7186:13

──────── D ────────

Dakota
7297:2

Dakotas
7294:14

dangerous
7286:10,14
7287:11
7293:2

darn 7308:3

data 7192:2
7245:20

7246:14
7266:9
7269:7,12,
13,15,16,2
1,24
7270:3
7272:2
7300:20
7303:2,5,1
8
7304:3,10
7307:20
7333:4,5,6
,14
7334:17,20
7345:18
7350:5
7351:21
7352:3,4,6
,7

date 7119:11
7125:25
7166:24
7205:17
7247:14
7248:5
7301:4,5
7347:10

dated 7111:7
7228:4,8
7229:14
7234:4

Dave 7198:20
7199:20,21
7209:22
7210:4

David 7210:2
7219:5,14,
20,22,25
7221:6
7233:15

day 7128:19
7174:11
7193:17,18
7195:11
7241:18
7283:19
7288:14
7319:14
7356:7
7364:3

days
7223:12,25

daytime
7318:15

day-to-day
7147:1

DC 7232:8

dea 7243:4

deadline
7225:8

deal 7118:3
7127:16
7131:24
7150:12
7209:6
7226:18
7227:3
7231:9,10
7238:7
7239:13
7255:16
7262:9
7284:1
7308:11
7315:20
7317:11
7319:22
7330:24
7335:15

dealing
7145:14
7146:22
7152:15
7154:25
7156:19
7164:4
7227:10
7232:16
7240:2
7243:4
7314:24
7349:22
7360:8

dealings
7240:13

deals
7178:23
7255:14,15
7284:7

dealt
7226:11
7237:25
7339:6

debate
7176:1

debt 7114:1
7243:24
7259:10,13
,16
7260:3,7
7272:20
7275:18
7277:4,19
7278:3
7292:18
7297:13,14
,17,19,22
7298:14,15
7308:15
7310:14
7311:2,11
7312:9,20
7339:1

debt-equity
7114:13
7115:2
7308:17,22
7309:8

decade
7206:7

decades
7216:22

December
7247:15
7248:10

decide
7324:3

decided
7143:18
7360:1

decides
7282:2

deciding
7329:24

decision
7120:20
7121:8,17,
22,23

7122:1
7180:5
7208:18
7212:5
7224:17
7248:18,19
7249:16,19
7251:13
7252:10
7258:17,19
7261:25
7262:1
7264:17
7265:12
7268:17,19
7277:14,16
7301:6
7350:15
7362:20

**decision-
making**
7270:15
7277:11

decisions
7202:4,7
7204:22
7212:19
7217:12
7225:16,23
7232:17
7258:13
7260:23,25
7263:6
7276:7
7295:16
7309:17,22
7312:4
7322:15
7340:7

deck 7111:5
7227:23,24
7228:1
7281:1

decline
7321:11

declining
7316:13

decrease
7201:19

deemed

7266:11

deep
7233:7,16

deepens
7287:22

deeply
7260:21

deferral
7348:25

deferring
7309:4

deficiencies
7174:6

define
7313:24
7333:10
7354:6
7355:15

defined
7171:1
7337:20

defining
7170:13
7171:17

definitely
7127:24
7303:11

definition
7354:10,24

definitive
7355:20

degree
7207:14
7311:11

delay
7254:4,5,6

delayed
7353:1

deliberately
7113:5

**deliberation
s** 7189:4

deliverables
7246:20

delivered

7212:15
7214:1

delivering
7346:13

Deloitte
7174:5

dem 7357:7

demand
7203:2
7214:14,24
7215:1,4,7
,22 7216:2
7252:20
7263:17
7278:25
7279:3
7288:15
7303:13
7304:7
7306:14,19
7321:9,17
7322:22,23
7326:7
7329:17

**demand-
response**
7214:7,16

demand-side
7121:15

demon
7355:14

demonstrate
7355:14
7357:8

demonstrated
7256:10,17

**demonstrativ
ely**
7355:15

denotes
7276:12

Department
7212:2

depend
7149:7
7284:7
7329:18
7332:14

dependable
7300:8,13,
23 7301:1
7302:14,21
7306:10

dependent
7203:1

depending
7116:22
7194:16
7297:19
7300:7
7349:6
7350:15

depends
7184:15
7194:22
7299:23
7309:24

depressed
7316:12
7318:25

depth 7233:4

derived
7120:3
7122:16
7170:18
7171:12

describe
7173:25
7229:24
7230:24
7235:1
7324:7,12

described
7238:20
7241:24
7267:10
7285:14

describing
7321:6

description
7111:2
7182:21
7234:16
7236:3

descriptions
7168:11

design
7127:8
7129:12
7250:17
7278:7
7279:1,7
7328:18
7332:3

designed
7168:2

designing
7286:17

designs
7328:10

desirability
7329:5

desire
7305:13,20

despite
7281:10
7308:12

detail
7123:3
7137:13
7192:13
7237:18
7259:12
7271:24
7292:3
7333:2

detailed
7192:13
7209:16
7241:16
7245:22
7250:17
7347:25

details
7129:7
7174:24
7249:4

determinate
7248:3

**determinatio
n**
7159:9,22
7298:8,25
7299:5

**determinativ
e** 7255:14
7345:14

determine
7181:3
7252:20
7285:10
7298:4
7310:18

determined
7296:12

determining
7148:13
7160:4,16
7203:5

devel 7192:9

develop
7214:9
7250:15
7251:10

developed
7117:3
7148:10
7162:12
7172:11
7187:22
7217:14
7247:4,5
7257:18
7266:13
7334:15

developer
7164:1

developers
7251:14
7296:24

developing
7134:9,11
7268:23

development
7108:10
7113:21
7115:23
7117:17
7118:2
7119:1
7120:15
7121:25
7122:12

7123:13
7124:13
7126:1
7140:2
7143:25
7145:8
7171:3,8
7172:17
7184:1
7188:5
7204:25
7208:15
7209:20
7213:20
7229:9,16
7230:3,4,8
,18
7233:23
7234:6
7238:23,24
7246:5,6,1
1,18
7247:22,24
7248:2,23
7249:4,11,
17,21,23
7250:4,6,9
,19
7251:15,17
,23,25
7252:1,13,
23
7253:2,7
7257:8,9,1
7 7260:15
7261:8
7263:13,15
,20,21
7265:1
7267:14
7268:9,11,
14
7269:5,6
7274:8
7275:12
7277:25
7290:20,23
7293:9
7294:12
7317:4
7337:19
7345:24
7349:5,11
7352:17

7354:6

developments
7205:4,20

dialogue
7143:8
7226:8
7326:23

Diana
7113:16
7115:14,15
7125:12
7126:22

dichotomy
7117:14

difference
7113:17
7151:5
7180:3
7190:25
7202:21
7248:21
7291:23
7292:2,10
7321:3
7335:22
7336:7,8,1
9 7346:15
7352:23

different
7127:15
7143:22
7153:7,22,
23 7156:25
7158:4
7177:18
7183:24
7190:11,24
7192:12
7231:18
7238:4
7242:8
7247:25
7248:1
7253:22
7255:20
7257:3,6,1
1
7262:1,2,4
7265:3,18
7266:7,21
7267:15

7268:13,16
7269:10
7272:21
7273:15,21
7275:14
7276:24
7277:6,21
7278:4,19
7279:7,15
7282:24,25
7283:17
7289:3,15,
17,23
7292:16
7295:12,19
7296:14
7297:18
7300:6
7304:7
7311:17,19
7313:9,14
7318:4
7322:9
7336:16
7338:1
7340:9,15
7341:1,12
7346:24
7350:17
7354:14
7355:9
7360:6

**differentiat
e** 7147:9

**differentiat
ion**
7278:11,13
7292:24

differently
7359:7

difficult
7191:24
7201:20,24
7262:16
7274:3
7285:13
7296:22
7312:3
7315:25
7336:17
7341:4

7347:20

difficulties
7225:20

difficulty
7297:2,3
7301:10
7311:20

diluted
7206:10

direct
7145:11
7164:19
7165:10
7175:24
7177:25
7178:1
7179:15
7180:9,18
7194:6
7203:18
7204:4
7232:18
7234:14
7259:8
7264:7
7301:24
7323:21
7338:24
7357:20
7364:13

directed
7133:3

directing
7145:5
7328:8

direction
7316:9
7333:21
7340:8,21
7341:17

directly
7129:5
7163:6
7165:12
7204:15
7211:12
7215:10
7232:11
7233:9
7239:14,21

7262:2
7334:22

directors
7231:13,14
7232:22

**disadvantage
s** 7201:17

disagree
7177:14
7183:15

disappointed
7223:17
7226:24

disconnect
7188:17

discount
7273:1,3,1
2,16,19
7336:11,13
,15

discreet
7247:21

discretion
7286:20

discuss
7185:23
7264:19
7271:23

discussed
7134:7
7164:19
7166:19
7227:23
7246:1
7253:1
7259:21
7364:18

discusses
7170:7

discussing
7140:22
7141:1
7182:10
7263:13

discussion
7142:8,14
7162:9
7167:21

7169:8
7177:7
7183:22
7194:9
7223:24
7227:2
7246:2
7250:23
7252:24
7265:1
7289:11,18
7291:6
7309:2
7326:9
7335:4
7348:20,21
7358:2
7365:15

discussions
7141:9,18,
23
7142:2,23
7196:10
7225:24
7334:22
7364:24

dispatchable
7214:19

displacement
7127:2

disposable
7127:6
7261:17,19

distance
7201:18

distant
7249:1

distinction
7219:9
7286:16
7336:17
7346:8

distinguish
7177:25

distorted
7319:22

distortion
7325:9

distortions

7324:22

distribute
7237:13

distributed
7197:12
7222:11
7280:9
7318:7,18
7319:1,5,2
2 7324:23
7325:6,11,
16 7327:9

distribution
7197:24
7233:2,3
7278:12,18
7279:2
7318:14
7319:10
7320:13,16
,18
7321:13
7322:6,7,2
2,24
7328:12,20
7329:20,23
7330:8,11

**distribution
al** 7287:6

**distribution
s** 7137:15
7185:6

divergence
7340:16

divestitures
7235:23

divided
7263:5
7323:6

dividends
7311:15

Division
7170:20

document
7113:9
7126:18
7186:17
7280:6

**documentatio
n** 7139:19
7146:9

documents
7124:19
7135:6
7176:25
7183:7
7184:4
7185:24
7227:13
7249:9
7259:22

dollar
7183:1,3,4
7251:2
7255:17
7258:4
7263:25
7285:15,24
7294:21
7335:16
7336:21
7363:10

dollars
7182:24
7209:1
7247:11,19
7251:7,22
7264:2,3,1
6,20
7285:18
7317:6
7320:5
7336:9

domestic
7252:20
7258:18,24
7262:24
7263:17
7266:23
7300:4
7304:7
7323:4
7331:10

domestically
7279:5
7321:8,19
7331:8,13

done 7114:5
7127:14

7129:1
7143:17
7148:12
7152:3
7168:14
7174:8
7178:22
7187:19
7189:1
7238:10
7241:25
7242:11
7257:7
7261:9,11
7263:24
7264:1
7277:12
7299:18
7322:18
7341:20
7350:16
7351:10

door 7361:10

doubled
7217:4

doubt
7182:11
7268:3
7359:25

Douglas
7109:7

downside
7362:6

downstream
7211:5

downwards
7177:11

dozen
7257:11
7288:3

Dr
7219:8,17,
21,23
7220:3,9,1
6,20
7221:9
7286:8
7293:1
7308:7
7313:17

7326:21

draft
7353:22

dramatic
7320:23
7325:11

dramatically
7267:7,23
7268:6
7325:16

draw 7145:9
7313:19,21

drew 7287:14

drill
7174:23

Drive
7211:25

driver
7141:19

driving
7141:23
7207:4

drop 7124:19
7202:17
7279:3

dropped
7120:15

drops
7187:16

drought
7287:23
7290:18,21
7293:11
7311:22,24

DSM 7128:10
7206:20,21
7207:3
7216:5
7266:24
7268:21
7269:11
7278:23
7322:2,3,5
,8,16
7329:5,13,
21,22,25
7330:12,13
,19

7332:15
7342:10,15,22
7344:25
7345:2
7346:4,18
7347:16,20
7349:10
7350:15,17,18,22,24

duration
7187:3,4

during
7130:7
7131:2,6
7187:15
7195:19
7214:23
7215:11
7222:11
7266:3
7300:9
7318:15

dynamically
7321:25

E

EA 7135:18

eager
7206:19

earlier
7130:14
7131:15
7164:17
7171:7
7195:13
7215:16
7260:18
7268:3
7269:16
7272:6
7296:20
7303:22
7308:6
7324:20
7340:4
7341:9
7346:22
7347:5
7349:21
7354:22

early
7192:21
7193:8
7195:22
7205:2

earning
7204:8

earnings
7273:10
7276:15,16,18
7282:17

ease 7309:6

easily
7146:1,2
7254:20
7255:17
7315:5

Eastmain
7170:19

easy 7310:2
7341:13

echo 7181:9

econ 7176:21

economic
7114:19
7122:1
7123:16
7137:13
7156:10
7176:4
7177:17,20
7182:18
7188:15
7202:22
7203:13
7204:5
7215:1
7261:7,11,15,22
7262:2
7263:9
7264:15
7266:14
7271:8
7272:2
7277:15
7298:16
7299:2
7314:3

7322:3,4,15
7325:20,25
7330:1
7339:2,4
7342:7,9,14 7344:8
7346:18
7348:18
7360:9

economically
7276:2
7298:5
7329:15

economics
7211:17
7279:15
7326:2

economies
7192:11

economist
7182:20
7286:5

economists
7286:8

economy
7137:12
7176:21
7189:16
7203:9
7208:21
7211:19
7260:13,17
7261:8
7278:2
7310:13
7311:17
7327:7
7339:17
7340:22

editing
7234:14

educated
7188:12

education
7122:18
7140:1
7149:8,15
7187:18

effect
7114:22
7145:17
7148:1
7149:21
7211:20
7261:2,18
7278:22
7304:16
7340:25
7352:6

effective
7148:13,14
7156:20,25
7157:12,21
7175:1

effectively
7226:11
7254:7
7259:17
7288:12
7302:9
7309:20
7320:1,15,19

effects
7115:13
7127:2
7133:6
7134:2,4
7141:6
7143:8
7146:18
7148:2
7156:10
7157:8
7161:5
7184:2,7
7187:2,13
7244:3
7329:4
7339:17

efficacious
7330:23

efficiency
7121:16
7128:9
7143:16
7148:14
7156:20
7216:4

7261:14

efficient
7129:9
7213:1

effort
7146:3
7218:19
7334:1
7355:7

efforts
7226:25

EIA/HIA
7161:9

eight
7211:11
7231:23
7232:3,10,20
7237:17,25
7317:6
7318:14

eighteen
7213:19

eighty
7182:24

EIS
7135:10,18,24
7136:5,14,17
7137:4,11
7139:20
7146:10
7161:5
7167:13
7174:3

either
7148:1,19
7150:3
7157:12
7158:2
7223:24
7242:22,23
7254:19
7277:21
7282:14
7289:5
7301:24
7309:18

7349:5

elections
7185:14

electric
7170:21
7191:1,6
7212:20
7238:1
7240:4,15

electrical
7119:5

electricity
7150:16
7151:6
7152:4
7155:3,13,
15,21
7156:4
7190:12
7200:7,24
7201:5,14
7202:10
7203:4
7212:7,21
7213:7,12,
23 7214:1
7219:11,15
7220:2,11,
17,19,24
7221:3,8
7231:20,21
7232:17,20
,23
7237:19
7252:18
7260:20,21
7261:3,13,
17 7278:9
7299:21
7300:7
7305:23
7310:22
7311:1,6
7312:11,18
7313:25
7314:4,10
7315:1,11,
13 7317:14
7318:13
7319:3
7320:11
7325:22

7330:3

**electricity'
s** 7219:18

element
7189:5
7203:4
7354:5

elements
7134:9
7247:18
7262:21

else 7112:8
7153:11
7188:7
7293:6
7315:8,18
7321:23
7330:22

elsewhere
7208:25
7261:18

emergency
7215:5,8

emissions
7210:24
7213:5

emphasize
7202:15

employ
7261:1

employed
7235:18
7274:6
7275:10,11
7276:11

employees
7166:5
7208:6
7210:11
7211:24

employer
7165:20
7203:12

employment
7122:18
7125:1
7126:2,13
7140:14

7164:14
7165:17
7167:13,25
7168:23
7182:16
7183:9
7185:23
7186:2,7
7188:25
7189:17
7204:16
7211:20

enable
7162:24
7242:16

Enbridge
7200:20
7296:24

encourage
7277:24
7331:18,22
7332:9

encouraging
7206:20

endeavour
7334:19,21

endeavours
7360:8

endless
7275:19

endlessly
7276:13

energy
7121:16
7128:9
7148:14
7151:21
7156:20
7192:9
7198:21
7199:21
7209:24
7210:5,22
7211:16
7212:4,16
7213:4,8,1
3 7216:4
7219:9
7232:5
7233:7,16

7237:19
7238:22
7248:7
7266:15
7288:19
7294:16
7300:8,14,
23 7301:1
7302:14,21
7306:10,20
,22 7318:7

**energy-
intensive**
7212:10

engage
7227:2

engineering
7123:22

enormous
7294:14
7301:14
7319:9
7326:15

enormously
7293:19

ensure
7123:3
7129:1
7140:6,17
7162:14
7172:3,21
7174:15,19
7249:5

ensures
7259:16

ensuring
7129:9
7166:23
7174:14
7201:7

entail
7250:6

entered
7300:2

entering
7225:23
7360:18

enterprise

7321:22
7361:24

enters
7357:21

entire
7206:2
7322:20
7364:19

entirely
7145:6
7273:5
7287:16

entirety
7252:13

entities
7231:8
7232:16

entitled
7161:18

entity
7259:25
7274:24
7276:3
7324:8

entrants
7215:17

**entrepreneur
ial** 7362:1

**entrepreneur
s** 7284:1,5
7358:7

enumeration
7237:1

envelope
7171:25

environment
7162:5
7208:24
7216:8
7279:7
7300:14

**environmenta
l**
7134:7,10
7135:8
7138:3
7146:7

7161:20
7174:18
7184:9,15
7248:12
7250:16
7258:20
7337:4
7338:2,4
7360:10

**environmenta
lly** 7213:2

environments
7238:11

envision
7142:23

envisioned
7177:10

equal 7203:6
7273:13
7284:23

equally
7362:24

equipment
7282:6

equity
7114:2
7169:10,16
,17,23,24
7170:3
7184:18,19
7185:6,7,1
5 7235:16
7271:21
7272:17,19
,23,25
7273:9
7274:5,20,
23 7275:1
7282:16,21
7310:24
7313:1

equivalent
7254:7
7256:17
7261:14
7298:24
7355:19

era 7314:7

ERCO 7200:17

err 7236:25

ESCO 7211:9

especially
7133:7
7146:19
7237:16

essence
7264:8
7348:24

essential
7190:2
7213:7

essentially
7150:13
7244:1
7252:1
7285:22
7343:5

established
7122:11
7126:19
7136:17
7162:13
7185:18
7243:19

establishing
7285:8

**establishmen
t** 7134:8

estimate
7204:20
7262:16
7300:9

estimated
7204:2

estimation
7192:23
7193:14

et 7224:6
7269:11
7333:19
7338:5
7355:6

Europe
7300:19,21

evaluate

7133:17
7181:2
7240:9
7283:3

evaluated
7143:10

evaluating
7250:1

evaluation
7134:15
7138:6
7187:17
7230:2
7237:7
7246:3
7285:9
7346:18

evaluations
7231:12

evening
7365:16

event
7241:10
7243:13
7266:1

events
7242:3,4
7265:22
7326:1
7343:24
7354:2

eventually
7264:9
7266:2
7282:6
7349:10,17

everybody
7112:8
7280:4
7289:7
7293:6
7315:7

everybody's
7222:7

everyone
7196:23
7365:17

everything

7184:13

everywhere
7311:6

evidence
7114:10
7117:14
7124:10
7130:15
7131:23
7164:9
7185:3,4
7208:17
7236:11
7271:25
7323:18,19
7341:23
7342:25
7355:24
7357:20
7362:4

exacerbated
7327:8

exact
7314:18
7355:2

exactly
7141:16
7174:24
7278:8

examination
7113:7
7133:6,11
7137:8
7146:17
7193:6,21
7194:5,17,
25 7196:11
7264:14
7323:10

examine
7270:3
7272:23
7275:8
7278:3

examined
7144:11
7155:20
7252:9
7262:8
7264:13

7266:21
7267:23
7268:25

examining
7307:19,23

example
7129:6
7143:14
7165:24
7174:17
7181:11
7191:5
7202:15
7251:4
7254:24
7294:11
7303:8
7317:24
7326:7
7327:14
7328:21
7330:6
7332:7
7337:14

examples
7167:11
7202:11
7218:1

exceeding
7167:13

except
7273:10
7300:12

excerpted
7176:24

excess
7218:10
7274:22

exchange
7303:25

excluded
7223:15

exclusive
7268:11

exclusively
7231:6
7283:19
7337:20

Excuse
7262:25
7337:14

execute
7255:13
7357:22
7359:5
7360:23

executed
7185:19
7355:6
7358:12

execution
7253:17

exempli
7161:8

exemplifies
7161:8

exercise
7271:18
7276:25

exhibit
7111:2
7133:1
7145:10
7150:12,13
7152:20
7176:25
7190:13,17
7198:2,4,9
7227:25
7228:1,7,1
5 7230:21
7234:24
7247:13
7280:12,14
,18 7328:4
7332:19
7341:24
7344:14
7351:17
7354:4

exhibits
7110:3
7111:1
7116:10
7227:14,23
7342:13,15

exist
7206:16

7214:8

existing
7204:16
7216:25
7261:15
7277:2
7307:13,15
7308:4
7349:14

exists
7138:7
7168:6

expand
7132:12
7206:21
7296:17
7359:9

expansion
7208:6
7325:11

expansions
7205:15

expect
7186:10,12
7194:7
7225:16
7337:8
7356:23
7362:5
7364:16,25

expectation
7251:5

expectations
7262:11
7269:10
7360:22

expected
7178:18
7179:22
7186:20
7262:22,23
7274:15
7282:21
7303:13
7350:2

expecting
7333:13

expend
7360:19

expenditure
7251:8,24
7330:14
7349:8,9

expenditures
7155:2,5,9
,11,13,17
7204:18
7247:14
7248:11
7250:20,21
,22
7251:10
7252:3
7255:3
7322:16

expense
7282:12

expensed
7282:11,13

experience
7124:25
7143:20
7171:1,13,
16
7180:4,20
7181:1
7230:25
7232:19
7233:4,7,1
1
7235:2,25
7238:8
7240:1
7241:3,22
7242:7,15
7243:18
7272:24
7313:19,20
7326:5

experiment
7307:22

expert
7112:10
7117:24
7242:23
7243:10
7244:24
7261:21

expertise
7236:21

7237:2,18
7238:17
7239:2
7261:23

experts
7229:1
7236:11
7239:6
7244:7
7254:11
7256:23
7264:18
7293:23
7339:6

explain
7143:4
7179:2,18

explained
7201:11
7241:20

explanation
7281:9

explicit
7252:7

explicitly
7248:16

explore
7181:12
7320:9

export
7201:22
7230:10
7246:24
7247:1
7248:6,14,
22 7250:7
7253:8,11,
13,16
7254:23
7255:9
7256:3,14
7258:23
7259:1
7263:16
7269:21
7284:12
7291:18
7293:8,25
7294:17,19
7299:21

7301:8
7305:24
7306:23
7321:8,18,
19
7323:2,4
7331:9
7332:11
7346:13
7354:7,10
7358:12

exportable
7202:25

exporting
7331:24

exports
7259:2
7267:17
7279:6
7294:2,18
7304:24

exposed
7320:6

exposing
7320:2,3

exposure
7202:10

express
7221:15
7224:23
7308:13

expressed
7169:15,23
7224:3

expressing
7223:20
7271:10

expression
7343:6

extended
7193:9

extensive
7162:12
7194:9

extent
7136:11
7174:22
7238:2

7258:21
7269:3
7283:20
7340:9
7364:18

external
7202:1
7254:11,13

extra 7267:1
7321:24
7331:25

extreme
7309:15

extremely
7192:13
7213:1

eye 7342:7

F

face 7144:13
7290:11

faced
7201:17
7209:12
7225:20

faces
7290:10

facilities
7215:12
7253:14
7288:18
7305:24
7340:5

facility
7171:3
7186:15
7187:13
7216:6
7218:13
7246:22
7247:4
7253:12,18
7288:8
7301:15
7305:11
7320:2

facing
7258:12
7295:21

7316:5,6
7317:19,25
7327:22

fact 7118:18
7120:24
7121:17
7123:9,11
7124:11
7126:4
7137:3
7149:6
7162:1,19
7178:5
7188:10
7208:12
7213:3
7248:4
7256:24
7262:18
7265:12
7268:25
7276:1,5
7281:10
7284:19
7291:10
7292:23
7295:16
7302:1
7303:4,12
7307:21
7310:3
7325:10
7349:18

factor
7213:20
7316:2

factors
7123:2
7125:24
7188:22
7357:12

fail
7255:14,15

failure
7255:16
7298:17

fair
7118:15,16
7123:14
7130:12
7133:25

7135:23
7136:8
7176:5
7201:8
7237:21
7283:15
7328:1
7333:2
7335:12
7339:19
7343:2
7345:13
7346:19,21
7348:2,5
7351:7
7357:25
7361:8
7362:10

fairly
7186:4
7190:20,21
7219:11
7220:4,12
7314:10,11
7346:4
7363:22

fait
7361:16,21

faith
7255:11
7363:4

fall 7307:3
7355:3

fallen
7321:21
7322:23
7347:1

Falling
7322:23

falls 7295:6
7321:9,17

familiar
7157:24
7164:21,23
7166:16
7167:8
7168:3
7222:13
7326:6,17
7342:23

familiarity
7344:8

families
7157:19
7211:12

family
7146:22

fantastic
7291:14

fashion
7297:9

fast 7299:14

favour
7256:9
7268:19
7304:4
7335:8
7349:3,4

favourable
7213:9
7284:7

feature
7170:4

February
7176:19
7353:11

federal
7149:7,17
7163:16
7203:25
7310:16
7325:5

Federation
7132:10
7244:14

fee 7262:15
7277:4,6,9
,13,19,21
7278:4
7297:13,15
,17,23,25
7298:5,15,
16,20
7299:1,2,9
7311:11
7312:10

feedback
7163:2

feel
7344:12,17

fees
7311:9,23
7312:8
7314:6
7339:1

fell 7124:22

ferna 7238:6

Fernandes
7109:10
7110:12
7158:19,22
,23
7159:2,15,
18
7160:2,6,1
0,13,20,24
7161:17,24
7162:7,11,
18,22
7163:8,13,
20,25
7164:6,8,1
2,17
7165:1,4,8
,15,19,23
7166:2,10,
14,18
7167:3,10,
16,23
7168:5,9,1
6,21
7169:7,13,
21
7170:2,6,1
6,23
7171:10,15
,23
7172:7,14
7173:3,18
7175:12
7183:22
7184:17
7193:2
7195:3,5
7196:2,3,1
5

Fertilizer
7200:17

fiat 7277:10

field
  7123:22
  7216:16

fifteen
  7194:15
  7197:21
  7271:2
  7290:20
  7301:12,16
  7302:14
  7318:1

fifty 7211:1
  7298:21
  7317:8

figure
  7186:1,17
  7335:16

Figures
  7187:25

filed
  7176:19
  7229:13
  7230:20
  7234:2,23
  7351:4

filidy
  7215:12

filing
  7176:7
  7177:9
  7224:7
  7227:22

filings
  7229:17
  7234:6

fill 7249:7

filled
  7177:8
  7182:13

final
  7196:13
  7209:14,18
  7244:2
  7257:1
  7277:1

finalizing
  7365:9

Finally

7207:6
7230:13

finan 7344:8

finance
  7235:24
  7237:3
  7242:1

financial
  7206:9
  7208:17
  7212:14
  7223:11,17
  7231:6,12
  7235:21
  7237:3,7
  7238:6
  7241:12
  7242:3,6
  7264:6
  7265:9,24
  7266:1
  7269:13,17
  7270:20,23
  ,25
  7271:3,5
  7282:11
  7303:18
  7333:4,6
  7334:16
  7337:21
  7343:18
  7347:19
  7351:4,9,2
  1,23
  7352:3,4,6
  ,7

financially
  7259:25
  7260:2,10
  7310:5,6
  7312:15,25
  7313:15

financings
  7235:23

findings
  7142:11

fine 7132:1
  7212:22

finish
  7356:9,21

finished
  7201:22
  7324:18

Fire 7212:2

fired
  7232:25
  7249:12
  7278:15
  7316:10

firm 7217:8
  7219:10
  7232:7
  7233:4,5,6
  ,15
  7237:2,24
  7240:1
  7245:11
  7335:15

firmer
  7353:24

firms 7220:5

first
  7112:17
  7118:19
  7119:2
  7122:24
  7126:2
  7129:8
  7131:10,15
  ,19,23
  7140:7,18,
  21 7144:3
  7145:1,3,9
  ,14
  7147:10
  7151:15
  7152:13
  7158:19
  7159:5
  7164:14
  7165:11
  7166:20
  7168:18,24
  7169:9,14,
  22
  7171:2,9,1
  7 7172:2
  7174:14
  7178:7
  7179:19
  7185:15

7189:6
7190:5
7197:25
7198:17
7205:23
7208:14
7227:10
7228:24
7236:18
7246:19
7250:5
7258:20
7263:24
7267:16
7281:2
7304:22
7308:9
7332:19
7338:4
7344:1
7349:4
7361:13

firsthand
  7171:13,16

firstly
  7191:25

fit 7205:5
  7274:6

five
  7133:17,20
  7207:24
  7211:3
  7235:13
  7263:14
  7271:13
  7289:25
  7300:18
  7316:21
  7332:8
  7356:22
  7364:8

fix 7286:19

fixed
  7127:4,16,
  23 7128:4
  7215:3
  7272:19
  7299:19
  7300:1
  7322:25
  7331:23

flag 7130:13
  7359:14,17

flags
  7363:21

flashed
  7190:10

fleet 7291:4

flexibility
  7309:4,6

flexible
  7295:15
  7308:22

Flin 7200:15

flip 7337:14

Flon 7200:15

flow 7262:15
  7291:14

flown
  7198:22

flows
  7178:13,18
  ,22 7291:1
  7300:8
  7313:11
  7330:13
  7336:21
  7338:24
  7339:2,4

flyer
  7316:25

focus
  7229:24
  7231:18,20
  7234:17
  7264:19
  7272:6,10
  7283:19
  7309:14

focussed
  7115:9,10
  7135:24
  7136:9
  7207:25
  7239:25
  7258:6
  7264:14,24
  7273:2
  7326:24

7351:23

focusses
7347:15

fond 7284:1

food 7211:25
7287:9

foot 7218:17

footnote
7151:24
7152:2
7170:17

forced
7189:7

forecast
7121:16
7206:9
7326:18

forecaster
7317:7

forecasts
7120:6
7269:11
7271:5
7318:4

forego
7347:11

foregoing
7296:16

forget
7316:17
7334:25

forgive
7326:22

form 7116:20
7187:5
7207:5
7219:18
7270:10
7298:13,23
7302:21
7311:7
7360:22

formed
7284:10

forms
7156:20
7232:24

7238:4
7247:21
7259:18
7269:17
7272:4

for-profit
7231:8
7238:15
7276:2,3

Forsyth
7198:20
7199:20
7209:22
7210:2,5
7217:16
7219:5,14,
20,22,25
7221:6

forth 7120:6
7126:14

fortune
7299:23

forty
7365:12

forty-eight
7270:24
7271:6
7272:11

forty-five
7210:10

forty-three
7203:18

forty-two
7203:24

forward
7116:11,22
7118:23
7122:25
7126:3,11,
17
7157:5,10
7174:21,25
7175:7
7187:23
7188:20
7189:5
7199:8
7214:25
7250:20

7282:9
7283:6
7288:14
7300:23
7304:25
7322:2
7342:14,15
7344:9

forwards
7174:10

fossil
7232:25

Foundation
7212:1

fourteen
7316:4

fraction
7302:17

frame 7226:1
7300:17

frames
7154:15

framework
7126:9

framing
7286:11

frankly
7271:9
7273:17
7274:3
7288:16

free 7222:16
7225:14

Friday
7223:11
7269:14
7333:5
7351:5

Friend
7126:24
7131:8
7132:10
7183:22
7364:8,9,2
5

front
7145:17
7185:25

7216:9

fronts
7248:12

fruition
7172:3,22

frustrated
7315:10

fuel 7213:10

fulfilled
7253:12

fulfilling
7300:4

full 7203:18
7208:18
7231:4
7238:13
7300:25

fully 7141:8
7143:2
7246:25
7247:4,5
7295:4

functional
7289:21

fundamental
7274:9
7284:3
7291:3

fundamentall
y 7238:6
7259:1
7262:9
7276:2,16
7291:7
7301:13
7302:2
7325:25

funds
7251:19

funnel
7223:14
7352:9

furnace
7212:20,23
7219:16

future
7116:16

7124:13,16
7148:20
7149:24
7205:20
7209:24
7230:18
7241:11
7243:13
7244:9
7248:9,17
7249:1,21
7251:18
7252:10,17
7255:6
7263:7
7265:18
7266:23
7268:12
7270:15
7277:20
7278:7
7279:11
7285:6
7299:17,18
,24
7300:11
7301:14
7326:14,24
7340:8
7347:17
7362:15

futures
7265:3
7266:20
7278:3

G

GAC 7109:14

game 7216:11

gamete
7304:9

gamut
7238:13

gang 7327:15

Gange
7109:14
7110:9
7112:15,20
7113:1,2
7114:9,20,
25

7115:8,12,
20
7116:1,12,
25
7117:7,12,
23
7118:8,11,
12,17,22
7119:4,9,1
4,18
7120:17,24
7121:3,5,1
3,21
7122:7
7123:5,9,2
5
7124:5,8,2
3
7125:3,6,1
0 7126:21
7127:13
7129:11,17
7130:2,12,
17
7131:16,21
7132:3

Gange's
7130:7
7131:2,7

gap 7314:9

gaps 7161:10

gas
7186:6,13,
21 7188:11
7201:20
7207:7
7210:24
7216:13,17
7231:20
7233:2
7237:20
7238:1
7249:2,11
7263:18
7268:22
7278:14
7287:16
7288:14,25
7290:6,7,1
6
7292:8,11
7303:19

7304:22
7306:13,19
7307:11
7316:10,11
,12,18,20,
21
7317:2,3,6
,14
7346:10
7347:15
7349:6
7350:25

gas-fired
7305:23

gasoline
7315:14

Gav 7198:22

Gavin
7198:23
7199:20,22
7209:22
7210:6
7220:1,6,1
5,18

GDP 7156:12
7204:21

gears
7313:18

Gen 7304:17

general
7115:7
7125:21
7147:1,12
7155:23
7176:1
7180:17
7198:23
7199:22,24
7210:7
7236:2
7240:17
7330:18
7349:25

**generalizati
on** 7327:17

generalized
7124:21

generally
7186:10,11

7188:11
7230:25
7235:2
7240:3

generate
7124:25
7218:4
7274:21

generated
7207:1
7215:25
7262:23
7364:20

generating
7247:25
7329:21

generation
7134:24
7141:10
7160:15
7161:19
7218:18
7231:21
7232:23
7253:12
7278:12,16
,17,18,23
7279:3,11
7289:3,12
7291:4
7301:20
7318:4,18
7319:1,5,1
1,23
7320:13,20
,21,24
7321:1,16
7322:4,9,1
0,14,19
7323:7
7324:23
7325:7,11,
17 7327:9
7328:12,20
7329:14,20
,22,25
7330:9
7332:4,5,6
,7

generations
7206:23

gentleman
7341:9

gentlemen
7199:2
7242:21

geographic
7201:16

geological
7202:22

geology
7202:18

George
7109:19
7110:11
7144:22,23
,24
7145:24
7146:12
7147:4,8,1
5,18,25
7148:12,18
7149:2,6,1
4,21
7150:2,10,
19,24
7151:3,9,1
5,24
7152:6,12,
19
7153:3,18,
20
7154:3,11,
18,24
7155:8,12,
19
7156:1,8,1
7,23
7157:9,17,
25 7158:6
7194:15
7226:15
7242:20
7243:3,25
7244:5

Gerdau
7110:16
7198:20
7199:5,20,
22,23
7200:18
7210:1,4,8

,17
7211:3,4,1
0,14,22
7217:11

Gerdau's
7198:24
7212:6,11,
14,18
7213:7
7216:6

gets 7249:12
7289:13
7299:18
7312:21
7317:24

getting
7225:7
7275:21
7306:9
7315:19
7319:4
7330:22
7333:16
7363:13

Gillam
7134:20
7137:8,14

given
7117:14
7119:20,23
7185:4
7187:3
7197:7
7226:25
7241:17
7243:9
7257:1
7269:23
7272:24
7284:9
7296:1
7300:7
7301:17
7302:16
7308:18
7317:22
7323:21
7334:19,20
7348:11

giving
7114:15

7153:4
7164:9
7236:11
7302:15
7309:21
7310:1

glad 7221:22

glance
7351:8,16

gleaned
7146:2

global
7201:13

globally
7201:23

globe
7210:12

go-ahead
7302:16

goal 7308:14

go-forward
7283:4

gone 7267:3
7316:9
7356:6

goods
7178:14,18
7201:22
7204:7
7315:12

Gosselin
7108:13

Gotham
7326:21

government
7116:13,20
7143:4
7149:7,17
7163:16
7204:3
7208:10
7225:9
7230:15
7232:5
7240:17
7241:10,13
,17 7242:5
7243:6,15

7246:7
7258:18
7259:5,6,7
,10,18
7260:5,6,1
2,14,24
7261:24
7262:18
7264:14
7275:6,9,1
3,17,21,25
7277:14,18
,20,23
7283:20
7287:8
7298:14,25
7299:7
7310:14,16
7311:3,15,
21
7312:5,17,
22 7313:12
7314:24
7315:9
7325:5
7338:2,21,
24 7339:25
7360:13

governments
7163:22
7203:25
7231:7,15
7243:20
7277:10
7287:3
7298:22

government's
7262:12

Governments
7312:4

grand
7190:19

Grant
7108:17
7219:8,17,
21,23
7220:3,9,1
6,20
7221:9
7286:8
7293:1
7308:7

7313:17
7323:17

grants
7157:20

graph 7187:9

graphs
7354:22

great
7286:17
7317:12
7334:14

greater
7116:6
7127:6
7139:8
7259:12
7271:23
7277:24
7292:21
7362:6

greatest
7113:22

greatly
7171:17

green
7112:15
7124:9
7218:19

greenhouse
7210:23

grid
7214:8,18
7218:9
7317:19
7318:1,5,1
7,21,25
7321:13
7324:19
7325:7,15
7329:23

Griffin
7200:19

gross
7182:15

grossly
7267:3

ground

7319:10

grounds
7363:8,11,
12,18

group
7167:25
7168:6
7197:18
7198:18
7199:16
7200:2
7211:11
7218:1
7290:25
7326:18
7352:3

groups
7128:25
7134:16,19
7137:6

growing
7247:1
7327:15

growth
7201:12
7204:18
7205:15,18
7266:23
7269:10
7326:7,14,
24
7327:3,4,5
,6,7,8

GSL 7200:13

guarantee
7259:10,13
,16
7262:15,19
7277:4,6,1
9,21
7278:4
7297:13,14
,17,23
7298:9,14,
16 7311:11
7312:10
7339:1

guaranteed
7305:22

guaranteeing

7275:17

guess
7113:19
7138:22
7197:8
7199:9
7218:12
7287:20
7297:23
7299:23
7306:24
7307:18
7308:21
7314:12

guests
7197:6

guidance
7286:13
7305:4
7364:16

guide
7134:23

guideline
7134:10

guidelines
7134:11
7136:17
7138:9
7139:10,13
7141:24

H

Habitat
7161:1,21

Hacault
7109:17
7194:8
7197:10,11
7198:6,11,
15 7199:19
7209:18
7221:20
7224:1
7239:8,9,2
4 7240:19
7241:19
7242:13,18

half 7130:21
7193:17
7195:11

7235:13,24
7247:11
7285:17
7288:3
7330:6

hand 7131:8
7181:1
7216:5
7243:12
7256:8
7268:8
7307:5
7311:4
7322:14
7332:2,4
7357:9

handed
7130:8

handle
7334:3
7341:4

handling
7193:21

hands 7364:2

happen
7174:16,24
7249:15
7267:6
7319:7

happened
7180:20
7300:12

happens
7188:18
7264:10
7313:12
7318:19
7321:19
7360:25

happy 7200:9
7279:17
7291:13,19
7316:1,13
7317:13

Har 7209:18

hard 7172:20
7173:7,19
7227:24
7299:14

7308:24

harder
7362:14

hardship
7311:25

harm 7184:9

haven't
7127:14
7143:16
7185:18
7193:22
7295:23

having
7131:12
7148:4
7167:6
7259:20
7262:6
7290:15
7294:9,18
7301:17,18
7319:24

head 7193:3
7196:8
7324:6
7335:19
7352:16

header
7222:15

heading
7244:9

headings
7311:19

health
7140:1
7161:1,4,7
,11,14,19,
21 7164:4
7241:13
7325:25

hear 7130:15
7169:19
7173:22
7226:24
7335:25
7361:12
7365:2

heard

7114:11
7131:22
7164:18
7234:16
7236:2
7260:18
7276:8

hearing
7114:11
7124:10
7162:5
7164:18
7199:8
7208:17
7216:10
7223:14
7347:23

hearings
7114:11
7217:8

heart 7212:1
7286:5,9

heat
7191:1,6
7219:10,12
7318:8

heavily
7216:7
7287:18
7327:11,15
,19

heavy
7186:14
7216:8

heck 7287:19

hedge
7289:22
7316:21,24

hedging
7289:14

held 7108:20
7141:18
7216:11

Helga 7109:8

help 7204:9
7206:13
7208:7
7209:13

7211:23
7215:18,19
7216:5
7217:13
7266:3
7304:19

helpful
7184:16

helping
7363:2

helps 7286:5

hence
7260:14

heroic
7334:1

he's 7117:17
7198:21
7210:6
7233:13
7359:3

Hi 7217:18

HIA 7161:6

high 7123:21
7124:18
7161:14
7174:23
7202:10
7204:8,13
7213:9
7215:4
7251:18
7256:9
7267:1
7295:18
7297:24
7316:18
7337:9
7342:23
7344:7
7357:7

higher
7155:15
7156:5
7165:16
7191:5,8
7207:22
7269:24
7285:15
7294:7

7303:15
7314:5
7318:10,16
7346:5

highest
7214:24

highly
7182:25
7188:12
7249:20

high-paying
7203:19
7209:3

Hill 7211:7
7230:21
7234:24

hire 7165:12

historic
7151:18
7178:15

historical
7181:2
7272:24

historically
7272:7,14
7299:10

history
7272:1

Hombach
7109:3
7110:13
7112:5,6,2
0 7113:3
7117:22
7175:14,16
,17
7176:4,14,
17,22
7177:6,22
7178:20
7179:9
7180:8
7181:14,15
7182:9,19
7183:6,14,
21
7184:5,16,
21
7185:1,2,1

2,22
7186:9,16,
25 7187:10
7188:21
7189:9,14,
19
7190:8,18,
23
7191:4,11,
17
7192:18,21
,25
7193:15
7196:5,14

home
7148:3,4
7157:15
7245:2

homogenized
7263:4

honest
7285:14

honestly
7353:14

hope 7223:23

hopefully
7126:16
7236:23
7280:4
7355:10

horizon
7249:7
7262:4
7265:13
7270:22
7317:22

horizons
7271:13

hospice
7211:24

hospitality
7204:9

hour 7194:8
7195:8
7222:11
7294:20
7305:15
7321:8,10,
11,17,18,2

4
7322:17,19
7330:4,20
7331:12,17
7332:6
7364:14
7365:6

hours
7279:19
7305:17
7319:14
7321:14
7365:6

house
7143:16

household
7143:7
7155:2,10,
11

housing
7147:21,22
7148:15,17
7149:8

HudBay
7200:15
7204:14

huge 7305:18

Hugh 7108:17
7219:8,17,
21,23
7220:3,9,1
6,20
7221:9
7286:8
7293:1
7308:7
7313:17

hund 7181:18

hundred
7159:16
7182:25
7183:2
7188:3
7203:18,19
7210:9,14
7211:1,3,1
2 7272:3
7290:4,11
7291:17
7300:17,18

7301:11

hundreds
7209:1

hurt 7326:22

hydro 7108:7
7109:5
7114:7,12,
15,23
7124:25
7126:14
7128:24
7131:18
7138:1,25
7139:15
7141:19,23
7142:11,16
7143:4,12,
15
7148:6,11
7154:12
7159:8
7160:3,15
7162:2
7166:19
7167:4
7168:10,18
7170:4,21
7172:20
7173:8,19
7176:19
7178:21
7179:20
7180:13,21
7181:20
7183:16
7185:4,13
7186:22
7187:14
7190:4
7192:1,8
7197:19
7201:1
7204:25
7205:3,12,
16,19,20
7206:2,18,
21,25
7207:12,24
7208:11,15
7209:5,6,9
7213:21
7215:14,17

,23,24
7216:9,11,
19
7218:14,17
7219:2
7224:21
7225:12,24
7226:9
7227:1
7236:15
7241:11
7243:14
7244:19
7247:13
7248:17
7249:8
7250:13
7252:19,25
7254:14
7255:5
7257:13,23
7258:2,8,1
2
7259:4,7,1
1,16,22,25
7260:3,9
7262:24
7264:2,3,4
,7
7265:4,8
7266:5,13,
19,22
7268:12
7270:17
7272:18
7273:8,10
7274:19
7275:12,18
7276:1,18
7277:10
7278:24
7279:4,12
7280:14
7282:8,13,
21 7284:20
7285:3,6
7287:15,21
,22
7288:5,12,
16,24
7289:20
7290:1,6,2
1,22,24
7291:6,8,1

8
7294:6,25
7295:2
7296:1
7297:8
7298:6,18
7299:17
7300:2,6,2
1 7302:13
7305:20
7306:7,9
7308:9,16,
23
7309:3,10
7310:4,20,
22
7311:8,20
7312:20
7313:8,11,
15,20
7321:10,18
7322:11
7324:7
7329:19
7331:12,21
7342:8
7343:9
7344:9,14,
25 7347:19
7348:7
7351:5,16,
20 7354:15
7357:17
7358:12
7361:10,15
,20
7362:18

hydro-based
7305:22

hydroelectri
c 7151:20
7171:3
7186:15
7187:13
7232:24
7240:3
7246:22
7253:14,17
7301:20
7305:25
7306:2,10,
20,22

hydrogen
7218:2

hydrological
7300:14

hydrology
7263:16
7264:24
7265:5,10,
15,16,19
7266:4,6,1
8 7267:21
7270:19
7287:13
7288:1
7290:9
7292:5,12

Hydro-Quebec
7160:7
7295:2

Hydro's
7108:9
7125:13
7133:5
7153:16
7164:18,21
7168:25
7174:18
7175:4
7182:11
7201:2,7
7204:23
7209:20
7213:10
7229:9,16
7233:23
7234:5
7246:4
7257:10
7258:25
7271:4,25
7272:10
7274:17
7276:6
7280:9
7281:20
7296:11
7308:15
7321:21
7329:18
7331:7,23
7358:20,24
7360:2

7363:5

hypothetical
ly 7330:20

———— I ————

i.e 7122:16
7348:25

Iceland
7288:9

I'd 7113:3
7126:22
7145:8,12
7150:10,11
7159:3,5
7176:22
7179:18
7185:23
7197:5
7199:2,7
7226:23
7236:15
7244:25
7286:9
7306:24
7314:19
7320:9
7352:10
7365:11

idea 7249:13

identificati
on 7328:11

identified
7120:8
7123:20
7124:21
7125:20
7134:14,19
,25
7136:12
7137:15
7140:3
7143:11
7157:24
7174:20
7175:5
7180:7
7190:7
7193:22
7241:4
7258:15

7263:12

identify
7134:13
7174:3
7237:2
7262:7
7354:7

identifying
7328:19

ideological
7364:10

Iderstine
7109:8

IEC 7109:24
7110:5,18
7112:23
7227:17

ignores
7264:3

I'll 7118:8
7130:4
7132:4,24
7145:11
7152:12,19
7175:13
7176:25
7191:13
7193:24,25
7197:9
7199:16
7220:20
7226:15
7236:16,18
7258:13
7286:6
7323:22
7334:9
7344:16
7352:21
7356:3
7359:16

Illinois
7289:5,6

I'm 7112:13
7113:5,6,1
3,16
7117:21
7119:20
7120:15
7129:18

7130:17
7137:5
7139:5,14
7141:16
7142:7
7145:4,14
7146:15
7150:14
7152:21
7153:9
7154:10
7157:10
7158:5
7164:8
7165:2,3
7170:12
7171:10
7179:7
7182:21
7184:21
7185:20
7193:7,11,
24 7198:15
7210:4
7218:22
7222:22
7226:24
7227:7
7235:17,20
7236:23
7240:22
7241:4
7245:11
7246:8
7249:24
7270:6
7281:1
7286:13
7293:2,6
7313:20
7316:24
7323:12,18
7324:1,2,4
,11 7334:4
7336:5,9
7338:12
7342:17
7344:22
7347:23
7355:1,12,
13 7356:9
7361:13
7364:4

immediate
7227:8
7246:20
7249:18

immediately
7113:6

impact
7114:5
7134:10
7135:8
7138:3
7139:13
7145:7
7146:7
7147:1,5
7148:19
7154:25
7161:20
7169:10,16
,24
7172:16
7177:17
7191:1,8
7203:13
7240:10,24
7241:5,9
7242:2
7243:5,13,
21 7246:6
7260:11
7261:2,7,1
2 7265:5
7279:4
7282:15
7292:24
7309:23
7322:23
7329:17,22
7330:1
7340:10,12
,13

impacted
7127:22,24
7129:5

impacts
7113:22
7115:6
7132:18
7133:4
7136:3,9,2
2 7143:1
7144:9

7146:14
7150:5
7161:12
7170:8
7207:21,22
7208:9
7230:14
7260:16
7261:23
7262:2
7279:14
7339:10

impersonal
7324:5

implement
7126:7

**implementati
on** 7128:17
7129:25
7141:10
7143:25
7174:13
7175:2
7189:4

**implementati
ons** 7142:3

implemented
7120:10,11
7122:15
7125:24
7129:14
7140:5,23
7141:2,17
7206:5

implementing
7129:9
7141:14

implications
7140:2
7237:9
7340:24

implicitly
7252:8

import
7263:16
7293:13
7294:4,17,
19

importance

7132:11
7139:13
7202:15
7285:8

important
7114:14
7138:9
7166:3
7201:12
7205:8,14
7212:9,11,
17 7224:10
7262:7,10
7263:1
7265:21,22
7269:17,22
7308:15
7310:6
7326:1
7339:3
7358:7

importantly
7259:9

imports
7268:22
7290:15
7293:16

imposed
7225:8
7299:11

imposition
7270:11

impression
7219:17

improve
7216:6

improvement
7128:15

improving
7172:1
7216:7

imprudent
7361:20

Inc 7200:15
7231:4
7245:12

incent
7218:7

incentives
7217:20,23
7218:8
7319:22

incidentally
7240:16

inclination
7283:2

include
7133:6
7136:23
7140:14
7150:21
7164:4
7200:6
7270:19
7272:21
7296:13
7303:20
7312:19
7343:7
7347:16
7348:1,6
7350:1,3

included
7118:17
7136:14
7137:18
7138:19
7179:13
7180:14
7230:2
7238:19
7240:7
7272:17
7312:21
7343:7
7347:2
7352:16,17

includes
7125:21
7165:24
7205:25
7296:8
7315:23
7347:15

including
7162:24,25
7167:5
7201:18
7204:25

7211:10
7213:9
7214:1
7225:5,21
7232:12,24
7233:8
7237:7,19
7247:14
7283:3
7305:18
7322:6
7354:25
7357:12
7364:21

inclusion
7161:8

income
7127:4,6,1
6,23,24
7128:3,4,1
6 7143:7
7261:17,19
7311:14
7321:15

incorporated
7135:18
7187:18

incread
7294:5

increase
7115:6
7149:22
7155:13
7156:11
7186:21
7208:11
7217:1
7294:1,4,5
7298:23
7303:11
7320:24
7321:6

increased
7143:7
7155:15
7213:13
7299:13
7342:11

increases
7127:3
7142:15

7143:5
7144:12
7148:19
7149:25
7150:5
7152:15
7153:24
7154:1,4
7156:19
7205:24
7206:6
7214:4
7309:5
7314:11
7315:24
7316:1,3,4
,5,6,7
7320:18
7339:10,18

increasing
7167:19
7213:9
7325:16

incredibly
7294:24
7314:2

incremental
7275:9,10
7276:14,15
7287:2
7288:15
7291:7
7293:10
7306:17
7346:14

increments
7275:23

incur 7182:6

incurred
7179:6
7180:10,18

inde 7256:22

independent
7112:10
7117:24
7194:12
7231:5
7232:13
7254:10
7256:22

7287:5

**independentl
y** 7283:21

in-depth
7145:22

Indian
7148:10

Indiana
7289:6
7327:20,25

indicate
7139:24
7142:13
7150:13
7156:18
7164:13
7170:17
7173:6
7194:5
7207:12
7236:18
7364:23

indicated
7135:17
7171:24
7172:8,19
7173:7,18
7182:10
7343:9
7344:7

indicates
7157:19
7159:7,20

indicating
7151:25

indications
7311:1

indirectly
7123:7
7204:15
7262:3

indis
7347:14

individual
7222:12
7265:22

individually
7322:5

**individual-
owned**
7147:22

individuals
7144:10,15
7148:6
7162:25
7166:4
7187:21
7188:6
7233:14

industrial
7151:12
7198:18
7199:16
7200:12
7204:8
7209:4,12
7213:16,22
7216:3
7217:13
7276:9
7318:8
7340:5

**industrializ
ed**
7327:12,15
,20

industries
7200:16
7201:15
7203:10,16
7204:5,6,1
4,19,20
7205:18
7206:11,19
7211:7,14
7220:8

industry
7125:13
7154:10
7201:12,17
7202:6,16,
25 7204:24
7205:6,11,
14,20,21,2
3 7206:3
7207:1
7208:2
7211:18
7220:7,13,

19 7231:19
7232:17
7233:11,17
7237:19
7238:1,5,2
2 7271:6
7319:16
7326:11

industry's
7205:6
7211:20

inevitable
7182:1
7325:19

infer 7123:7

inferring
7122:4

infinite
7359:25

inflation
7155:14
7156:6
7271:21
7272:1,13,
22

information
7111:9
7117:1
7119:19
7123:11
7124:15
7130:8
7137:3,6,1
7,20,25
7138:22,24
7139:15
7145:22,25
7146:4
7151:25
7152:2,14
7153:12,15
7154:19
7155:3
7156:9
7171:19
7178:15
7209:23
7215:22
7224:10,13
,14,15,18,
22,24,25

7225:4,6,1
0,11,25
7228:12,15
7230:23
7256:20
7257:11
7265:4,7
7266:23
7267:11
7269:9
7273:14
7295:23
7332:21
7333:1
7345:1,18,
22 7347:19
7348:1,4,8
,10
7351:4,23
7353:10
7355:22
7357:5,6
7359:14

informed
7208:8,10
7252:10

**infrastructu
re** 7148:9
7149:9,15
7233:7
7251:11
7267:2

**infrastructu
res**
7151:13

ingredient
7299:3

inhabitants
7145:3
7147:2,11

inherent
7174:7
7264:25
7327:6

initial
7177:9
7188:14
7350:9

Initially
7206:6

initiative
7266:25

initiatives
7188:23
7200:5

innovation
7210:21

input
7179:15
7192:8
7234:14

input/output
7159:6,9,1
4,21
7160:4
7178:6,8
7180:17

inputs
7179:11,20
,21 7192:7
7217:11

inquire
7137:25

inside
7264:9

insight
7171:19
7242:15
7352:13
7353:4

install
7218:17

instance
7137:1

instances
7203:11
7287:8

instead
7321:18
7347:2
7351:24

instinct
7349:25

institutions
7284:6
7358:8

insurance

7289:13
7293:10

integrated
7329:12

intend
7132:12
7195:11

intended
7134:22

intending
7295:5
7365:8

intends
7227:2

intensity
7210:22

intensive
7186:14
7212:5

intent
7359:12

intents
7288:4

interacted
7266:6

interaction
7238:21

intercon
7343:19

interconnect
ed 7293:20

interconnect
ion
7343:25
7344:2

interconnect
ions
7205:12
7296:13

interest
7162:3
7202:8
7226:10
7227:1
7247:14
7263:16,24
7271:21

7272:2,13,
21
7281:23,24
7303:14
7304:8
7308:17
7309:9
7310:25
7313:2
7338:2
7345:15
7349:16

interested
7163:6
7253:13
7276:6

interesting
7150:20
7256:18
7291:20
7304:14
7323:20

interests
7200:6
7208:19
7226:17
7338:1,3

interim
7199:15
7200:4

interject
7224:2

internal
7129:25
7202:1
7274:4

internationa
l 7190:15
7203:1
7232:6

interpret
7136:22
7358:20

interpretati
on 7180:16

interpreted
7134:1

interrelated
7184:13

7253:11

interrogator
ies
7267:12

interrupt
7184:22

interruptibl
e 7215:13

interruption
7121:4

intertie
7246:23
7247:6
7248:22
7250:7
7252:15
7253:8,19,
22,23
7254:5,23
7255:8
7256:3,13
7258:1
7267:16
7269:20
7270:4
7278:14
7284:11
7293:22
7294:3,9
7296:25
7297:4,7
7305:9
7307:10
7343:8
7347:2

interties
7293:18
7296:17,22
,23 7347:6

intervened
7360:14

Intervenor
7113:4
7200:25

Intervenors
7193:25
7236:15
7254:12

interview

7150:3

interviews
7126:10

introduce
7198:16
7227:13

introduction
7217:19

introduction
s 7199:1

invest
7205:10
7208:6
7251:15
7260:23

invested
7202:9
7206:22
7216:7

investigatio
n 7252:5

investing
7251:16

investment
7185:7,15
7202:3,4
7206:7
7209:1
7212:5,18
7217:9
7231:5
7233:11
7235:15,21
7237:4,11,
13
7239:2,12
7314:22
7320:25
7330:19
7340:3,7

investments
7151:19
7169:10
7208:25
7217:12
7237:7
7319:9
7320:16,19
7322:1,2

investors
7273:3,7,9
7274:11

invited
7359:2

involve
7163:5

involved
7141:8,13
7142:2
7171:2,8
7185:20
7197:8
7208:20
7211:12
7233:9
7240:6

involvement
7135:20

involves
7145:14

involving
7328:10
7344:2

IR 7130:8
7131:9,13,
25

iron 7213:5
7319:9

IRR 7276:20

irrelevant
7263:21
7264:11

IRs 7270:14
7271:23
7364:21

islanded
7297:9

isn't 7197:7
7288:22
7289:18
7299:21
7311:3

issuance
7239:19,20

issue
7112:14

7113:25	7188:20	7219:15,16	7298:14	7232:2,22
7127:22	7190:3,6	7221:20	7299:10,13	7235:6,12
7128:18	7200:24	7224:20	7302:8	7236:23
7143:2	7209:17	7225:2	7304:7,8,1	7237:24
7157:5	7214:17	7238:3	5 7305:14	7245:10
7174:25	7220:25	7243:17	7306:1,3,1	7293:25
7179:25	7240:7	7246:13	8	7330:15,16
7190:5	7245:22	7247:16	7307:7,15,	7364:12
7191:18	7270:5,8	7248:16	22	
7193:16	7271:17,23	7249:3,12,	7309:16,17	
7226:22	7286:12	15 7251:8	7311:9,25	**J**
7230:14	7294:15	7253:21,24	7312:3,17	**January**
7243:12	7304:7	7254:6	7313:18	7176:15
7245:20	7314:24	7255:9	7314:11,12	
7251:20	7338:8	7256:5,15	7315:4,25	**Jennifer**
7255:4,22	**Italy**	7257:2,4,8	7316:22	7109:9
7261:5,11,	7150:22	,19	7317:4,10,	**jeopardize**
20		7259:20	12,19	7308:4
7270:14,21	**item** 7240:21	7261:14	7318:11	
7271:22	7241:20,24	7262:7	7319:1,15,	**Jersey**
7273:1,23	7242:16	7263:1	20,24	7214:21
7274:9	7282:12	7264:17	7321:4,12,	**Jessica**
7292:16	**items**	7265:16	15,21,25	7109:22
7317:22	7174:19	7268:3	7322:10,11	7110:10
7318:18	7213:11	7269:5,25	,18,24	7132:7,8,9
7319:20	7240:20	7271:11	7323:2	,24
7324:22		7272:22	7325:2,10,	7133:10,16
7326:13	**it'll**	7273:18	19,22,23,2	,24
7339:13	7224:16	7274:18	4 7326:12	7134:21
7355:2	7313:10,12	7276:12,13	7327:13,15	7135:4,10,
7362:21	**it's**	,14	,25	14,16,23
issued	7117:8,13	7277:10,17	7330:22	7136:2,7,2
7339:7	7123:3	7278:1	7334:18,22	0
issuer	7130:6	7279:9	7336:2	7137:16,24
7243:22	7136:8,14	7281:23	7341:3,12,	7138:8,16,
issuer's	7139:23	7282:3,11,	18	21
7243:23	7146:8	13,19	7343:5,24	7139:5,12,
issues	7150:20	7283:17	7345:14	21
7116:21,24	7155:1	7284:4,5,2	7346:14,25	7140:17,25
7118:13	7158:11,18	1,22	7347:12	7141:7,21
7119:5,10,	,19	7285:12,13	7352:6,7,8	7142:7,22
15 7120:5	7169:19	,22	7353:15	7143:19,24
7126:6,11,	7173:12	7287:7,18	7356:17,20	7144:5,8,1
13,15,16,2	7176:25	7288:17	7358:7,17	7 7194:21
0 7129:13	7177:22	7289:19	7359:4	7226:7
7139:25	7182:23	7290:7,9,2	7361:6,8	7244:13
7141:20	7183:8	2	7362:9,13	**job**
7161:7,19	7188:7	7291:7,17,	**I've**	7166:15,19
7164:2	7190:1,13	19	7113:14,16	,22
7168:12	7194:8	7292:16,17	7129:22	7167:17
7170:11	7202:12	7293:22	7138:4	7168:11
7175:2,5	7212:11	7294:17	7143:17	7178:2
	7216:10	7295:1	7168:14	7183:1,2
	7218:24	7296:21,22		7189:7

7211:18
7334:14

jobs 7166:12
7167:20
7177:8,10,
11
7182:10,12
7186:19,20
7187:2,3
7188:2,4,1
1 7202:25
7203:7,19,
20 7209:3
7211:3,6,1
2,15,19
7217:10
7262:2
7339:5,6

joined
7235:16

joint
7165:11
7184:1

journeymen
7188:24

judgment
7286:18
7300:24
7313:9
7335:21
7355:25

judgmental
7336:3
7363:14

judiciously
7251:21

jump 7304:21

June 7247:16
7251:6
7255:3
7281:17

jurisdiction
7155:21
7156:3
7202:13
7205:5
7293:20
7361:24

jurisdiction

s 7151:11
7152:17
7157:12,15
7158:1
7190:13,24
7191:7
7202:2
7206:12
7207:8,10
7214:2
7215:9,23
7218:15,16
,23 7288:4
7289:2,7
7291:12
7298:20
7316:2,8,1
4 7318:10
7326:14
7327:2,4,2
5
7328:16,18
7341:12,13
,15,18

**justificatio
n** 7251:1

justify
7258:3

―――――――
K
―――――――
K23/Gas
7350:11

Kapitany
7108:14
7280:23,25
7285:7
7286:4
7334:25

KCN 7135:24

KCNs
7134:4,18
7135:11
7136:10
7137:4
7141:8,13
7184:2
7185:5

KCN's
7135:20

Keeyask

7116:5,8,9
7117:18
7118:18
7120:11
7122:12
7123:16
7125:18
7133:13
7134:24
7135:8,10,
24 7136:5
7137:4
7138:13
7140:21
7141:10
7161:5,19
7162:4
7164:15
7165:21
7167:6,14
7168:2,17
7169:15
7183:25
7184:1
7188:18
7207:25
7216:12
7246:21
7247:3,9,1
5,17
7248:21
7249:1
7250:7
7251:3
7252:15
7253:7
7254:4,23
7255:8
7256:3,12
7257:25
7267:16
7269:20
7270:4
7278:14
7281:18
7282:3
7283:6,11,
12
7284:11,25
7285:17
7290:3
7292:8,11,
25 7296:9
7299:18

7300:3,5,9
7301:8,10,
19,23,24
7302:2
7303:4,20
7304:5,15
7305:5
7307:11
7317:24
7318:23
7343:7,14,
20 7344:3
7347:10,16
7348:6,25
7349:6,10,
15
7350:13,15
,22,23
7352:16
7355:11

Keeyask26
7305:1

Ken 7233:15

key 7126:6
7129:2
7143:11
7174:19
7179:19,25
7201:4
7203:4
7206:16
7212:16
7217:11

Keystone
7200:21

kilowatt
7305:15,16
7321:8,10,
11,13,17,1
8,24
7322:17,18
,19
7330:4,19
7331:12,17
7332:6

Kinder
7110:20
7227:9,11,
15,19
7228:25
7233:19,25

7234:8,12,
20,22
7235:5,11
7236:6,9,1
0 7244:23
7323:24
7333:19

Kinder's
7364:21

kinds
7239:16
7243:21
7251:9,19
7260:25
7279:8,12
7288:18
7289:15
7308:2
7309:11
7312:4
7338:8
7358:18
7360:6

knocking
7361:10

knowledge
7154:10
7257:15
7340:24
7348:14
7353:12

known
7128:13
7171:25
7176:2
7187:14
7257:4

Koch 7200:16

KURT
7196:9,17
7198:13
7228:19
7280:15

kV
7200:13,14

―――――――
L
―――――――
La 7224:6
7295:10
7304:14,17

7307:19
7348:24
7349:2,3,2
1

labour
7188:12
7203:17

Labrador
7159:8

lack 7187:1
7247:20
7266:25

laden
7128:23
7157:7

lags 7313:6

language
7244:10
7290:1
7359:6,12

large
7170:10
7211:4
7219:11
7220:16
7237:23
7241:12
7251:11
7253:12
7267:2
7319:3
7331:23

largely
7264:11
7278:10,16
,19
7292:24
7325:10

larger
7155:16
7208:9

largest
7200:13
7210:17,18
,25

Larry
7108:15

last 7139:23

7140:10
7143:17
7173:5
7175:19
7223:12
7224:8
7231:22
7237:17
7245:23
7248:4
7249:10
7269:8,9,1
4 7281:4
7291:11,13
,15,17,24
7313:17
7314:17
7315:18
7317:8
7332:22
7351:5,20
7354:17
7363:2

lat 7303:15

late 7197:5
7223:11
7307:16
7353:11

later
7121:19
7134:22
7193:14
7248:2
7259:12
7335:6
7339:15
7347:10
7352:17

Lavigne
7365:25

law 7138:7
7162:3

lawyers
7175:20
7358:10

layer 7339:2

layered
7292:17

lead 7188:23
7191:7

7216:21
7334:5

leader
7210:22

leads
7308:19
7345:19

leakage
7176:2
7179:25
7181:22

leakages
7178:23
7179:1,3,2
2
7180:2,6,2
3 7191:18
7192:6

leaked
7181:25

learned
7126:7,24
7131:7
7138:4
7140:4
7141:11,14
,17 7142:3
7364:7

least
7268:19
7311:18
7314:8
7320:21
7330:17
7344:7

leave
7130:13

leaves
7308:16

leaving
7113:6
7130:17
7220:25
7245:2

led 7180:5

leeway
7301:2

legacy

7187:2

legal
7222:16
7231:4
7360:16,24

legally
7361:6

legislative
7116:15
7117:20
7277:3

legitimate
7265:16
7340:11,19
7347:4,8
7363:18

lend 7286:12
7310:8,18

lengthy
7194:7,11

lens 7256:4

less
7194:7,11
7238:10
7248:3
7261:17
7262:4
7271:2
7279:4
7282:14
7288:16
7290:14
7299:12
7323:20
7330:5
7331:22
7332:10

lesser
7238:2
7283:20

lessons
7126:7
7140:4,22
7141:2,11,
14,17
7142:3

let's
7130:19
7158:12

7179:13
7182:9
7183:6
7185:22
7186:16
7190:8
7191:17
7220:24
7221:25
7283:2
7320:14
7324:16
7330:17
7331:9
7337:16

level
7123:21
7124:18
7174:23
7186:7
7192:13
7216:16
7242:12
7254:1
7269:4
7299:1,2
7308:25
7312:10
7337:9
7342:23
7344:7,24
7345:2
7346:4,18

levels
7204:2
7277:6
7296:14
7350:17

licence
7163:14,21

lies 7188:15

life 7146:23
7186:13

light
7209:11
7269:10

lightly
7251:9,13

likelihood
7262:17

7298:8

likely
7238:24
7319:6
7345:21
7348:14

limit
7131:17
7293:16,17
7294:7
7300:25
7301:2

limitation
7149:23
7219:3
7293:18

limited
7135:12
7207:14
7223:18
7329:22

limiting
7338:9

limits
7294:5

line 7175:19
7184:11
7205:1
7293:7
7295:25
7296:4,9
7356:8
7359:2

lines
7226:16

list 7110:3
7111:1
7124:20
7135:6
7178:7
7179:20
7247:1
7355:2

listed
7240:20

listen
7237:1

listening

7364:13

lists
7233:12

literature
7127:2,19
7128:1
7129:12
7148:1,13
7152:7
7154:7
7155:20
7156:2
7157:18
7158:1
7159:12
7170:13
7171:13
7326:10

little
7113:16,18
7145:3
7146:15,21
7151:5
7181:5
7192:21
7193:11
7215:19
7226:24
7236:20
7239:25
7281:8
7284:24
7287:23
7304:10
7313:25
7326:22
7327:6,7
7329:9
7340:12,13
7356:17
7359:6
7361:13
7364:6

lives 7147:2

living
7147:11,12
7148:3
7155:14,23

load 7120:6
7121:16
7205:18

7206:13
7214:23
7216:21
7266:23
7269:10

loads
7214:19

loans
7157:21

local 7126:2
7134:8,13,
14 7135:2
7136:18
7137:21
7138:17,25
7139:16
7141:5,24
7167:18
7172:10
7204:10

locate
7220:22
7221:3

located
7180:19
7188:13
7203:10

location
7202:4

locations
7188:13,14
7207:17

locked
7299:17,18
,22

locked-in
7299:22

logic
7188:17
7362:25

logical
7272:24
7346:14

logistically
7333:25

London
7131:8

long 7113:13

7120:3,5
7124:20
7172:20
7173:7,18
7175:21
7194:25
7198:20
7199:20
7200:18
7216:21
7260:9
7270:24
7271:7,11
7272:9
7288:17
7297:9
7318:20
7353:19
7360:18,20

longer
7122:14
7187:3
7195:7
7257:8
7312:6,7,8
,11

long-term
7202:6
7204:23
7205:7
7212:6
7217:11
7274:23
7320:1
7362:16

lose 7260:1

loses
7321:10,11

losing
7330:21

loss
7255:18,19
7261:14
7283:7
7285:19

lost 7321:15
7357:16

lot 7126:20
7221:4
7224:6,8

7265:18
7278:6
7279:24
7282:3
7286:12
7287:19
7289:24
7290:13,14
7291:10
7294:12
7302:6
7326:12
7355:7

lots 7220:23
7294:22
7305:16
7311:17
7318:3
7327:3

Louisiana
7327:14

low
7127:4,16,
23
7128:3,16
7150:16
7190:20,21
7213:6
7215:11
7221:8
7277:7
7291:19
7297:25
7314:10

low-cost
7213:12
7217:8

lower 7125:4
7156:21
7170:20
7186:6,21
7203:6
7207:16
7214:3
7215:2
7216:16
7291:12
7303:13
7312:10
7321:20

lowest

7150:18
7151:18
7207:13
7212:16
7213:22,24
7276:7,19

lowest-cost
7207:10

low-income
7157:19
7191:8

low-interest
7157:20

lucky
7150:15

lunch
7196:23
7222:11
7225:15

lunchbreak
7193:9

M

---

macro 7337:3

macroeconomic 7339:10

macro-environmental
7338:13

magnitude
7191:22
7192:5
7241:9,12
7262:17
7298:9

main 7113:9
7156:18
7245:18

mainly
7199:24

maintain
7217:9
7282:21
7345:14

maintaining
7321:12

major
7151:20
7154:2
7160:15
7180:3
7200:11
7201:2,7,21 7213:20
7214:13
7216:23
7231:20
7232:16
7279:11
7363:15

majority
7116:3
7147:20
7188:11

maker
7277:14

malleable
7249:20

man 7199:21
7251:7
7286:10

manage
7206:13
7214:10
7215:19
7217:13
7306:14
7315:5

management
7120:9
7121:15
7122:15
7125:24
7126:5,6,8
7128:6,20
7212:6

manager
7168:10
7198:21,24
7199:17,21,23
7210:5,7

managers
7148:8
7166:20

manages

7178:13,18

managing
7125:19
7239:23

mandate
7274:17

mandated
7163:19

Mani 7208:16

Manitoba
7108:3,7,9,23 7109:5
7114:7,12,15,23
7116:14,21
7125:7,13
7126:14
7128:12,13,24
7131:18
7132:9
7133:5,7
7134:20
7138:1,25
7139:15
7141:18
7142:11,16,18 7143:4
7146:18
7147:2
7148:6,11,22 7149:11
7153:16
7162:2
7164:18,21
7166:18
7167:4
7168:10,18,25
7172:20
7173:8,19
7174:17
7175:4,25
7176:19,21
7177:10,24
7178:5,9,21,25
7179:6,17,20,22
7180:4,10,11,13,21
7181:17,20

7182:2,6,11 7183:16
7185:4
7190:4,20
7191:5
7192:1,8
7194:10
7197:16,19,23
7198:18,24
7199:15,23
7200:1,12,19,21,22
7201:6,15
7202:18
7203:15
7204:12,18
7205:10,16,19,23
7206:15,17,20
7207:6,10,17
7208:5,15,21
7209:4,12,14
7210:6,13,15
7211:4,23
7212:1
7213:8,10,13,16,21,23 7214:5
7215:14,23,24
7216:3,6,9,11,19
7218:14
7219:2
7223:9
7224:21
7225:12,24
7226:9
7227:1
7229:6,9,16 7232:12
7233:23
7234:5
7236:15
7241:10,11,13
7243:6,14,16

7244:14,18
7246:4,7
7247:13
7248:17
7249:8
7250:13
7251:8
7252:18,25
7254:14
7255:5
7257:10,23
7258:2,8,12,25
7259:4,7,10,16,18,22,25
7260:3,5,9,14,20
7262:24
7264:4,7
7265:3,8
7266:5,13,19,22
7267:4
7268:12
7270:17
7271:4,25
7272:10,18
7273:8,10
7274:17,19
7275:11,18
7276:1,6,18 7277:10
7278:9,24
7279:4,12
7280:9,14
7281:20
7282:8,13,20 7284:20
7285:3,5
7288:3
7290:21,22
7291:4,17
7293:16
7294:6,10,22,25
7296:1,11
7298:6,18
7299:17
7300:2
7302:3,6,12 7303:12
7305:18,21,23,25

7306:8,13,
18 7308:15
7309:10
7310:4,9,1
2,15,17,19
,20,22
7311:8,20
7312:20
7313:8,11,
15,25
7318:22
7321:9,10,
17,20,21,2
4 7322:11
7323:6
7324:7
7329:18,19
7330:4,17
7331:7,12,
20,21,22
7332:6,9,1
6 7339:17
7342:8
7343:9
7344:9,14,
25 7347:18
7348:7
7351:5,20
7354:14
7357:17
7358:12
7361:10,15
7362:18
7363:5

Manitoban
7201:21

Manitobans
7115:7
7143:3
7177:8
7182:13
7261:1
7331:18,22
7332:9

Manitoba's
7204:24
7207:8
7260:6
7320:15

manner
7213:3
7239:3

7336:4
7360:9

**manufacturer
s** 7210:17
7211:5

**manufacturin
g** 7211:6
7218:6
7220:4,11

map 7272:8

maps 7139:7

March 7185:4

margins
7179:4
7181:23

Marilyn
7108:14
7280:25
7285:7
7286:4

mark 7174:25
7197:25

marked
7113:9
7280:13

market
7201:18
7214:18,23
7215:2
7232:14
7237:9
7238:20
7240:15
7295:6
7301:2
7305:17
7313:24
7316:23
7317:2,25
7318:24
7319:19
7331:15
7332:11
7363:12

marketplace
7201:13
7299:23
7324:22
7325:3,14

7326:5

markets
7214:20
7230:16
7235:16
7238:22
7240:17
7243:15,20
,23
7258:23
7259:19,23
,24
7260:6,8
7278:13
7293:8
7305:24
7309:17,21
,24
7310:2,8
7312:1,13
7313:3

market's
7242:5
7313:7

Marla 7109:6
7226:23
7244:18
7280:8

mass 7263:11

massive
7246:14
7292:18

match
7201:24

material
7146:9
7202:24
7203:3
7288:1

materials
7211:10
7233:12

math 7285:24
7304:1,4

**mathematical
ly** 7256:16

matter
7143:12
7202:12

7225:16
7287:19
7290:19
7292:4
7294:17

matters
7112:11
7118:4
7140:23
7141:3,25
7159:4
7222:21,23
,24
7227:11
7264:11
7269:1
7280:21
7315:3

maximize
7274:12
7294:25

maximizing
7167:12
7274:24
7324:8

may 7117:22
7121:16
7126:23
7130:13
7137:17
7140:13
7142:5
7149:24
7151:12
7177:17
7179:1,3
7181:10
7182:20
7191:19
7193:8
7194:8,24
7196:12
7197:13
7207:21
7208:7,8
7210:10
7224:16
7230:17
7245:24
7251:17
7254:15,16
7278:2

7307:18,23
7311:12
7314:9,11
7323:22
7324:11
7339:16
7347:20
7349:18
7350:5,6,2
2,24,25
7359:13
7362:24,25
7364:15
7365:8

maybe 7123:8
7142:1
7181:12
7182:1,22
7284:24
7287:24
7307:12
7331:3

mean 7121:17
7129:21
7131:22
7145:25
7185:3
7250:1,22
7257:17
7259:15
7262:8
7275:10
7287:14
7288:10
7289:7,20
7291:22
7293:12
7294:22
7295:10
7301:9
7304:24
7307:7,20
7309:16
7314:14
7317:1
7320:16,19
7327:2
7338:6
7339:22
7340:21
7341:5,8
7355:2,5

meaning
7176:7
7359:12

meaningful
7275:4

means
7113:24
7203:6
7212:12
7304:3

meant
7224:20
7281:14

measurable
7128:22
7157:6

measure
7205:13
7262:13,14
7275:3
7287:5
7298:12
7320:7
7331:23

measured
7144:12
7157:4
7329:13
7336:8

measures
7128:21
7129:3,4
7157:5
7167:5
7170:9,14,
18,25
7171:12,18

measuring
7274:13

mechanism
7353:5

mechanisms
7174:15

medium
7250:11
7334:14

medium-term
7142:15

meet 7205:18
7252:20

meeting
7167:13

meetings
7197:19,20

megawatt
7246:22
7247:6
7253:8,19
7254:1
7256:3,13
7258:1
7267:16
7269:20
7270:4
7284:11
7294:2,20
7295:22
7343:7,8,2
5 7344:2
7347:2

megawatts
7217:3,4
7289:24
7290:5,6,7
,24
7293:21
7301:20
7305:25
7306:20

Meghan
7109:12

melt 7212:20
7219:15

member
7108:14,15
,16,17
7200:14
7323:17
7332:18
7334:25
7335:1
7348:22

members
7112:7
7144:12
7166:12,20
,21
7198:17

7199:7,14
7200:3,23
7201:13,23
,25
7202:2,14
7207:9
7209:19
7210:2
7215:21
7233:6
7245:10
7335:1,7

menger
7200:23

mention
7167:25
7238:2
7339:16

mentioned
7137:17
7171:7
7181:11
7351:3

Menzies
7109:12

merchant
7238:15
7301:13
7302:8,10
7320:2

Merci
7197:11
7227:6,21
7236:14
7242:18

merely
7180:12

mergers
7231:9
7235:20,22

merit 7350:5

merits
7295:24
7296:4
7302:20
7352:13

messy 7313:5

met 7197:18

metal
7210:19
7213:3

Metallics
7211:10

**methodologic
al** 7245:22

methodology
7270:6

methods
7274:3

Metis 7132:9
7136:15
7137:18,20
7140:14
7163:1
7244:14

metric
7276:4,21
7284:14
7285:9
7286:19,22
7312:24,25
7313:2

metrics
7274:4
7276:24
7309:11
7310:24
7313:10
7314:15

Mexico
7151:3

MH-178
7111:12
7280:18

M-hm
7151:2,14
7176:9

Michael
7109:20,25
7117:7
7130:5,6
7131:1,6
7195:15,17

microphone
7132:4
7158:20

7175:13
7181:5
7197:9
7222:9,25
7226:3

middle
7127:4

midst 7266:3

Midwest
7221:7
7327:21
7328:1

mill
7198:24,25
7199:23
7200:19
7210:6,7,1
3,16
7211:4
7212:24
7218:4

Miller
7109:15
7112:21

million
7164:24
7181:18
7203:16,17
7204:2,7
7208:2,4
7247:15
7248:9
7255:3
7345:7,10

millions
7202:9
7209:1
7335:15
7336:9

mills
7210:15
7214:6

mind 7222:16
7297:14,24
7307:24
7321:2
7335:17

mindful
7356:10

minds 7306:4

mine 7203:3

mined
7202:24

minerals
7200:15
7202:23

minimal
7206:15

minimize
7274:18
7276:17

minimized
7274:18

minimizing
7347:13

mining
7202:14
7231:25

Minister
7209:15
7232:4

Minister's
7317:5

ministries
7242:1

Minnesota
7246:23
7294:13
7343:20
7344:3
7354:12

minute
7130:10,20
,21 7324:1

minutes
7130:18,20
7158:12
7194:16
7197:5
7221:24
7222:1
7279:21,25
7356:17,21
7364:9
7365:12

MIPEN 7200:3

MIPUG
7109:17
7110:15
7196:19
7197:14
7198:1
7199:4,12
7200:3,4,6
,11,23,25
7201:13,23
,25 7202:2
7203:8,10,
13,15,21,2
5
7204:1,4,6
,19,20
7207:9
7208:14,16
,20
7209:11
7215:21
7218:1
7224:2
7225:21
7226:9

MIPUG-23-1
7111:3
7198:4

MIPUG-23-2
7111:4
7198:7,9

MIPUG's
7200:14
7209:16

mischaracter
ize 7185:3

misnomers
7237:11

MISO 7305:17
7318:24
7331:9,15,
20

miss 7238:16

misstate
7132:1

mitigating
7316:2

mitigation
7161:12

mixed 7182:4

MKO 7109:19
7144:25

MMF 7109:22

model
7159:14
7160:4
7177:24
7178:1,10,
17,19
7179:12,16
,23
7180:1,7,1
7,23,25
7182:8
7192:4,12
7212:14
7214:22
7270:22,23
7271:3,10,
14 7296:10
7305:3
7364:21

modelled
7296:8

modelling
7123:17
7159:9,21
7178:7
7263:3
7271:18
7296:6
7334:16
7346:22

models
7159:6
7160:16
7191:25
7235:21
7270:16,17
,25 7271:8
7286:17
7334:20
7338:25

modest
7334:1

molten
7220:2

moment
7130:9

7185:23
7190:9
7324:19
7344:14
7348:21
7356:4

mon 7162:13
7243:2

monetized
7122:23

money
7114:23
7237:12,13
7257:20
7273:2
7281:23,25
7282:3,9,1
9,22
7295:18
7310:8,18,
19,22
7325:9
7329:25
7347:13

monitor
7178:13

monitored
7140:3
7141:6
7174:21
7188:20

monitoring
7128:17
7139:25
7162:9,12,
13,16
7163:15,23
7174:13,15
,18 7175:1
7189:4,20

Monnin
7109:24
7184:21
7196:10
7222:9
7223:1
7227:5,6,2
1
7228:3,11,
20,21
7229:4,12,

20,23
7230:19
7233:18
7234:1,10,
15,22
7236:1,8,1
4 7333:23
7334:4,8
7344:16,22
7358:22
7359:8,18
7365:2,7

Monnin's
7195:20

Montana
7297:3

Monte
7270:16

Monteferro
7211:6

monthly
7315:12

months
7243:2
7245:24
7269:8
7294:23

morning
7112:3,6,7
,8,20,21
7132:8
7144:24
7158:25
7159:1
7162:8
7175:18
7183:22
7195:19
7225:15
7276:9
7281:2
7365:13,17

morning's
7158:18
7189:3

Moroz 7109:9

Morrison
7110:18
7111:6,10

7112:15
7193:6,13,
17
7194:2,5,9
7195:6,18
7196:12
7223:4
7227:7,17
7228:4,7,1
6
7229:5,25
7231:3
7233:20
7234:1,3
7235:6,12,
17 7236:22
7241:3,23
7242:16
7245:11
7323:24
7324:3
7328:9
7333:13
7341:24,25
7343:1

mostly
7290:25

motion
7219:19

motive
7219:19

mouth 7181:6

move 7123:4
7170:16
7174:9
7181:5
7189:7
7258:13
7286:7

moving
7118:23
7122:25
7126:15,17
7139:22
7187:23
7189:5
7246:9
7249:24
7253:5
7262:7

MPA 7227:25

7228:5,12,
13 7229:12
7230:22,23
7231:2,3
7234:25
7235:4,12
7236:3,12
7245:11
7269:12
7328:4,9
7333:13,18
7341:24
7354:4
7364:19

MPA-4 7111:5
7228:1
7332:19

MPA-5 7111:6
7228:7

MPA-6 7111:9
7228:15

MPA's
7229:14

MP's 7234:17

multi-factor
7261:9

multiple
7142:12
7176:7
7177:19
7265:18

multiplied
7266:17
7341:16

multiplier
7261:2,18

municipal
7203:24
7231:16
7242:11

Mur 7364:25

Muskrat
7295:6

myself
7192:1
7219:2

myth 7213:23

─────────
N
─────────
Nalcor
7295:4

namely
7118:1
7320:11
7356:7

narrow
7272:12

narrowed
7123:20

narrowly
7250:3
7252:21
7253:1

Nation
7140:21
7166:21
7167:6
7168:24
7169:9,14,
22

Nations
7118:19
7119:2
7122:24
7126:2
7129:8
7131:10,15
,19,23
7133:13
7140:7,18
7144:3
7145:2,3
7147:10
7164:14
7165:11
7168:19
7171:2,9,1
7 7172:2
7185:16
7189:6
7190:5
7258:20
7338:5

natural
7201:20
7207:7
7231:20

7233:2
7237:19,20
7238:1
7249:11
7263:18
7316:10,11
,18,21
7317:2,6,1
4 7362:1,5

nature
7184:8
7186:14
7248:1
7269:23
7286:18
7288:17

nearly
7203:19
7217:4
7240:22
7247:5

necessarily
7250:22
7272:22
7277:17
7284:14
7290:12
7299:3
7341:13
7355:19
7362:8

necessary
7217:9

negative
7241:10
7282:14

negotiate
7307:16
7355:10

negotiated
7164:19
7165:10
7168:1
7246:25
7247:7
7253:20,23
7254:1,17,
18 7255:11
7256:7
7354:15

negotiating
7355:8

negotiation
7353:20

negotiations
7131:10,14
7254:9,10
7360:19

net 7182:16
7183:3,9
7259:1
7275:9
7277:5
7294:2,18
7336:10
7345:6,10

network
7291:3

Newfoundland
7159:8
7288:8
7316:5

next-to-last
7273:23

NF 7204:22

NFAT 7146:11
7176:6
7177:9
7186:1,18
7204:22
7207:19
7208:12
7236:13
7245:13
7261:6
7278:17
7315:22

night 7364:1

nine 7203:9
7231:23
7365:18

nineteen
7214:6

ninety-nine
7265:9
7266:17

ninety-one
7203:22

nobody
  7316:19,23

nodding
  7324:6

nominal
  7263:25
  7264:20
  7272:7

nominally
  7259:6
  7273:8

non 7324:7

None 7255:19
  7279:8
  7284:16

nonetheless
  7299:20
  7303:17

non-partners
  7163:1

non-profit
  7274:24

normal
  7228:23
  7241:14
  7266:2
  7360:15

North 7151:1
  7198:20
  7199:20
  7200:18
  7204:17
  7207:18
  7209:14
  7212:12
  7213:22,24
  7214:6
  7215:11
  7221:4
  7297:1
  7316:9
  7319:2
  7340:5

northern
  7120:12
  7122:17
  7132:20
  7133:7
  7136:24

7137:7
7140:7,19
7141:1,22
7142:1,4
7144:11,25
7146:19
7147:6
7148:7,10
7162:25
7170:8
7187:20
7188:14,16
7202:18
7204:12
7294:12

Norway
  7288:9

notable
  7205:23
  7289:10
  7351:17

note
  7153:6,22
  7212:11
  7263:1
  7271:4
  7299:10
  7342:24
  7347:3
  7356:4

noted
  7122:10
  7126:12
  7174:6
  7222:15
  7228:19
  7261:4
  7277:4
  7278:9
  7280:15
  7314:23
  7327:24
  7351:8

not-for
  7238:14

not-for-
  profits
  7311:16

nothing
  7223:3
  7267:23

7288:14
7293:3
7298:24
7300:8
7302:9
7316:4

notice
  7222:10
  7280:5

noticed
  7222:11
  7244:8

notion
  7275:24
  7317:18
  7320:10

notionally
  7349:12
  7356:16

notwithstand
  ing 7276:1
  7285:19
  7363:22

Nova 7232:13
  7243:1
  7328:24
  7329:1

Nowhere
  7284:17

np
  7109:7,8,9
  ,15,20,23

NPV 7335:16

nub 7246:15

nuclear
  7288:25

null 7360:25

numeral
  7139:22
  7142:10

numerous
  7153:23
  7204:5
  7232:19

──────────
        O
──────────
object

7334:5,6

objection
  7244:19

objectionabl
  e 7334:10

objections
  7239:10
  7244:14

objective
  7362:8

objectively
  7362:7

obligation
  7121:24
  7214:25

obliged
  7363:4

observation
  7140:11

observations
  7115:21
  7125:11
  7156:18

observer
  7312:12

obtained
  7146:1
  7152:2,14

obvious
  7225:3

obviously
  7267:4
  7270:18
  7309:10
  7329:14
  7333:21
  7339:4
  7348:9
  7360:25

occasion
  7239:13

occasions
  7242:7
  7286:23

occur
  7175:24,25
  7177:25

7178:2
7208:25
7230:17
7251:17
7252:6

occurring
  7142:23
  7154:5
  7206:8

occurs
  7278:13

o'clock
  7113:14
  7195:13,25
  7196:22
  7279:22
  7356:22
  7365:18

October
  7111:3
  7198:1,4

Odette
  7109:10
  7110:12
  7158:22,23
  7159:2,15,
  18
  7160:2,6,1
  0,13,20,24
  7161:17,24
  7162:7,11,
  18,22
  7163:8,13,
  20,25
  7164:6,8,1
  2,17
  7165:1,4,8
  ,15,19,23
  7166:2,10,
  14,18
  7167:3,10,
  16,23
  7168:5,9,1
  6,21
  7169:7,13,
  21
  7170:2,6,1
  6,23
  7171:10,15
  ,23
  7172:7,14
  7173:3

7195:5
7196:3

offer 7215:4

offered
7206:12
7213:12,22

offerings
7206:15,16
7207:15

office
7317:5

off-peak
7214:15

offs 7322:17

offsetting
7201:16

oh 7130:20
7165:2
7196:1
7358:10

oil-fired
7288:8

okay 7114:25
7115:13
7122:8
7123:25
7126:21
7129:17
7133:1
7134:21
7135:4
7136:20
7137:16,24
7138:21
7141:7
7144:5,8
7146:12
7147:8,18
7148:12
7149:6
7150:19
7154:11
7155:12,19
7156:23
7157:9,17,
25
7159:15,18
7160:6,10,
13,20

7170:2
7173:23
7175:17
7185:2,22
7189:23
7190:18
7191:11
7192:18
7195:9
7196:21
7197:3
7199:10
7217:17
7218:21
7219:7,24
7221:9
7236:25
7243:3,25
7244:5
7286:4
7307:11
7311:16,21
7312:15
7324:6
7329:2
7331:1
7332:12
7334:24
7335:24
7337:23
7341:22
7351:2
7353:25
7356:14
7358:9
7363:1,20
7365:14

old 7305:15

omission
7351:17

ones 7153:7
7214:9
7257:15
7347:24
7350:1

one's 7304:2

ongoing
7128:17
7201:6
7248:11

Ontario

7205:1
7214:13,18
7232:4,5
7288:25
7289:10
7313:20
7316:3
7318:12
7328:23

onto 7283:13

opened
7143:8

operate
7215:24
7231:25
7300:18
7360:12,13

operating
7200:12
7214:20
7336:10

Operation
7212:2

operational
7186:19,20
7188:1,4

operations
7130:1
7201:12
7209:23
7211:11
7213:7
7324:12

operator
7214:8,18

operators
7319:3

opinion
7119:23
7298:2
7335:3,9
7337:17
7338:12

opinions
7299:25
7333:9
7337:13
7349:23

**opportunitie
s** 7140:13
7143:6
7174:6
7187:22
7204:17
7238:23
7249:20
7257:13
7258:7,10
7268:14,21
7269:6
7279:15
7329:13,14

opportunity
7131:13
7163:22
7176:18
7177:13
7183:10
7184:20
7185:17
7193:9
7200:8
7214:10
7223:10
7248:18
7249:21
7250:15
7251:4,25
7252:2
7253:25
7256:11,19
,24
7257:8,9,1
7 7258:6
7267:20,25
7268:4,5,9
,11
7269:5,12
7284:25
7296:17
7303:23,24
7304:1
7308:5
7333:1
7343:10,11
,15 7363:9

opposed
7118:4
7147:11
7148:3,11
7172:22

7180:1
7188:13
7219:12
7258:7

opposite
7186:19

optim
7304:23

optimal
7304:23

optimistic
7362:2

optimization
7126:3,18
7295:12,13
,16

optimize
7172:2

optimized
7120:13

option
7115:6
7123:22
7124:5,12,
16 7129:23
7250:5,12,
18,23,24
7252:12
7257:4,19,
21,22
7283:4,11,
13 7285:25
7292:8,9
7295:22
7297:6
7304:14,15
7307:17
7347:21
7350:4

optional
7214:1

options
7123:7
7124:20,22
7188:2
7206:22
7215:18
7216:17
7217:25

7218:12
7223:14
7249:25
7250:2,4
7252:8,19,
22 7253:3
7263:19
7265:6
7268:16,24
7278:16
7279:8,11
7283:3,10,
17 7289:12
7292:13
7331:7

order 7137:8
7191:22
7192:5
7197:14
7229:7
7233:21
7246:11
7247:10
7252:20
7274:22
7276:10,19
7298:7
7335:9

ore
7202:19,21
,24
7203:5,6
7213:5

**organisation
s** 7164:4

organization
7144:25
7238:5

**organization
s** 7182:2

original
7187:9
7207:20
7249:9
7267:13
7337:17
7352:3,4

originally
7299:11
7351:20
7353:20

7356:6

Orle 7109:19
7110:11
7112:18
7144:20,22
,23,24
7145:24
7146:12
7147:4,8,1
5,18,25
7148:12,18
7149:2,6,1
4,21
7150:2,10,
19,24
7151:3,9,1
5,24
7152:6,12,
19
7153:3,18,
20
7154:3,11,
18,24
7155:8,12,
19
7156:1,8,1
7,23
7157:9,17,
25
7158:6,9
7190:9,14
7194:14,15
,22
7226:13,15
7242:19,20
7243:3,25
7244:5,11
7364:7

others
7270:9
7343:1

otherwise
7171:19
7282:15

Ottawa
7232:7

ought
7117:6,20
7227:11

ourself
7338:9

ourselves
7128:5
7136:19

outcome
7217:7

outcomes
7266:11

outlined
7134:6
7142:17

outlining
7142:10

output
7160:16
7301:14
7302:17
7323:4
7329:19

outreach
7143:20
7144:2

outright
7157:20

outset
7246:10

outside
7117:8
7155:13
7203:10
7241:18
7338:6,14

outstanding
7116:24
7260:3
7310:14

overall
7146:25
7161:13
7207:16
7220:12
7287:25

overbuilding
7216:23

overbuilt
7288:21

overhead
7322:25

oversight
7131:20,22
7360:11

overstated
7179:4

owned
7147:21
7148:3

owner 7259:6

owners
7238:25

ownership
7169:16,23
7170:3
7184:18,19

————————
        P
————————
p.m 7197:1
7222:3,4
7280:1,2
7365:20

pace 7214:4

Pachal
7164:19

package
7246:20
7248:21
7250:7
7253:6,10
7254:22
7256:11
7267:19

page 7110:2
7111:2
7113:10,15
,16,20
7115:15
7120:18
7121:7
7125:10
7126:22
7132:25
7135:5
7139:22
7140:10
7142:9
7145:9
7150:11
7152:1,13,

14,20,22
7153:8
7159:19
7161:23
7167:24
7170:6
7177:1,2,7
7183:6,8
7185:24
7186:17
7187:9
7190:9
7240:21
7266:8
7280:10
7332:19
7337:14,15
7341:23
7346:3
7351:16
7357:4

pages
7108:25
7176:20,23

paid
7149:16,18
,22
7182:25
7216:14
7322:1

painless
7363:22

panel
7110:5,18
7112:7,23
7116:23
7153:15
7158:8,24
7173:6
7175:12
7184:6
7198:17
7199:7
7200:9
7221:14
7223:10
7224:5
7225:14
7227:17
7228:25
7236:10
7244:22,25

7245:10
7247:13,17
7248:3
7253:1
7255:21
7270:9
7273:14
7274:2
7279:19
7295:21
7323:8,13
7324:20
7335:2
7338:7
7348:22
7358:2
7364:15
7365:11

panels
7224:6,25
7319:13,23

paper
7172:23

paragraph
7139:23
7140:9,10
7142:10
7151:16
7152:13

parallel
7252:9

parallels
7161:6

pardon
7121:24

parity
7317:19
7318:1,6,1
7 7324:19
7325:15

Park 7110:18
7111:6,10
7112:15
7193:6,13,
17
7194:2,5,9
7195:7,18
7196:12
7227:7,17
7228:4,8,1

6
7229:6,25
7231:4
7233:20
7234:2
7235:6,12,
17 7236:22
7241:3,23
7242:16
7245:12
7323:24
7324:3
7328:9
7333:13
7341:24,25
7343:1

Park's
7234:4

parse 7263:2

participants
7206:19

participate
7206:14
7214:7,16,
19,21
7215:1,7,1
2

participated
7200:25

**participatio
n** 7207:14
7216:2
7277:11

particular
7135:19
7136:24
7137:3,7,2
0 7138:11
7147:4
7150:14
7157:13
7224:11
7230:3,11
7240:14
7241:24
7244:7
7254:15
7269:15
7275:12
7281:4
7309:25

7316:14
7344:15
7355:4

particularly
7140:20
7204:11
7263:18,20
7265:23
7272:1
7293:8
7317:19
7326:20
7327:11
7362:19

parties
7128:23
7134:13
7194:23
7225:5,20
7226:1,11
7253:24
7254:10,25
7255:10
7258:17,19
,22
7332:22
7354:20
7355:9
7360:19,21

partly
7296:10
7301:8
7336:9

partner
7205:19
7235:18

**partner-
owned**
7231:6

partners
7118:19
7131:23
7168:24
7169:14,22
7253:13
7254:14
7361:9

partnership
7135:13
7162:12
7163:23

7164:1
7168:18

party 7247:7
7353:21
7357:21
7361:3

party's
7360:22

Pas 7200:16

pass 7215:10
7303:23

past 7174:20
7185:13
7201:10
7207:11
7209:6
7232:10,20
7237:25
7239:3,16,
18 7240:13
7242:1
7250:24
7257:5,6
7277:5
7284:12
7286:7
7313:25
7316:4
7343:25

path 7286:14

pathway
7348:24

patterns
7266:18
7267:21

Patti 7109:5

pause
7115:18
7121:1
7127:11
7131:4
7150:8
7152:10
7153:1
7154:22
7156:15
7160:22
7169:5
7173:1

7175:9
7176:11
7177:4
7183:19
7191:15
7192:16
7221:11
7223:6
7235:9
7245:7,15
7263:22
7302:24
7328:6
7338:17

pay 7207:1
7214:11
7261:1
7276:7
7282:22
7283:6,18
7311:7,22,
23
7312:6,7,8
,22
7315:17
7349:16

payer's
7323:5

paying
7206:4
7208:2
7213:17
7281:24
7310:23
7311:2,8,9
,10,14,15,
18 7312:11
7315:19
7330:10
7342:2

payment
7308:17

PDP 7116:21
7125:21
7133:5
7136:4
7205:22
7207:21
7208:3,19
7243:5
7281:4

7333:9

peaks
7214:15
7318:15

Peli 7228:24

Pelino
7110:19
7227:8,18
7229:11,19
,22 7230:1
7231:3
7234:13
7237:10,22
7238:12,18
7239:15
7240:5
7241:7,25
7242:25
7243:11
7245:4,9,1
1,17
7281:16
7285:12
7288:2
7293:15
7296:5
7297:16
7298:3
7300:5
7303:10
7305:6
7309:8
7314:21
7318:3
7321:4
7324:9,14,
24
7325:4,18
7326:8,19
7327:1,13,
21
7328:2,14,
22,25
7329:7,11
7330:25
7331:2,6
7332:17,24
7333:3,11,
15,20
7334:15
7335:5,12,
18 7336:5

7337:1,6,1
1,22,24
7338:15,23
7339:20
7341:3
7342:4,12,
19,21
7343:4,21
7344:5,10
7345:4,8,1
1,16
7346:6,11,
20
7348:3,16
7349:1
7350:14
7351:6,13,
19
7352:2,15,
25
7353:6,13,
17
7354:1,8,1
3
7355:1,17
7356:1
7357:10,14
,18,24
7358:5,16
7360:4
7361:17,22
7362:11
7363:6,16,
19

pencilled-in
7249:11

pending
7333:21
7334:21

penetration
7190:25
7191:6

people
7127:17
7128:10
7129:5,9
7133:7
7140:15
7142:18
7146:18
7172:10
7188:12,25

7192:2
7197:8
7221:17
7240:14
7282:24
7300:20
7301:2
7306:4
7309:21,25
7310:8
7314:12
7315:3,10
7319:11
7338:7
7362:22,24

peoples
7135:1
7139:2,16

PEPINO
7244:4

per 7188:16
7203:23
7207:23
7211:2
7275:10

perceive
7243:20
7258:16
7314:13

perceived
7260:2,10
7363:12

percent
7155:4,16
7159:17
7177:10,12
7182:12
7205:25
7206:1,4
7207:21,23
7213:4,15,
17,19
7214:3,5
7217:1
7231:24
7251:15
7270:7
7272:19
7274:20,21
7277:4,13,
19 7278:5

7282:21
7288:5,12
7289:6,20
7293:17
7294:7
7297:23
7298:4
7299:12,14
7302:13
7305:22
7306:1,21
7308:25
7336:6,7,8
,13,15

percentage
7177:8
7204:16
7314:16

percentages
7177:15

perception
7242:5
7243:22
7308:14
7313:14
7362:9,19

perfect
7341:8

perform
7133:3
7145:15
7157:4
7172:15
7205:13

performance
7128:21
7129:3,4
7157:5
7297:19
7310:13

performed
7236:12

performing
7136:3,21
7333:25

perhaps
7118:2
7142:1
7220:8
7272:24

7285:20
7309:4
7314:8
7348:21

period
7121:18
7155:22
7156:4
7187:21
7206:2
7213:16
7272:9
7308:25
7360:20

periods
7214:24
7215:4,11
7265:21
7291:16

permanent
7209:3
7277:13
7312:6

permission
7365:11

permits
7247:5
7248:12,13

person
7198:20

personal
7124:24
7146:22
7232:18

personally
7185:18
7232:2

perspective
7120:1
7156:13
7190:1
7194:10
7223:16
7230:5
7231:19
7238:6
7246:13
7247:4
7256:2
7262:9,13

7264:2,5,1
6 7288:20
7291:15
7292:14
7296:2,3
7313:7,8
7324:21
7338:21
7343:18
7348:13,18
7360:16

perspectives
7209:20

Peter
7109:15

Peters
7109:2
7193:20
7222:22
7364:17

phenomena
7317:20
7325:16
7327:11,24

photovoltaic
7318:6

physical
7293:18
7294:5
7316:14
7364:9

picked
7285:21

piece
7172:23
7202:18
7247:23
7277:1
7298:12
7315:7
7362:3

pieces
7305:7

pink 7359:17
7363:21

pinning
7336:16

pipeline

7200:20,21
7233:2

PJM's
7214:21
7215:1

placeholder
7248:25
7249:5,22

places
7207:15
7221:4
7288:11

plait 7227:5
7239:8

plan 7108:10
7113:22
7115:24
7117:17
7118:2
7119:1
7120:15
7123:13
7132:19
7145:8
7172:17
7174:18
7186:4
7188:5
7208:12
7209:20
7213:20
7217:2
7219:4
7223:19
7229:9,16
7230:3,4,8
,18
7233:23
7234:6
7246:5,6,1
1,18
7247:18,22
,24
7248:2,23
7249:4,6,1
0,11,17,24
7250:1,4,6
,19
7252:13,23
7253:2,7
7254:3,4,6
7260:15

7261:8
7263:13,15
,20,21
7265:1
7267:14
7274:8
7275:12,13
,14
7277:25
7284:18,23
7285:11,16
,18
7290:23
7291:23
7293:9
7295:13
7296:8,10,
12,15
7297:7
7303:19,20
7305:2
7307:13,15
7308:3
7315:23
7329:12
7337:19
7340:13
7343:2,7,8
7344:1
7345:6,9,1
5,24
7346:3,5,2
5
7347:3,4,1
5,20,24
7348:1,20,
23,25
7349:2,7,1
8,19
7350:3,11,
12,20,24
7351:10,11
,17
7352:11,12
,15,16,18,
23 7354:6
7355:21
7360:1

planning
7123:19
7124:19
7320:6

plans

7116:15
7121:25
7123:1,12
7133:5
7136:4,12
7142:16
7148:2
7162:12,14
,22 7163:1
7172:17
7174:15
7175:6
7186:6,21,
22 7213:11
7223:19
7249:6
7252:24
7255:20,21
7256:1
7262:1
7265:6,10
7266:7,21,
24 7274:1
7275:4
7281:13
7284:17
7290:20
7296:7,12
7315:22
7340:10,15
,17,18,20
7341:1,10
7342:9,25
7343:2,6,1
3,17,19
7344:1
7345:2
7346:8,17,
22 7347:24
7348:5,8,1
3
7349:22,25
7351:9,21
7352:5,23
7355:18

plant 7182:4
7199:17
7202:9
7211:13
7212:13
7214:10
7218:2,19
7220:22

7221:3
7249:2,12,
13 7278:15
7282:6
7302:18
7316:15,17
,18
7350:25

plants
7181:17
7202:2
7205:10,17
7214:3
7218:15
7249:2
7268:22
7288:14
7300:21
7306:14,19
7317:12

play 7120:6
7197:15
7348:14

playing
7216:16

please
7112:5
7113:13
7121:4
7132:5
7139:4
7144:20
7194:3,20
7195:4,16
7199:2
7222:19
7226:4
7229:23
7230:24
7235:1
7236:16
7242:19
7244:12,17

pleased
7198:15
7225:13
7227:7

pleasure
7323:13

plus 7193:18

7357:12

pocket
7244:2

point
7114:19
7119:24
7122:3
7123:24
7128:3
7136:15
7153:25
7178:4,13
7185:16
7188:1
7190:19
7194:24
7207:24
7216:11
7223:20
7237:15
7248:18,25
7249:16,19
7250:10
7263:22
7264:23
7269:25
7277:1,8
7283:23
7287:21
7289:4,21
7292:22
7295:11
7296:20
7303:9,22
7306:25
7308:5
7309:3
7311:5
7313:3
7314:23
7324:23
7332:13,20
7336:17
7339:15,23
7340:4
7351:25
7352:4
7353:9
7354:18
7355:13
7356:13
7359:24
7360:3

7362:12
7364:24
7365:1

pointed
7301:10
7341:9
7349:21

points
7123:10
7197:24
7245:18
7263:23
7273:13
7277:7
7298:21,22
7306:25
7339:21

pol 7337:17

Poland
7150:22

policies
7143:21
7144:1
7277:3
7294:6

policy
7279:13,14
7294:7
7313:19
7315:24
7338:2,3,4,5

political
7313:22

pooled
7306:21

poor 7127:3
7128:16

population
7137:15
7147:12

populations
7136:13

portable
7188:24

Portage
7108:22

portfolio

7287:18
7288:23,24
7289:1,5,11,12,21
7290:1,7
7306:11

portfolios
7289:2,8

portion
7192:23,24
7193:1,2
7220:12
7260:3
7299:20
7301:14
7311:12
7312:19
7330:9
7345:24
7349:14

pose 7202:19
7220:9

posed 7128:5

poses
7224:11

position
7112:4
7120:16
7191:21
7207:8
7209:13,16
7222:7
7224:18
7235:13
7242:6
7256:21
7280:5
7293:3
7355:24
7358:24

positions
7167:7

positive
7170:3

possibilities 7267:22
7268:24
7362:6

possibility

7195:12
7318:11
7362:6

possible
7113:24
7115:13
7193:8
7197:7
7217:1
7225:25
7230:9
7253:24
7254:2,3
7265:9
7268:16
7276:7,19
7295:5
7313:23

possibly
7143:10

post 7190:5

post-construction 7190:6

posted
7160:12
7162:24
7341:10

post-project
7126:8
7188:5

posts
7116:23

pot 7115:5

potential
7115:6
7119:15
7121:25
7129:23
7133:6
7134:2,4
7143:7
7146:17
7230:14,17
7240:10,24
7241:5,9
7242:2
7243:5
7246:6
7257:12

7265:3,5,24
7266:10,20
7273:25
7275:8
7277:22
7298:17
7319:1
7326:24
7328:10

potentially
7257:1
7276:13
7279:10
7292:16
7294:18
7299:7
7309:15
7317:25
7341:19
7347:16
7349:10
7350:4

poured
7182:5

power 7119:6
7124:25
7128:9,11
7144:6
7148:7
7157:16
7186:23
7198:18
7199:16
7200:2
7201:11,19
7202:15
7203:6
7205:8,14,24
7206:13,23
7207:1,9,11,16
7209:12
7215:18
7217:8
7218:4,9,13
7219:9,12,19 7238:1
7240:15
7253:14

7257:13
7301:19
7302:3,6,8,10
7305:11,12,14,19,20,21
7306:4,7,9,17
7317:25
7318:8
7320:13
7321:20
7331:8,19,22,24
7343:20
7344:3

PowerPoint
7152:3
7160:25
7328:4
7354:4
7357:3

Power's
7354:12

practical
7163:5
7289:20
7303:24

practicality
7129:24

practice
7120:10
7123:22
7125:14
7162:20
7163:10,12

practices
7118:25
7122:9,11,15
7125:20
7126:1,5
7128:6
7138:6
7190:7

pre 7357:4

prec 7359:10

precedence
7359:10

precedent
7358:14

precise
7236:21

precisely
7329:9

precision
7286:17

predicable
7317:10

predictability 7201:5
7202:5

predictable
7208:24
7315:6

predicted
7216:22

predominant
7157:8

predominantly 7127:3
7253:15
7316:10

preempting
7224:3

preexisting
7301:20

prefer
7185:5
7359:18

preferable
7357:8

preference
7169:15,23
7187:1,3

preferences
7167:17
7168:23

preferred
7108:10
7113:21
7115:23
7117:16
7118:2
7120:15
7123:13

7145:8
7172:16
7185:6
7186:4
7188:4
7209:20
7229:9,16
7230:2,4,8,18
7233:23
7234:6
7246:4,6,11,18
7247:22,23
7248:1,23
7249:4,10,17,23
7250:4,5,19
7252:13,22
7253:2,6
7260:15
7261:7
7263:13,15,20,21
7265:1
7267:14
7274:7
7293:9
7337:19
7345:24
7347:24
7354:6

prefiled
7341:23

pre-filed
7342:25

preliminary
7345:17

premised
7358:14

premium
7271:21
7272:17,19,25
7347:8

premiums
7295:18

preparation
7136:17

prepare

7271:1

prepared
7135:11
7161:21
7162:1,3
7195:23
7229:12,21
7234:2,11,13
7244:6
7270:23
7301:3
7348:8

preparing
7176:5
7209:14

pres 7196:19
7210:3

presence
7139:1,16

present
7197:13
7210:4
7227:7
7275:9
7336:10
7345:6,10

presentation
7110:15,16
7138:17
7152:3
7153:4,16
7160:25
7196:4,12,19,20,23
7199:4,5,12
7210:1
7224:4
7245:18
7249:24
7258:14
7260:19
7279:16,23
7308:6
7340:3
7341:9
7365:3

presentations 7198:16
7199:3
7200:10
7201:10

7209:11
7276:8

presented
7117:15
7140:16
7146:10
7155:7
7183:15
7199:24
7206:7
7244:15,20
7252:25
7274:2
7290:20
7308:10
7344:25

presenter
7196:16

presenting
7227:25
7307:21

presently
7213:8

presents
7308:23

president
7197:12
7210:7
7227:7,22
7228:22
7235:14,18,20

press
7221:15
7306:13

pressing
7335:2

pressure
7326:15

pressures
7340:17

presumably
7354:12

presume
7141:18
7333:17

presumed
7254:20

presumes
  7278:18

presuming
  7307:19

pretty
  7269:17
  7305:22
  7308:24
  7309:11
  7316:22
  7346:17

prevalent
  7180:6

previous
  7114:11
  7226:18
  7243:9

previously
  7112:24
  7190:10
  7303:13,19

price 7203:2
  7207:7
  7299:19,22
  7300:1
  7302:7
  7309:19
  7315:4
  7316:11,19
  ,22
  7317:14
  7321:19,20
  ,24

priced
  7329:19

prices
  7203:6
  7206:25
  7260:21
  7262:3
  7263:16,18
  7316:12,13
  7317:6
  7318:6,7,2
  4,25
  7331:9,10

pricing
  7202:10
  7214:22

7328:11,19

primarily
  7134:3
  7136:9

primary
  7229:24
  7234:17
  7246:8,9
  7257:22
  7258:17
  7260:13

principle
  7128:20
  7177:20
  7182:17
  7187:18
  7203:11
  7208:14

prior
  7118:23
  7227:23
  7232:3,5
  7239:19,20
  7302:15
  7357:6

priorities
  7240:25
  7241:6,17

private
  7231:14
  7251:14

privatized
  7314:4

probabilitie
s
  7270:12,19

probability
  7270:16
  7362:9

probably
  7123:18
  7153:17
  7158:11
  7180:5
  7210:14
  7213:22
  7279:23
  7300:20
  7312:2

7365:6,11

problem
  7121:5
  7127:21
  7291:20
  7295:21
  7341:14

problematic
  7303:9

problems
  7286:12

procedural
  7172:1

proceed
  7112:17
  7118:2,6
  7119:22
  7199:2
  7227:14
  7228:25
  7241:14
  7258:9
  7282:2
  7359:15

proceeding
  7117:9
  7209:17
  7233:19
  7242:24
  7332:22
  7337:10
  7342:3

proceedings
  7112:5
  7158:18
  7196:1
  7197:4,9
  7199:8
  7222:7
  7244:25
  7245:3
  7280:22
  7317:18
  7336:1

process
  7123:20
  7131:18
  7142:19
  7161:10
  7179:18

7197:17
7203:3
7207:19
7210:21,23
7218:6
7245:24
7246:10,15
7251:12
7256:21,22
7258:3
7261:4
7273:15
7276:23
7277:5,11,
14 7278:17
7279:9
7289:9
7354:17

processes
  7218:18
  7257:5

processing
  7210:18

Processors
  7211:8

produce
  7288:19
  7300:6,9
  7302:3

produced
  7124:11
  7192:12
  7201:20
  7206:3
  7212:15
  7218:13
  7253:14
  7314:2

produces
  7290:13,14

producing
  7212:24
  7306:21

product
  7203:1,2

production
  7210:13
  7212:18
  7299:21
  7301:25

7331:17

products
  7202:25
  7206:23
  7212:13,15
  ,24

professional
  7298:2
  7363:5

professional
  ism 7209:8

professor
  7112:20
  7211:17

profile
  7116:6,11

profit
  7238:15
  7282:14
  7324:8

profitable
  7238:24

profitably
  7202:24

profits
  7282:14

proforma
  7129:4

profound
  7278:22
  7279:14
  7329:4

program
  7129:6
  7143:15
  7146:6
  7157:16
  7188:11
  7206:17,25
  7207:15
  7215:5,15,
  17,22
  7216:12
  7218:23

programming
  7206:21

programs
  7121:16

7128:9,12,
13,15
7129:10
7143:9,10
7144:7
7148:8,14
7149:16
7156:20,24
7157:3,4,1
1,21
7174:4
7214:1,7,1
6 7217:13
7278:23
7329:5
7341:11

progress
7281:21
7282:7
7349:16

progression
7127:21

project
7122:21
7123:4,16
7126:5,6,8
,9 7128:20
7134:25
7138:11
7140:2
7141:6,10
7161:20
7167:7
7168:2,10,
17
7170:4,20,
21 7174:12
7186:13
7189:24
7192:9
7216:13,15
7247:2,6
7248:8,16
7250:10
7255:8
7257:7
7263:17
7264:17
7267:1
7269:11
7282:4
7283:1,2,6

7287:5
7301:7
7302:16,19
,20 7303:8
7304:16
7360:17

projected
7186:2
7300:4

projections
7167:14

projects
7118:6
7120:2
7143:21
7144:3
7146:8
7151:20
7169:16
7172:10
7174:9
7175:1,3
7185:13,14
,20
7187:14
7189:1,17
7201:3
7216:20
7247:21
7251:11,17
,23
7267:2,7
7281:19
7283:21
7300:6

promise
7165:6

promote
7148:7

promptly
7206:8

pronounced
7236:23

proper
7139:20
7285:8
7299:2

properly
7224:24

property
7282:6

propo
7320:10

proponent
7190:4

proponents
7258:3

proposal
7205:22
7245:17
7247:24
7249:19
7277:23

proposals
7215:23

propose
7216:19
7228:22
7280:13

proposed
7122:5
7152:15
7154:15
7205:2
7214:4
7229:9
7233:23
7240:11
7286:23

proposition
7320:10

proprietary
7191:25

prosed
7205:1

protect
7325:21

proud 7165:9
7210:8

prov 7256:20

prove
7330:23

proved
7266:18

proven

7205:13

provide
7116:14
7150:20
7163:2
7171:18
7178:7,24
7182:21
7191:21
7192:1
7209:23
7231:11
7234:16
7237:13
7245:12,25
7246:12
7265:4
7294:8
7321:13

provided
7122:14
7138:24
7139:8,15,
19
7148:22,23
7153:15
7154:13
7179:20
7207:20
7223:11,18
7230:23
7236:2
7245:19,21
7249:10
7256:20
7257:11
7263:25
7266:22
7267:11
7269:13
7273:14
7276:16
7303:19
7342:8
7347:19
7351:20,22
7352:5

provides
7183:9
7192:22
7214:9
7259:10

7329:19

providing
7214:11
7231:6
7232:12
7242:14
7250:8
7262:18
7325:6

province
7148:20
7149:11,18
7157:16
7160:17
7178:2
7179:6
7180:18
7181:25
7201:17
7204:7
7210:17,18
7211:5
7217:10
7218:19
7230:16
7251:7
7257:12
7258:8
7288:15,22
7291:8
7297:8
7298:6
7309:3
7310:9,12
7340:1,2

provinces
7160:15
7178:14,19
7205:12
7218:16
7242:2

province's
7204:21
7230:17
7241:1

provincial
7127:20
7129:14
7159:9,10,
21,23
7160:4,16
7163:16

7203:9,23,
25 7208:10
7231:16
7232:16
7242:12
7260:13,16
7312:20

provision
7192:22
7222:15

provisional
7269:21
7303:4
7333:10
7335:3,9

provisions
7355:5

proviso
7141:4

proximity
7346:17

proxy 7310:2
7311:12

prudent
7116:20
7143:3
7163:18
7364:6

PUB 7132:17
7197:14
7199:24
7201:10
7209:5
7226:9
7229:7,25
7230:20
7231:2
7232:12
7233:21
7234:18,23
7235:4
7333:21
7334:22

PUB/MH
7131:9

PUB-58-5
7176:25

public
7108:3,21

7116:14
7143:5
7162:3,23,
24 7229:7
7231:17
7240:7,16
7279:13
7336:25
7346:9,12
7355:14,24
7364:15,19

publication
7222:10

published
7207:13

PUB's
7132:16

pull 7328:4

pulp 7218:3

Purdue
7326:18

pure 7318:12

purely
7184:14

purport
7193:21

purported
7144:9

purpose
7151:10

purposes
7219:12
7236:11
7244:24
7288:5
7323:4
7354:24

pursue
7250:15,16
7251:25
7268:16
7282:25
7287:2

pursued
7268:14

pursuing
7268:12

7297:6

pursuit
7207:3
7257:22

pushing
7171:25

putting
7192:7
7196:13
7271:16
7273:9
7326:14
7340:18
7350:12

puzzled
7361:13

────────

Q
────────

Qual
7110:6,19,
20 7112:24
7227:18,19

**qualificatio
n** 7110:22
7227:14
7228:23
7229:3
7234:25
7236:19

**qualificatio
ns** 7111:11
7167:19
7228:12,17
7230:23,25
7235:2
7239:6,10
7243:8
7244:6,15,
19 7246:2

qualified
7242:22

qualify
7228:25

qualitative
7248:20
7285:23
7295:25
7335:20

quality

7161:13
7224:15,18
,23 7225:4

**quantificati
on** 7128:2

quantified
7116:4

quantify
7127:25
7191:19
7192:6
7285:13

quantitative
7298:9

quantity
7275:15,16
7297:18
7334:20

quantum
7297:14
7300:1

quarter
7196:22

Quebec
7288:6
7316:5

**Quebec-
Hydro's**
7170:19

question
7117:11,13
,25 7118:3
7128:4
7139:4
7145:7
7155:25
7173:5,15
7179:8
7184:23
7196:15
7202:19,21
7214:17
7217:20
7218:21
7219:2
7220:3
7239:11,24
7241:2,21
7242:3

7246:8,9
7248:8
7252:4
7254:15
7257:20
7260:15
7261:10,24
7269:2
7270:21
7272:16
7273:19,24
7285:23
7287:20
7292:1
7297:23
7299:4
7300:13
7303:12
7304:6
7305:7
7306:3,22
7310:10,21
7312:14
7314:12,19
7321:7,25
7329:14
7330:20
7332:19
7334:5,8
7339:9,24
7347:9
7364:17
7365:4

questionable
7273:12

questioning
7356:8
7359:2

questions
7113:12
7132:10
7144:18
7145:5,6
7158:7
7175:12,22
7191:13
7192:19
7193:13
7194:24
7200:9
7221:14
7227:15

7228:24
7241:16
7242:14,22
7270:10
7271:17
7279:17,24
7280:23
7323:9,21
7347:4
7363:2
7364:7,9,1
0 7365:1

quick
7225:22
7242:21
7286:19
7351:4,16

quickly
7193:25
7258:13

quit 7183:1

quite
7222:13
7223:17
7272:15
7281:14
7309:2
7346:23
7364:12

quote 7121:6
7161:2,17

quote/
  unquote
7250:25
7319:5

quoted
7161:1

quoting
7241:4
7358:6

─────────
R

rage 7240:2

Rail 7200:19

railcars
7211:2

raise 7163:2
7260:7

7270:6
7271:17
7339:21

raised
7155:21
7156:4
7226:17
7270:8
7339:22
7364:2

raising
7124:11
7231:10
7239:17
7321:23

Ramage
7109:5
7165:9

range 7161:7
7206:13
7232:23
7266:10
7268:24
7271:16
7272:12,15
,25
7273:18

ranges
7266:24
7336:11

rapidly
7314:7

rate 7115:6
7127:3,8
7129:12
7142:15
7144:9,12
7148:2,19
7149:25
7153:12,25
7154:4
7155:14,15
7156:5,19
7157:24
7199:25
7204:13
7205:24
7206:5,14,
17 7207:20
7208:24
7215:13,16

7217:3,6,1
0 7261:12
7262:23
7263:2,3,5
,8 7272:23
7273:1,3,1
2,16,19,24
,25
7274:4,5,1
3,14
7278:7,25
7279:1,7
7309:5
7310:18
7315:23
7316:3,4,5
,6,7
7319:7
7320:17,18
7323:5
7325:14
7328:10,18
7332:2,3
7336:13,15
7339:10,17
7341:10

rated 7240:8

ratepayer
7143:1
7274:18
7276:5
7292:14
7308:8
7314:15,16
,25

ratepayers
7113:25
7144:4
7156:21
7157:1,13,
15 7158:3
7191:8
7208:19
7216:15,20
7230:11
7252:18
7258:18,24
7259:2
7262:20,24
7264:14
7275:7
7276:4,6,1

6,17
7278:20
7281:22,25
7282:22
7283:17,20
,22 7285:4
7287:3,8
7309:7
7310:23
7311:2,25
7314:10
7315:25
7325:21
7347:11

rates
7127:16
7143:7,12
7145:7
7149:22
7150:5,16,
18
7151:6,18
7152:15
7153:24
7154:14,25
7155:21
7156:4,21
7158:4
7190:12,20
,21
7200:25
7201:1,6,7
,8,14
7202:7,8,1
2 7204:23
7205:3,7,8
7206:6
7207:4,12
7208:22
7213:13,15
,18,22,24
7217:9
7218:22
7221:8
7261:13
7262:21
7263:16,24
7271:21
7272:2,7,1
3,21,22
7273:11,19
,24 7274:9
7276:8,10,

19
7278:7,9
7291:11,19
7303:14,15
7304:8
7308:8,19
7310:16
7314:4,10
7315:1
7317:14
7320:11
7331:10
7336:11
7339:3
7340:7,8,1
0,14,21

rather
7162:2
7169:16
7208:3
7225:2
7270:16
7282:6
7294:7
7314:5

rating
7114:6,7,1
2,14,15
7230:16
7239:13,19
,21,22
7240:2,13,
14 7241:2
7243:15
7259:24
7308:12
7309:12,14
,16,20,22
7310:1,4
7312:12
7313:7

ratings
7239:20,23
7240:10
7243:18,19

ratio
7114:2,13
7115:2
7274:20,21
,23
7282:16,22
7308:22

7310:24,25 7311:1 7313:1,2 **ratios** 7309:9 **Raw** 7211:10 **re** 7108:7 7348:17 **reach** 7206:10 7247:18 **react** 7319:19 **reaction** 7315:1 **reading** 7139:6 7172:22 **ready** 7119:24 7158:18 7187:22 7197:4,8 7280:5 **ready-to-go** 7247:21 **real** 7189:21 7190:1,2 7223:23 7247:6 7248:16 7249:15,19 7251:22 7252:22 7256:11,19 ,23 7264:2,3,1 6 7268:3 7281:23 7282:9,19 7286:11 7303:24 7304:2 7313:21 7318:11,17 7319:17 7321:7 7325:2 7343:10	7363:9 **realistic** 7128:22 7157:7 7361:11 **realisticall** **y** 7361:2 **reality** 7247:2 7254:17 7263:5 7283:5,15 7286:2 7296:3 7307:1 7319:9 7355:19 7358:7 7360:18 7362:8 **really** 7117:21 7150:20,25 7151:5 7173:14 7246:10,18 7249:17 7268:17 7286:15 7287:15 7288:22 7289:18 7290:2 7291:18 7292:5,11, 19 7296:17 7309:16 7310:9 7312:15 7313:24 7316:19 7317:2,3 7360:2 **reason** 7115:5 7177:14 7182:11 7260:1 7267:19 7268:18 7272:8	7281:3 7295:17 7296:14 7300:10 7305:8 7337:18 7355:12 7362:13 **reasonable** 7123:23 7162:16 7163:5 7168:22 7169:3 7191:10 7271:6 7272:22 7274:10 7278:2 7312:2,3 **reasonablene** **ss** 7246:4 **reasoning** 7286:7 **reasons** 7183:15 7205:19 7257:14 7268:10,15 ,20 7278:1 7292:22 7315:24 7362:21 **rec** 7364:2 **recall** 7133:14,22 7162:9 7167:21 7169:11,12 7172:4,5,1 2 7197:14 7335:4,11 7353:14 **receive** 7215:5 7222:17 7331:14,15 **received** 7216:8 7269:15,16	7333:5 **receives** 7279:5,6 **receiving** 7137:25 7215:8 7253:13 7264:13 **recent** 7224:13,14 7272:1 7326:1 **recently** 7199:17 7247:8 **recessing** 7130:23 7158:14 7196:25 7222:3 7280:1 **recognize** 7122:20 7125:23 7148:9 7225:6 7339:12,16 7357:3 7359:17 **Recognizing** 7354:21 **recollect** 7358:4 **recommend** 7119:21 7250:19 **recommendati** **on** 7117:4 7118:5 7142:24 7157:3 **recommendati** **ons** 7116:22 7117:9,16 **recommended** 7118:25 **record**	7138:3 7159:4 7161:25 7181:2 7223:24,25 7240:21 7300:10,12 7341:2,21 7342:3 7355:14,24 7364:15,19 **records** 7300:16,18 **recoveries** 7208:11 **rectified** 7169:1 **recycle** 7210:19 **recycler** 7210:18 **recycling** 7210:21 7211:11 **Red** 7188:23 7211:25 7212:1 **redacted** 7280:12 **reduce** 7215:3 7282:17 7322:16 7331:18 **reduces** 7213:3 **reducing** 7210:22,23 7214:24 7311:25 **reduction** 7325:7 **reductions** 7215:10 **refer** 7113:10 7132:24 7152:12,19

7166:22
7292:23

reference
7113:17
7115:15
7117:24
7125:11,17
,18
7126:4,25
7132:16
7135:7
7137:10
7146:6,9
7151:5
7165:20
7229:14
7234:3
7335:20
7336:24

referenced
7124:18
7161:2
7352:12

references
7146:3,6

referencing
7153:22

referral
7166:15,22

referred
7121:6
7138:17
7198:25
7290:17

referring
7134:3
7144:7
7147:13
7169:8
7337:25
7342:13,17
7359:9

refers
7166:15

refined
7279:24

reflect
7201:8
7338:13,20

reflected
7320:21

reflecting
7211:19
7320:24

reflects
7208:21

refrain
7277:18

refreshing
7356:20

Refrigerator
7129:6

**refrigerator
s** 7129:7

Reg 7173:22

regard
7135:20
7136:24
7138:1
7207:19
7333:9
7337:13

regarding
7116:21
7119:2
7120:6
7126:13
7138:25
7139:15
7141:9,22
7142:2,11,
14 7167:4
7169:9
7174:5
7188:14

regardless
7290:23
7315:23

regards
7145:7
7146:12
7148:1,18,
19 7149:24
7154:11
7317:21

region
7210:19

7211:1

regional
7134:9,14
7135:2
7136:18
7137:21
7138:18
7139:1
7198:21
7199:21
7210:5

regions
7204:12

Regis
7108:13

register
7242:4

registering
7166:22

registration
7166:23

regrettable
7267:5

regular
7221:20

regulated
7208:24
7238:10,15
7324:21
7325:8
7360:8

regulation
7138:7
7201:6
7208:23
7243:1
7360:9,10

regulator
7359:25
7363:4

regulators
7306:5

regulatory
7231:17
7277:3
7279:14
7358:15,21
7361:16,21

reheat
7212:23

reinvestment
7209:2

reject
7252:12
7267:19
7281:3
7337:19

rejected
7254:19
7256:8

relat
7275:16

relate
7231:1
7235:3

related
7116:15
7125:2
7129:5
7139:25
7144:3
7200:6
7201:4
7241:8,11,
16 7255:24
7265:19
7281:19
7301:8
7324:22

relates
7119:6
7240:3
7296:19

relating
7242:2

relation
7209:24

relationship
7168:22
7190:3
7273:6
7278:23
7279:5
7301:24
7321:7

**relationship
s** 7275:22

7284:8,10
7285:14,20
7286:3
7310:15

relative
7155:8
7300:3
7340:25
7341:4
7353:4

relatively
7126:18
7248:9
7302:17
7303:16
7315:11
7340:12,13
7342:2
7344:4
7353:16

relax 7293:4

relay
7209:19

released
7269:14
7270:3

relevance
7230:3,11

relevant
7117:13
7232:11
7238:3
7256:6
7258:16
7263:19
7264:6,22
7266:12
7267:15
7275:16
7276:4

reliability
7205:11
7214:22

reliable
7213:6
7272:3

relied
7135:6
7136:5

reluctance
7349:24
7350:9

rely 7128:2

remain
7161:11
7201:15
7291:8

remains
7206:24
7207:3
7248:8
7299:20

remedial
7148:2

remember
7219:8
7317:5

remove
7286:20

removed
7206:25

renewable
7151:21

renewed
7166:24

reng 7198:21

rent 7177:20
7182:18
7188:15

rental
7311:9,23
7312:8
7314:6

rentals
7259:9
7262:14
7338:25

rents 7314:3

repeat
7139:3
7149:13
7155:25

rephrase
7118:3
7327:19

replaced
7129:7

Replacement
7129:6

report
7113:19
7115:16
7116:2
7121:7,14
7123:10
7124:1,22
7125:16,20
7133:1
7135:5
7138:19
7139:6,7,2
2 7140:10
7141:15
7142:9
7144:11
7150:11
7152:13,15
7153:5,10,
11
7154:4,6,2
4
7159:7,19
7161:1,18,
23 7162:1
7163:15
7164:13
7165:19
7166:14
7167:24
7170:7
7174:5
7176:5,14
7177:23
7178:25
7179:13
7188:10
7190:9
7209:15
7211:16
7229:13,20
7234:2,10,
12
7245:19,21
7258:15
7259:21
7267:10
7270:13
7271:22

7279:23
7286:16
7287:13
7288:3
7290:17
7292:23
7301:10
7311:6
7334:16
7337:25
7339:21
7364:19

reported
7247:12

reporting
7173:9,20

reports
7150:4
7154:8
7172:8
7341:7

report's
7224:7

reposition
7221:25

represent
7132:9
7144:25
7145:21
7147:20

representati
ons
7361:15

representati
ve 7167:7

representati
ves
7259:23

represented
7162:4
7284:14
7325:15

representing
7145:1

represents
7125:13
7203:17
7251:6

7297:24
7302:18

reps 7167:6

reputable
7272:5

reputation
7172:18
7255:4,18
7268:1
7284:3
7357:16
7359:4
7363:5

request
7222:17
7225:11
7280:11

requested
7205:25

require
7128:23
7132:16
7212:14
7216:20
7225:9
7251:14
7289:23
7299:6

required
7119:6
7137:9
7143:5
7164:2
7169:10
7190:1
7214:17
7248:11,15
7251:1,10
7268:17
7274:7
7302:3,6
7305:12
7325:23
7355:20

requirement
7360:15

requirements
7134:6
7172:1
7300:4

7306:11

research
7127:15

reserve
7147:11,14
7148:9,15,
17,24
7149:7,10,
19,23
7189:7
7214:20
7215:2

reserved
7112:9,14
7193:5

resident
7148:4

residential
7261:16

residents
7148:2
7149:22

residual
7259:3

residually
7259:4

resolves
7175:7

resource
7123:1,19
7124:18
7187:22
7314:2
7329:12

resource-
based
7189:16

resources
7204:25
7250:14
7252:14
7258:6
7267:25
7304:20
7355:8
7360:19

respect
7114:12

reviewed
  7126:23
  7128:1
  7131:13
  7154:8
  7157:18
  7159:12
  7167:11
  7176:6
  7183:13
  7269:22
  7296:11

reviewing
  7168:11
  7177:23
  7249:4
  7265:6,11

reviews
  7201:1

revised
  7176:18
  7177:11,15
  7182:11
  7183:9
  7186:1,18

Richard
  7108:16
  7217:18
  7218:7,21
  7219:7
  7303:1
  7304:13

ring 7337:5

ripple
  7211:20

rise 7129:19
  7261:14
  7262:3

rises
  7317:14

rising
  7213:18
  7340:14

risk
  7116:6,11
  7208:24
  7216:19
  7264:25
  7276:12

  7277:23
  7290:9,10
  7291:7
  7301:14
  7304:18
  7307:4
  7308:2
  7317:4
  7320:3,4,6
  7325:2
  7326:6,13
  7357:16
  7359:3
  7361:2,23

risks
  7116:16
  7230:7,11
  7237:8
  7258:11
  7263:12
  7289:16

risky 7293:3

river
  7170:21
  7211:25
  7212:1
  7290:25

road 7287:15
  7315:19

roads
  7149:8,15

robust
  7223:22

rock
  7202:20,21
  ,24 7203:5

ROE 7276:21

role 7140:21
  7141:1
  7197:15

roll 7212:23

rolling
  7210:15
  7212:24

Roman
  7139:22
  7142:9

roof

  7319:13,23

room 7112:8
  7128:15
  7197:13
  7205:17
  7221:25
  7293:7

Round
  7131:8,9

route
  7292:11
  7347:9

royalty
  7314:5

RPM 7214:22

rude 7113:6

rule
  7189:10,12
  7293:17
  7299:15

rules
  7214:18
  7293:16

run 7192:4
  7197:6
  7221:18
  7245:18
  7305:3
  7322:11

runaway
  7267:1

running
  7326:6

runs
  7178:10,19
  7364:21

Rupert
  7170:20

Russ 7196:10

RUSSELL
  7110:6
  7112:24
  7114:8,16,
  24
  7115:4,10,
  25
  7116:7,19

  7118:16,21
  7119:3,8,1
  3,17,25
  7120:23
  7121:3,12,
  20
  7122:3,8
  7123:6,15
  7124:4,7,1
  7,24
  7125:5,8,1
  9
  7127:9,18
  7129:15,22
  7131:16
  7132:23
  7133:9,15,
  23 7134:5
  7135:3,9,1
  2,15,22,25
  7136:6,11
  7137:11,22
  7138:2,15,
  20
  7139:3,11,
  18
  7140:12,24
  7141:4,16
  7142:5,21,
  25 7143:22
  7144:2,6,1
  4 7145:21
  7146:5
  7147:3,7,1
  3,16,23
  7148:5,16,
  25
  7149:4,12,
  20
  7150:1,6,1
  7,23
  7151:2,8,1
  4,23
  7152:5,8,1
  8,24
  7153:14,19
  ,21
  7154:9,17,
  20
  7155:6,10,
  18,24
  7156:7,12,
  22
  7157:2,14,

  23 7158:5
  7159:1,11,
  16,25
  7160:5,8,1
  1,18
  7161:16,22
  7162:6,10,
  17,21
  7163:7,11,
  17,24
  7164:3,7,1
  0,16,23
  7165:2,6,1
  4,18,22
  7166:1,9,1
  3,17
  7167:2,9,1
  5,22
  7168:4,8,1
  3,20
  7169:2,12,
  18,25
  7170:5,15,
  22
  7171:6,14,
  21
  7172:5,13,
  24
  7173:11,13
  ,16,21,24
  7174:2
  7176:3,9,1
  3,16,20
  7177:16
  7178:4,21
  7179:17
  7180:15
  7181:7,10,
  16 7182:17
  7183:5,12,
  17
  7184:3,11
  7185:10,17
  7186:8,11,
  24
  7187:6,11
  7189:2,12,
  15,25
  7190:16,22
  7191:2,9,2
  3

  ─────────
       S
  ═════════

Safe 7211:24

salaries
  7203:15

salary
  7203:21

sale 7300:22
  7343:20
  7344:2
  7346:10,12
  7352:14,24
  7353:2,5,1
  0,19
  7354:12,23
  ,25
  7355:16,18

sales
  7294:16

salmon
  7359:19
  7363:21

salve
  7265:25

Santangeli
  7233:15

satisfy
  7216:21
  7304:24
  7305:2
  7306:19

Saunders
  7109:22
  7110:10
  7112:18
  7132:4,7,8
  ,9,24
  7133:10,16
  ,24
  7134:21
  7135:4,10,
  14,16,23
  7136:2,7,2
  0
  7137:16,24
  7138:8,16,
  21
  7139:5,12,
  21
  7140:17,25
  7141:7,21
  7142:7,22

7143:19,24
7144:5,8,1
7,20
7162:8
7194:19,21
7195:3
7226:5,7
7244:12,13
,17 7364:8

save
  7330:5,6,9
  ,19

savings
  7276:5

saw 7160:9
  7193:3
  7308:22

scan 7174:5

scenario
  7216:13,17
  7250:12
  7270:10
  7303:3
  7318:23
  7349:13

scenarios
  7133:18,20
  7215:25
  7265:3,10,
  19
  7266:10,12
  ,17
  7267:21
  7270:11,19
  7272:20
  7297:18,20
  7326:6
  7342:10

sceptical
  7345:20,25

schedule
  7192:22
  7195:10

scheduled
  7193:17
  7194:2
  7196:6,16

scheme
  7190:19

7303:17
7308:18

schools
  7149:16

sco 7241:20

scope 7111:6
  7117:8
  7132:25
  7133:21
  7134:2
  7145:10,13
  7146:16,25
  7189:14
  7228:4,7
  7229:14
  7230:1,14
  7232:11
  7234:4
  7236:12
  7240:20
  7241:8,16,
  18,20,24
  7242:16
  7243:4,12
  7246:2
  7250:2
  7314:22
  7338:6,14

Scotia
  7232:13
  7235:14
  7243:1
  7328:24
  7329:1

scrap
  7210:18,20
  7212:8,21
  7213:3
  7220:2

screen
  7177:1
  7183:7
  7190:10

scroll
  7113:18
  7133:2
  7177:6
  7187:8,25
  7341:23

scrolling

7342:1

scrutiny
  7304:12

Seal 7188:23

seamless
  7126:18

search
  7286:21

searching
  7276:23

seated
  7198:22

second
  7115:14
  7142:10
  7182:14
  7191:12
  7198:6
  7206:11
  7212:7
  7223:3
  7226:4
  7234:21
  7236:7
  7247:23
  7249:20
  7250:18
  7262:22
  7264:23
  7281:8
  7305:1
  7328:9
  7329:3
  7337:16
  7352:10

secondary
  7204:5

second-best
  7307:17

second-
  highest
  7220:19

secondly
  7243:4
  7259:5

Secretary
  7227:22
  7228:22

section
  7115:21
  7133:2
  7137:12
  7139:23
  7140:11
  7142:9
  7159:19
  7188:10
  7258:14
  7339:8

Sections
  7135:7
  7139:20

sector
  7231:23
  7251:14

sectors
  7143:23
  7204:10
  7231:25

secure
  7140:14

securing
  7126:1

seducing
  7286:13

seductive
  7323:18

seeing
  7314:11
  7320:23

seek 7276:17

seeker
  7166:19

seeking
  7274:12
  7353:4

seem 7304:21

seems 7116:2
  7117:18
  7218:23
  7268:15

seen 7114:18
  7168:14
  7175:4
  7185:13,19
  7194:12

7206:24
7207:3
7248:3
7256:23
7260:4
7337:3
7346:1

select
7288:11
7316:8

selected
7289:1

self 7260:10
7310:6
7312:25
7313:15

**self-
  generation**
7217:20,21

**self-
  supporting**
7259:25
7260:2
7308:15
7310:5
7312:16

Selkirk
7198:25
7200:19
7210:16
7211:7,8,2
4 7212:2

sell 7218:9
7294:10
7302:13
7305:16
7316:23
7330:22
7331:8,9,1
2,19
7332:10

sellers
7309:18

selling
7301:19
7317:25
7318:24
7321:7,8
7331:8,14,
17,24

7332:5

sending
7361:1

sense
7117:18
7122:1
7193:7
7261:13
7274:19
7277:20
7283:9
7288:1
7290:8
7291:4
7296:18
7297:9
7304:18
7315:2
7318:20
7331:11,21
7332:9
7334:2
7337:9
7347:12
7349:6

sensible
7347:10

sensitive
7280:13
7359:13

sensitivity
7278:24
7292:21

sent 7252:5

sentence
7134:1
7145:15
7240:23

separate
7184:14
7293:24
7294:1
7320:20
7328:11

separated
7318:13
7320:12
7332:3

separately

7279:3
7328:18

Separating
7322:13

separation
7330:7

September
7111:7
7228:5,9
7229:15
7234:4

seriously
7211:23
7251:21

seriousness
7285:23

serve 7201:9
7213:17
7221:21

service
7166:15,16
,22,23
7204:9
7205:17
7214:11
7215:6
7232:14
7252:17
7294:11
7330:11
7346:10,12
7355:11

services
7165:24
7178:14,19
,24 7204:7
7231:7
7237:3
7329:20

serving
7293:8

session
7112:8,14
7193:4,5
7225:17

sets 7145:10
7152:14

setting

7206:15
7299:8

seven
7210:14
7211:19
7235:24
7237:17
7245:23
7318:14
7330:6,21
7331:11,14
,20
7351:21
7356:16,20

**seventy-
  eight**
7249:7
7265:13,14
,17
7271:7,11,
14 7272:10

several
7112:12
7152:16
7203:11
7211:4
7218:12
7224:8
7233:6
7242:7
7266:21
7269:9
7286:22

severe
7287:23
7290:22

shake 7193:3

shaking
7196:8

shale
7316:11
7317:3

share 7185:7
7222:19
7225:3
7226:21

shared
7215:22

shareholders

7231:15
7306:6
7320:5

sharing
7183:23

sharpened
7343:6

Shawna
7164:19

sheet
7234:25
7281:20

sheets
7353:22

Shefman
7109:23

shifted
7248:5

shifting
7214:14
7313:18

ship 7197:7

shippers
7210:25

shopping
7220:21
7221:2

short
7113:23
7120:3
7124:20
7142:15

shortcomings
7189:22

shorter
7187:4
7225:7
7265:21

shot 7236:24

showed
7190:14
7207:21

showing
7155:1

shown

7190:14

shows
7186:2,3,1
8 7190:12

shrinking
7314:9

sic 7356:7

sidestepped
7167:18

sign 7300:24
7301:3,4,1
6

signals
7361:1,4

signed
7118:19
7197:21
7248:7
7301:9

significance
7335:17
7363:14

significant
7118:13
7119:5,10,
15 7127:14
7143:1
7164:14
7185:15
7186:4
7187:14
7190:25
7203:8
7204:11,16
7211:15
7224:9
7247:9
7250:25
7255:1
7257:9
7260:19
7297:6
7299:6
7318:11
7321:6
7335:22,25
7347:8

**significantl
y** 7121:19

7208:11
7256:10
7304:4
7335:8
7342:10

signing
7301:11
7302:1

s'il 7227:5
7239:8

similar
7143:14
7146:8
7157:16
7194:22
7226:17
7238:7
7269:15

similarly
7140:25
7278:6
7338:19

Simonsen
7196:8,9,1
7
7198:12,13
7228:19
7280:15

simple
7182:8
7188:10
7286:19
7313:4
7341:19

simplest
7348:10

simply
7128:3
7172:22
7249:5,22
7250:5
7252:12
7263:3,10
7271:9,15
7272:19
7285:15
7334:17
7339:12

simultaneous

ly 7252:6

single
7272:23
7278:21
7304:9
7313:2

sir
7113:10,19
7114:10
7115:1,11,
22 7116:18
7117:1
7119:7,16
7121:11,22
7123:14
7124:1,6
7125:9,11,
15 7127:7
7129:18
7136:7
7150:12
7153:9
7238:17
7323:13
7324:11
7326:16
7334:2,14
7335:14
7337:5
7344:13,24
7345:3,12
7346:2
7347:23
7348:13
7350:13
7352:1
7353:9
7354:5
7355:13
7356:13
7357:3
7359:21,24
7360:3
7361:12

sister
7202:2

site
7166:5,6
7167:7
7182:5
7192:9

sites 7189:8
7257:12

sitting
7193:14
7279:19
7281:20
7317:5

situation
7224:5
7254:13
7257:3
7282:23
7312:3
7314:13
7320:15
7360:22

six 7263:12
7290:4
7294:23
7319:13
7331:10,15
,19,24
7332:10
7356:16,20

sixteen
7214:3
7215:25

sixty 7188:3

sixty-five
7145:2

sizable
7242:4

size 7212:12
7253:22
7305:18
7334:19

skilled
7188:12

skills
7167:19
7188:7

Skinner
7233:15

skipping
7240:22

skyrocketing
7216:24

sleight

7311:4

slide 7111:5
7138:16
7152:20,22
7153:4,7,1
0,13
7154:12
7155:1
7160:25
7224:4
7227:23,24
7228:1
7244:8
7246:9
7249:24
7253:5
7262:7
7281:1
7328:4
7344:15
7351:16
7354:4
7357:2

slightly
7190:11
7284:24
7303:15

slug 7292:18

small
7161:10
7220:12
7302:17
7303:16,17
7334:19

smaller
7253:22

Smart
7128:9,11,
21 7144:6
7148:7
7157:16

so-called
7264:1
7304:17

social
7149:16
7184:14
7211:22
7338:3,4

socio 7147:5

socioecon 7137:13

socioeconomi c 7112:11
7120:1,9
7122:1,9,1 3 7124:15
7128:25
7132:18
7133:4
7136:3,21
7144:10
7146:14
7147:1
7172:2,16
7174:18
7184:7,14
7187:17
7338:20

sol 7319:23

solar
7232:24
7305:19
7318:6
7319:13,23

sold 7218:14
7302:4,7
7331:13

Soldier
7108:15

solely
7348:16

solution
7127:20

solutions
7156:19

somebody
7143:15
7182:24
7305:10
7315:18

somebody's
7316:16

somehow
7282:20
7363:4

someone

7265:25
7305:21

someone's
7305:15

someplace
7153:11
7315:18
7321:23

somewhat
7132:12
7186:19
7220:5
7239:1
7265:2
7272:14
7346:5

somewhere
7188:7
7282:10
7330:21
7365:11

sor 7320:17

sorry
7113:16
7121:3
7129:18
7149:12
7153:16,20 ,21
7155:24
7159:18
7164:7,10
7165:2,3
7169:19
7173:11,22
7177:2
7179:1,7
7181:7
7184:22
7190:11
7196:3
7217:24
7224:1
7264:4
7297:2
7358:23
7364:4

sort 7286:16
7287:1,25
7289:16
7308:8,18,

19,23
7314:9
7318:19

sorts
7151:12

sounds
7195:9
7342:1

sour 7361:25
7362:3

source
7151:25
7155:6

sourced
7179:14

sources
7153:23
7178:16
7272:5
7289:3

South
7288:10
7294:11

southern
7188:13,16
7200:20,22

sovereign
7145:1

span 7272:11

speak
7131:13,14
7137:2
7170:9
7181:11
7193:22
7195:18
7221:16
7306:5,6
7353:13
7357:15
7358:24

speaking
7135:19
7248:9
7250:3
7252:21,23
7253:1
7259:6

7273:9

speaks
7131:9

special
7231:13
7232:22
7341:11

specialty
7339:12

specific
7128:11,22
7134:6,15
7136:16
7138:5
7139:19
7143:10
7144:4,15
7148:16
7157:6,14
7158:2
7178:2
7209:23
7230:13
7240:20
7301:22
7312:25

specifically
7117:25
7118:5
7144:15
7150:11
7166:5
7168:2
7230:10
7231:1
7235:3
7261:9
7271:20
7330:17

specificatio ns 7254:3

specify
7136:18

speculative
7251:16

spend 7204:6
7250:13,14
7251:1
7261:16,17
7265:17

7282:3
7308:1
7315:13
7329:24,25
7330:11,12
7347:13
7350:24

spending
7201:7
7203:14
7204:4
7232:7
7251:18
7252:16
7258:4
7269:3
7349:19
7350:18,19 ,22

spends
7294:25

spent
7216:12
7225:14
7248:10
7251:6,22
7252:15
7257:21
7281:24
7282:9,19
7292:20

spike 7186:5

spins 7264:8

SPLASH
7269:15,16
7333:5,14

split
7304:15

spoke
7137:20
7177:18
7193:2

spoken
7120:7

spot 7168:12

spread
7346:4

spring

7203:14

squash
7333:24

stability
7201:5
7217:10

stable
7205:8
7208:23
7213:6
7217:8
7354:16

staff
7202:10
7209:8
7224:21
7227:1
7232:4

stage
7220:23
7287:17

stages
7308:11

stake 7286:3

stakeholder
7265:23
7273:17,20
7338:21

stakeholders
7161:9
7230:5,8
7258:16
7262:6
7264:7,11,
12,22
7265:22
7273:7,22
7275:5,6
7338:1,3

stand
7130:10,19
7221:24
7222:1
7306:17

standard
7309:11
7358:17
7360:5

standby
7215:9

start
7119:16
7175:23
7195:13,22
7197:9
7222:7,8
7223:13
7226:23
7236:16
7239:9
7244:8
7312:14,19
7324:17
7344:12

started
7127:21
7210:13
7235:14
7289:9
7354:17

starting
7199:9
7323:10

starts
7318:17

state
7131:10
7170:24
7175:7
7326:17

stated
7174:9
7215:16
7245:10
7247:16
7248:17
7253:20
7347:5

statement
7114:4,21
7115:1,5
7134:10
7135:8
7146:8
7151:16
7152:7
7161:20
7172:4,6

statements
7282:11

states
7151:4
7161:2
7221:7
7246:24
7294:12,13
7297:1
7319:21
7320:5
7325:5
7327:5,12,
20 7343:20

stati 7336:1

station
7247:25

statistical
7336:2

statistics
7177:24
7178:10,16
7179:23
7272:4

Stats
7178:1,13,
16 7179:12
7180:1,7,2
5
7192:2,3,4

status
7131:14
7147:14
7260:1

stay 7185:6
7189:7
7200:4
7337:15

steadily
7186:20

steady
7186:6
7205:24

steel
7179:14
7198:20,25
7199:20
7200:18
7210:16,21

,22
7211:8,9,1
8
7212:4,8,2
2,24
7213:3,5
7214:6
7219:15
7220:2,7

steep
7314:11

Steinbach
7211:7,9

step 7174:14
7178:6,7
7350:9
7356:3

steps
7162:15,19

stood
7171:24
7179:10
7267:23

stop 7252:16
7356:13

storage
7294:22,24
7295:1,3,7
,8,9

**straightforw
ard** 7313:4

strange
7312:13

strategic
7231:12

strategies
7161:12

strategy
7347:13

stream
7259:8
7308:20

streaming
7304:19

stretch
7292:6

strictly

7343:16,17

strikes
7313:21

Stroke
7212:1

strong
7349:23

struck
7131:25

structure
7212:10
7325:15

structured
7278:8
7298:14

structures
7201:24
7319:8

struggled
7308:9

stuck
7307:17

studied
7123:8
7124:12
7127:8
7341:1

studies
7206:3

stuff 7244:9
7287:13
7289:24
7305:19

sub 7206:9

**subcontracto
rs** 7204:15

subheading
7243:7

subject
7146:7
7176:2
7257:5
7259:11
7320:17
7352:22
7365:7

submission
7257:10

submissions
7239:5

submitted
7176:15
7178:9

subscribe
7215:15
7326:11

subscribers
7219:6

subsequent
7128:4
7206:9

subsequently
7176:19
7182:4
7349:5
7353:23

subsidiary
7246:19

subsidies
7325:6,12

subsidizing
7311:3

subsidy
7207:5

substantial
7248:11
7349:14
7360:19

substantiall
y 7213:14
7246:25
7318:15

success
7157:24
7174:12

successes
7207:2

successfully
7296:23
7297:4
7354:15

suddenly
7283:13

7312:10

suffer
7224:16

sufficient
7123:11
7137:5
7195:22
7205:14
7207:2
7293:13
7363:11,12

suggest
7112:17
7120:16
7181:4
7189:5
7270:18
7287:1
7328:17
7329:3
7343:2
7345:13
7352:21
7364:2

suggested
7122:6
7128:13,19
7167:17
7248:4
7254:25
7320:11
7324:20
7335:8

suggesting
7122:25
7179:12
7180:9
7182:12,23
7358:13
7361:14,19
7363:3

suggestion
7357:5,20
7359:3

suggests
7127:2
7128:14
7150:17
7250:25
7252:8,14

sum 7208:2

summarize
7171:11
7238:17

summary
7125:11
7139:23
7142:9

summation
7217:7

sump 7349:14

sunk
7281:6,12,
18
7283:3,12,
24,25
7284:14
7285:1,3
7286:6
7357:12

superior
7256:11,18
7269:1
7285:2,11,
25 7286:1

superiority
7285:16,18

supervision
7229:21
7234:11

supplementar
y 7111:9
7228:12,15
7230:22
7233:12
7234:25

suppliers
7178:24
7180:22

supply
7200:24
7214:17

support
7165:20
7204:9
7208:6,15
7211:14,24
7216:9

7250:5,9,1
8 7252:7
7257:22
7268:10

supported
7312:16

supporting
7253:8
7260:11
7310:7
7312:17,18
7313:1,16

supportive
7204:24
7236:19

supports
7152:7
7167:12
7205:21
7211:19

suppose
7226:23
7283:10

supposed
7274:19

sure 7125:16
7126:20
7141:17
7145:12
7178:17
7181:15
7182:7
7193:7
7222:10
7286:13
7288:2
7293:6
7312:2
7313:20
7323:18
7329:11
7336:9
7355:1

surfaced
7317:18

surprise
7168:10,14
7169:14,18
,22 7170:1

7184:18,24

surprising
7265:2

surveys
7238:20
7341:6

suspect
7181:23
7193:8
7272:14

sustainable
7140:6,18

Sven 7109:3
7110:13
7112:6
7117:22
7175:16,17
7176:4,14,
17,22
7177:6,22
7178:20
7179:9
7180:8
7181:10,14
,15
7182:9,19
7183:6,14,
21
7184:5,16
7185:1,2,1
2,22
7186:9,16,
25 7187:10
7188:21
7189:9,14,
19
7190:8,18,
23
7191:4,11,
17
7192:18,25
7193:15
7196:5,14

swaying
7359:13

switched
7287:16

sworn 7110:6
7112:24
7165:5

7227:12

synchronized
7215:2

system
7290:10
7294:15,23
7301:19
7306:21
7319:3
7322:7,20
7340:18

systems
7291:1

T

Tab 7230:21
7234:24

table 7110:1
7124:22
7172:8
7183:8
7192:8
7202:18
7253:4,25
7255:1,10
7258:5
7289:19
7305:9
7307:24
7343:15

takeaway
7287:14

taking
7154:12
7178:2
7208:25
7221:15
7284:25
7301:13
7316:24
7342:9

talk 7280:7
7281:2
7287:12
7289:13
7296:24
7310:3
7312:25
7324:4
7328:10

7338:8

talked
7154:4
7217:19
7223:13
7285:8
7314:14
7323:17

talking
7189:20
7196:18
7217:23
7218:8
7244:1,10
7246:16
7273:6
7278:16
7290:3
7300:22
7317:7
7331:16
7334:1
7337:25
7348:23,24

tangential
7364:24

tangible
7116:10
7122:23
7172:9

target
7248:5
7308:24

targets
7308:17

tax 7259:9
7297:12
7298:24
7310:16
7311:7,8,1
0,12,14,18
,22
7312:11
7325:6

taxation
7298:13

taxes 7179:4
7181:24
7261:1
7262:14

7311:11
7312:9
7314:5
7339:1

taxpayer
7244:1

taxpayers
7125:7
7243:6,7,1
0 7246:7
7310:23
7312:17,18

TC 7211:7

team 7342:2

tease
7246:13

technically
7256:16

technologies
7217:22
7268:23
7318:5

technology
7232:1

telephone
7315:15

temperature
7212:23

temporarily
7274:22
7311:22,25

tempting
7287:2

ten 7113:14
7158:12
7186:5
7187:20
7194:15
7203:10
7213:15,21
7279:21,25
7301:11,15
7302:14
7316:20,24
7318:1,5
7341:15
7364:8

tend 7160:15

7175:20

tends 7186:6

term 7113:23
7120:3,5
7122:14
7134:1
7151:4
7176:5
7247:20
7250:11
7267:1
7270:22
7271:8
7297:10
7324:11
7337:3,9
7340:14
7349:8
7353:22

terminal
7270:23
7271:10,15
,16

terms 7115:2
7117:23
7118:25
7120:2
7122:13
7127:25
7132:16
7137:9
7145:24
7148:15
7160:16
7161:25
7172:20
7176:20
7186:25
7192:5
7219:11
7225:7
7229:14
7234:3
7236:21
7237:16
7238:10,14
7248:12
7251:24
7253:15
7255:18,22
7259:24
7263:25

7269:4
7287:2
7293:10
7298:10
7301:23,25
7314:15,18
7320:15
7328:15
7331:3,8
7332:21
7333:24
7335:16
7336:2,24
7337:12
7338:21
7342:8
7343:17
7345:1,13
7347:23
7353:21
7354:10
7355:24
7358:11
7360:5
7364:11,16

terrible
7290:12

terrified
7287:12

terrifying
7323:18

test
7224:13,24
7225:6
7258:10
7269:12
7273:18
7275:3

tested
7266:9,25
7271:12
7272:13,25
7307:22

testimony
7135:17
7167:4
7243:10
7245:13

Texas 7215:3
7221:8

```
   7327:3          7351:2          7269:13,24      7363:19         7287:1,15

 thank            7363:22,24      7270:3          theatre         7288:6,7,9
   7112:19        7365:14,18      7274:7            7202:17       ,10,11
   7113:2,3,1                     7275:11,24                      7292:12
 7 7114:25        thankfully      7277:12          themselves     7293:3,17
   7115:14        7175:20         7283:15,16        7150:4        7294:11
   7124:23                        7286:9,20         7336:11       7297:7
   7125:12        Thanks          7290:12           7339:3        7298:24
   7126:21        7221:9          7291:25                         7302:9
   7130:2,3       7341:22         7292:14          theoretical    7303:12
   7132:2,3                       7294:24           7264:15       7306:12
   7135:4         That'll         7295:20           7303:25       7307:19
   7139:21        7228:5          7297:2                          7308:11
   7144:17,19                     7300:17,20       theoreticall   7309:5
 ,23              that's          7304:11          y 7256:16      7311:22,24
   7158:6,7,9     7116:17         7306:8                          7313:6,21
 ,12,24           7117:21         7307:4,5,1       theory         7316:23
   7160:1         7132:1          1 7309:1          7289:11,13    7319:9
   7173:3,4       7133:1,8        7310:9            7290:2        7327:3,7
   7175:11,17     7138:14         7312:2                          7332:20
   7187:11        7145:23         7314:2           thereabouts    7336:1
   7192:18,20     7146:10         7316:13           7288:5        7339:2,8
   7194:25        7149:17         7317:1                          7340:16
   7195:2         7155:8          7319:6           thereafter     7354:13,14
   7198:14        7157:9          7320:25           7112:18       7359:3
   7199:10,13     7159:24         7322:11           7187:16       7363:25
   7200:8         7176:1          7324:4,5,9        7206:8
   7210:3         7179:10         ,24 7326:9        7301:5        they're
   7217:14,15     7180:3          7327:2,8                        7136:12
   7219:7         7182:15         7330:25          therefore      7176:23
   7221:13,17     7183:7          7332:17,24        7212:17       7188:13
   7222:1,18      7184:11         7333:3,4          7243:23       7193:18
   7225:1         7186:9,11       7335:12           7274:12,24    7223:17
   7226:7,12      7187:9          7337:22           7281:24       7251:16
   7228:20,21     7188:19         7338:12,15                      7254:10
   7230:19        7189:3,9        ,23              therein        7266:1
   7233:18        7190:2,11       7339:11,13        7120:3        7279:13
   7234:15        7195:12         7342:1            7122:16       7281:22,24
   7236:1,8,1     7212:21         7343:4,15,       7188:15        7291:1
 7 7239:7         7219:1          21 7344:10                      7293:25
   7240:19        7220:13         7345:16          There'll       7300:21
   7242:13,14     7221:13         7346:21          7199:3         7306:6
 ,20              7233:25         7348:5,10,                      7309:18
   7244:10,11     7234:8          18 7350:16       there's        7310:2,18
 ,13,15,16,       7235:22,23      7351:13           7177:7        7311:10,14
 18,21            7237:10,22      7352:3,25         7182:14       ,15
   7245:3,4       7238:12         7353:6            7183:7,24,    7313:4,5
   7280:8,15,     7240:21         7354:1,8          25 7190:24    7340:6
 20,25            7241:1          7356:12           7196:15       7341:7,8
   7324:16        7244:2,4        7357:10,14        7197:22
   7336:22        7246:14         ,18,24            7205:17      they've
   7338:11        7250:22         7358:16           7218:10,11    7150:15
   7350:8         7253:25         7360:15           7219:5        7175:6
                  7257:15                           7222:12       7244:20
                  7262:4,10                         7251:18       7323:21
                  7264:1                            7271:24
                                                    7273:1
                                                    7280:21
                                                    7281:5
```

7354:20

thin 7184:11

third
7246:19
7248:24,25
7249:22
7252:12
7354:5

thirdly
7245:21

thirteen
7203:19
7210:9

thirty
7145:1
7147:19
7298:21
7365:12

Thompson
7134:20
7136:13
7137:7,14
7200:22

thousand
7145:2
7182:24,25
7183:2,4
7203:22,24
7210:11
7251:6
7266:19
7289:25
7290:4

threat
7319:4,18

throughout
7124:10
7174:3
7189:3
7206:2
7210:19
7246:15

throw 7268:3

thrust
7330:18

tier 7294:12

tight 7197:6

timing-wise

7193:19

Timothy
7211:16

tirelessly
7224:22

Tobin
7198:23
7199:20
7209:22
7210:6
7217:16
7220:1,6,1
5,18

today 7112:9
7193:5,10,
14 7196:4
7198:22
7199:19
7207:11
7209:18
7210:4
7225:18
7227:7,25
7233:10
7238:8
7252:1
7260:18
7268:20
7278:4,9
7316:21
7319:15
7340:4
7341:5,9,1
3 7343:6
7347:5
7348:23
7355:4
7357:3

today's
7112:4
7197:4
7202:7
7205:22

Tolko
7200:15
7204:14

tomorrow
7193:18
7211:25
7317:13
7356:11

7365:13,17

tomorrow's
7202:8

tonight
7365:9

tonnes
7210:20

tool 7168:15
7177:18

tools 7216:5
7334:16

top 7226:2
7292:17
7335:19
7352:16

top-of-mind
7326:13

Toronto
7231:5
7232:7

total
7155:4,11,
16 7181:21
7203:14
7204:18
7215:9
7231:24
7235:23
7259:14
7262:23
7275:11
7282:4
7289:25
7302:17,20
7321:11
7341:11

touches
7196:13

towards
7126:15
7128:11
7174:14
7237:6

Town 7134:20

Toy 7211:25

track
7240:15

tradeoff
7287:7

traditional
7239:2
7274:3,25
7276:20,21
7290:8

**traditionall
y** 7273:3

training
7140:15
7174:5
7187:19
7188:23

trans 7205:4

transaction
7240:11

transactions
7239:16,17
7254:13,15
,16
7258:22

TransCanada
7200:21

transcript
7110:25
7280:10

transferred
7282:5

transform
7220:2

transmission
7205:1,4
7207:25
7233:1
7278:11,18
7279:2
7293:7
7295:8,15,
17,19,22,2
5
7296:9,13,
16 7318:13
7319:10
7320:12
7321:12
7322:6,7,2
2,24
7328:12,20

7329:20,23
7330:8,10
7347:6,11
7348:6
7349:4,9,2
0,24
7350:1,4

transparent
7201:6
7208:23

**transportati
on** 7179:5
7180:13
7182:2
7213:10
7220:25

transporting
7182:3

treat 7281:7

treated
7180:2
7253:10
7263:10

treating
7286:6

tremendous
7178:15
7264:1

trend
7186:19

trick
7202:20

trickier
7262:16

tried
7174:23

tries
7177:24

triple
7217:5

trite 7346:4

trouble
7221:16

truckloads
7211:2

true 7207:11

7284:4,5
7298:16
7327:2
7333:4

try 7182:20
7190:5
7191:19
7197:6
7224:22
7285:13
7286:6
7292:3
7298:4
7299:4
7307:2,12,
13,16
7309:6
7315:15
7320:8
7331:12
7341:16
7359:6
7360:20,21

trying
7117:21
7127:25
7141:19
7153:5,25
7174:9
7220:22
7225:15
7238:17
7294:25
7306:25
7307:6
7314:14
7316:16
7322:11
7356:10
7363:7

tune 7212:22

turn 7112:18
7132:4
7167:24
7175:13
7197:9
7216:23
7222:8,25
7226:3
7257:2
7260:24
7297:13

7344:13
7356:18

turned
7360:17

Turner
7198:19
7199:9,13,
15 7213:14
7215:16
7217:24
7218:11
7219:1

Turning
7357:2

turns
7202:20
7216:22
7292:7

tweaked
7304:10

twelve
7210:12

twenty
7114:2
7155:22
7156:4
7183:3
7197:21
7207:22
7208:3
7271:2,5,1
3
7291:11,13
,15,16,21,
24,25
7292:5,12,
19 7298:20
7305:17
7312:7

twenty-five
7211:2
7233:10
7257:6
7271:1
7277:7

twenty-seven
7266:12,16

twice
7203:23

type 7145:19
7156:10
7236:3
7252:5
7360:10

types
7156:24,25
7157:11,13
7158:3
7168:6
7231:22
7238:23
7322:9,10

typical
7271:6
7358:6,17

typically
7204:24
7205:5,13
7212:13
7219:18
7231:9,13
7232:22
7242:10
7251:14
7271:2
7273:3
7282:11,23
7347:7
7360:6

TyPlan
7110:5
7112:10,23
7113:9
7133:1

TyPlan's
7132:25
7134:2

Tyson 7110:6
7112:24
7114:8,16,
24
7115:4,10,
25
7116:7,19
7117:15
7118:4,12,
16,21
7119:3,8,1
3,17,25
7120:23

7121:3,12,
20
7122:3,8
7123:6,15
7124:4,7,1
7,24
7125:5,8,1
9
7127:9,18
7129:15,22
7130:3,9,1
4
7131:7,12,
16
7132:1,15,
23
7133:9,15,
23 7134:5
7135:3,9,1
2,15,22,25
7136:6,11
7137:11,22
7138:2,15,
20
7139:3,11,
18
7140:12,24
7141:4,16
7142:5,21,
25 7143:22
7144:2,6,1
4,24
7145:21
7146:5
7147:3,7,1
3,16,23
7148:5,16,
25
7149:4,12,
20
7150:1,6,1
7,23
7151:2,8,1
4,23
7152:5,8,1
8,24
7153:14,19
,21
7154:9,17,
20
7155:6,10,
18,24
7156:7,12,
22

7157:2,14,
23
7158:5,6,2
5
7159:1,11,
16,25
7160:5,8,1
1,18
7161:16,22
7162:6,10,
17,21
7163:7,11,
17,24
7164:3,7,1
0,16,23
7165:2,6,1
4,18,22
7166:1,9,1
3,17
7167:2,9,1
5,22
7168:4,8,1
3,20
7169:2,12,
18,25
7170:5,15,
22
7171:6,14,
21
7172:5,13,
24
7173:4,6,1
1,13,16,21
,24 7174:2
7175:18
7176:3,9,1
3,16,20
7177:16
7178:4,21
7179:11,17
7180:15
7181:5,7,1
0,16
7182:17
7183:5,11,
12,17
7184:3,11,
22
7185:10,17
7186:8,11,
24
7187:6,11
7189:2,12,
15,25

7190:16,22
7191:2,9,2
3 7192:19

Tyson's
7117:8
7195:19
7196:10

───────
U
───────

ULC 7200:17

ultimately
7275:18
7277:15
7282:4
7285:4
7355:6

**uncomfortabl
e**
7344:12,17

underlie
7313:14

underlines
7208:12

underlying
7327:7

undermining
7326:2

underneath
7329:3

understand
7113:8
7115:22
7122:24
7148:6
7182:14
7217:2
7238:22
7240:8
7241:15
7244:10
7246:12
7261:6
7262:1
7266:6
7281:14
7286:7
7308:10
7330:1
7332:13

7341:17
7347:18
7348:7
7349:7
7350:10,13
7360:3
7362:23,25

**understandin
g** 7117:2
7138:23
7145:13
7163:14
7166:8
7167:1
7177:23
7186:12
7196:6,11,
13 7223:18
7238:21
7243:18,19
7246:17
7247:3
7266:4
7267:13
7281:17
7355:20
7358:11
7360:21

**understandin
gs** 7139:9

understated
7191:19

understood
7142:18
7143:2
7179:10
7241:7
7243:12
7255:24
7257:4
7324:19
7349:3
7350:16

undertake
7208:16
7240:11

undertaken
7124:19
7126:10
7134:12
7230:12

7231:1
7235:3
7271:19
7333:18

Undertaking
7111:12
7280:10,18

underway
7200:5

**undifferenti
ated**
7263:11
7305:14

unemployment
7204:13

unexpected
7194:6
7205:18

unfair
7283:9
7322:10,11

**unfortunatel
y** 7192:11
7242:9
7326:11

union 7167:6

unique
7219:11
7220:4,5,7
7267:5

United
7151:4
7221:7
7246:24
7294:13
7297:1
7319:21
7320:5
7325:5
7327:5
7343:19

University
7211:17
7326:18

unknown
7118:14

unless
7194:5

7217:12
7222:21,23
7291:2
7307:1

unlikely
7270:1

unoptimized
7349:22

update
7111:3,4
7198:1,4,7
,9 7334:18
7351:22
7352:8

updated
7153:10
7344:8
7345:1

updates
7197:13,22
7342:7

upgrades
7209:2

uphold
7363:5

upon 7112:1
7114:6
7115:12
7127:15
7130:23,24
7147:1,6
7148:2
7149:7,23
7155:2
7158:14,15
7185:8
7196:25
7197:1
7222:3,4
7280:1,2
7313:19
7326:4
7359:5
7365:20

upper 7127:5

Uruguay
7288:10

USA 7201:20

useful
7168:15
7264:17
7267:6
7270:15
7276:24
7305:3
7341:19
7349:17

users
7198:18
7199:16
7200:2
7209:12
7260:20
7318:9

usually
7323:20
7335:24

utilities
7108:3,21
7116:14
7127:8,15,
20 7128:5
7129:14
7154:2
7216:18
7229:7
7231:21
7232:13,25
7233:7,16
7237:25
7240:3,4
7243:1
7319:3,18,
21
7325:8,21,
22
7326:1,6,1
0,25
7336:25

utility
7129:25
7143:17,20
7209:5
7214:8,11
7232:20
7238:5
7319:24
7320:5
7324:21
7326:17

7330:20

utilize
7159:8
7160:3

utilized
7159:14,22
7167:5
7170:9
7192:9
7275:15

———— V ————

Vale 7200:22
7204:14

valuable
7202:19,23
7211:6
7294:24
7296:16
7314:2
7347:6

valuations
7232:19
7235:22

value
7114:18
7187:6,7
7270:23
7271:10,15
7273:2
7275:9
7284:13,16
7293:10,24
7294:8
7295:1
7297:6
7313:24
7322:3,4
7345:6,10
7346:14
7349:23
7353:4

values
7271:16
7336:10

valuing
7309:25

Van 7109:8

variable

7215:9
7304:10

variables
7266:15
7271:12

variety
7123:18
7134:12
7157:3
7178:16
7238:4
7248:12
7255:10
7257:14
7266:14
7267:11
7268:16,20
7269:6
7277:15
7278:1
7289:2
7295:19
7315:24
7346:23
7360:6

various
7129:14
7143:21
7169:9
7181:24
7190:12
7209:16
7231:22
7258:22
7264:21
7265:5
7266:10,14
7273:21
7274:1

venture
7353:9

ventures
7165:11

verge
7256:25

verification
7123:2

verses
7182:16

versus

7169:23
7173:8,20
7185:6
7186:13
7278:12
7279:6
7286:17
7292:25
7323:4
7331:20
7352:20

via 7328:18

viable
7208:4
7217:21
7256:24

vice 7210:7
7235:14,18
,20

**vice-
president**
7198:23
7199:22

vicinity
7131:11

view 7114:19
7115:3
7135:19
7140:20
7141:8
7184:12,15
7188:1
7189:20
7202:6
7224:9
7241:20
7250:10
7257:25
7258:24
7265:20
7267:18
7270:1
7271:9
7272:9
7275:2,5
7284:22
7296:5,15
7303:7,14
7310:4
7325:18
7339:2

7340:24
7343:12
7345:20,23
7347:5
7362:5,17

viewed
7259:22

views
7224:13
7226:21,25

VII 7139:22

Villegas
7177:1

Virden
7200:18

virtually
7270:25
7271:11

virtue
7299:19

visit 7148:7

vitae
7230:20
7234:23

void 7360:25

volatility
7315:2
7317:16

volume
7246:14

vous 7227:5
7239:8

**vulnerabilit
y** 7287:22

———— W ————

WACC 7273:13

wages 7204:9

walk 7283:25
7320:14
7335:22

walked
7254:25

Walker
7233:8

walking
7363:8

warn 7323:16

warning
7344:23

Washington
7232:8

wasn't
7122:25
7125:16
7297:21

waste
7206:23
7218:2,18

watch 7197:5

watching
7226:8

water 7238:2
7259:9
7262:13
7291:1,14
7294:23
7300:8
7302:5
7309:5
7311:9,10,
23 7312:8
7313:13
7314:5
7338:25

ways 7142:22
7206:13
7238:7
7295:19
7310:1

wayside
7347:1

website
7162:23

we'd 7126:17

week 7130:4
7211:2
7342:14
7352:10

weeks
7153:17
7224:8
7247:13

7248:4
7269:9
7332:22
7342:15

weigh
7295:24

weighted
7272:17
7273:4

Weinstein
7109:25
7117:7
7130:5,6
7131:1,6
7158:10
7195:15,17

welcome
7158:19
7199:7
7245:1

we'll
7189:23
7195:25
7221:23,24
7222:16,23
,25
7226:18
7227:1,3
7259:11
7279:20
7324:18
7326:22
7333:20
7364:3
7365:17

well-
represente
d 7221:19

well-served
7209:5

we're 7112:4
7122:11,16
7158:17
7192:21
7197:4,5,8
7210:25
7216:18
7220:6
7224:12
7225:19,22

7244:1,6
7246:16
7249:25
7278:16
7279:17
7283:18,20
,21
7284:18
7287:15
7306:7,8,9
,17 7312:9
7317:22,23
7333:16
7336:10
7338:9
7341:25
7346:3
7349:22
7354:18
7355:2
7365:6,15

we've
7120:7,8
7167:11
7175:4
7195:20
7201:11
7202:11
7223:9,13
7224:8
7226:8
7238:13
7240:6,12
7242:11
7246:17
7248:3
7256:20
7276:8
7283:18
7301:9
7314:1
7333:15
7343:6
7345:25
7356:5

whatever
7225:14
7227:2
7260:1
7299:1
7302:7
7306:2
7308:18

7318:19
7362:13

whatsoever
7322:23

Wheel
7200:19

whenever
7122:1

whereas
7118:18
7177:25
7181:25
7186:5
7331:14

whether
7118:1,5
7119:21
7120:14
7123:3
7125:16
7137:19
7141:12,13
7152:21
7154:14,15
7157:10,19
,20
7163:18
7169:9
7175:25
7184:6
7185:5
7188:22
7190:24
7196:15
7207:3
7208:18
7216:15
7224:17
7238:23
7241:11
7242:3
7243:13
7249:13
7251:21
7252:11
7254:15
7261:10,25
7268:25
7270:14
7273:12
7279:13
7285:10

7292:10
7297:24
7298:4
7300:1
7301:6
7305:5,7
7313:12,15
7319:10
7323:1
7329:15,24
7334:25
7347:9
7361:2
7365:2

whole 7258:8
7260:17
7281:6
7339:8
7352:7

wholesalers
7178:24
7181:24

wholesaling
7179:5

whomever
7143:3

who's
7198:23

wide 7255:9
7257:13

widely
7218:23,25

wider
7206:12

William
7109:14
7110:9
7113:1,2
7114:9,20,
25
7115:8,12,
20
7116:1,12,
25 7117:12
7118:8,11,
12,17,22
7119:4,9,1
4,18
7120:17,24
7121:5,13,

21 7122:7
7123:5,9,2
5
7124:5,8,2
3
7125:3,6,1
0 7126:21
7127:13
7129:11,17
7130:2,17
7131:21

Williams
7109:11
7110:23
7126:24,25
7132:11
7133:25
7162:4
7167:17
7169:9
7194:3,4
7222:13,14
,18
7223:2,8
7236:16,17
7237:15
7238:9,16
7239:4,8
7323:9,12,
15,16
7324:10,16
7325:1,13
7326:4,16,
21
7327:10,18
,23
7328:3,8,1
5,24
7329:2,8
7330:15
7331:1,4
7332:12,25
7333:7,12,
17,23
7334:7,12,
13,24
7335:6,14,
24 7336:22
7337:2,7,1
2,23
7338:11,19
7339:14
7340:23

7341:22
7342:6,17,
20,22
7343:16,23
7344:6,11,
18,20,21
7345:5,9,1
2
7346:2,7,1
6 7347:22
7348:12,19
7350:7
7351:2,7,1
5,25
7352:9,21
7353:3,8,1
5,25
7354:3,9,2
1
7355:12,23
7356:2,5,1
2,15,23
7357:1,2,1
1,15,19
7358:1,9,1
9
7359:1,16,
20,23,24
7361:12,18
7362:10
7363:1,13,
17,20
7364:4,5
7365:5,10

Williams's
7133:11

willing
7305:15
7309:18
7310:18
7316:23
7317:11
7330:12

willingness
7310:7
7350:9

wind
7124:1,4,5
,12,16,21
7125:1
7232:24
7268:22

7278:15
7294:12
7305:19

Winnipeg
7108:23
7197:19,23
7200:20
7203:11
7211:9,13
7245:1,2
7346:9

Winnipeg's
7204:13

winter
7317:9

wires 7233:1
7321:16
7322:6,13,
22 7323:6
7332:3

Wisconsin
7305:2
7346:9

wisdom
7360:1

wish 7226:14

witness
7112:23
7164:18
7356:24
7358:23
7359:2
7363:23

witnesses
7110:22
7112:12
7167:4
7194:13
7221:25
7229:3
7236:20
7242:23
7244:7,20,
24 7253:21
7280:24
7323:11
7365:3,8

Wojczynski
7196:1

7226:21

woman 7251:7

wonder
7145:16
7291:17
7329:8
7364:5

wondering
7137:5
7139:14
7152:21
7153:9
7193:24
7287:14
7308:21

work 7111:6
7117:8
7128:11,25
7132:25
7133:21
7134:2
7145:11,13
7146:25
7166:4,20
7174:7
7175:20
7200:23
7209:9
7214:8
7228:4,7
7229:14,25
7230:2,14
7231:1
7232:11
7234:4,17
7235:3,5,1
1
7236:11,13
7237:16
7239:17,21
7240:20
7241:8,16
7242:17
7243:4,12
7246:2
7281:21
7282:7
7284:13
7307:14
7326:17
7333:18,22
7334:16

7336:23
7338:14
7349:16
7362:4

worked
7143:21
7185:13
7232:9
7233:13
7237:24
7238:13
7239:18

workers
7204:8
7211:24

workforces
7189:18

working
7224:21
7232:19
7255:7,9
7296:25
7319:15

workroom
7195:20

works 7236:4
7304:4

world
7135:19
7150:18
7184:12
7200:17
7255:15
7267:3
7288:4,11
7336:10
7340:6

Worldwide
7200:18

worry 7293:4

worse
7300:11

worst
7300:10,12

worth 7258:4
7267:25
7294:23
7307:6,18,

23 7363:8

worthless
7202:20

worthwhile
7270:2

WPS
7352:14,24
7353:1,4,1
0,19
7354:23,25
7355:16,18

write
7284:18

writing
7255:23
7280:11
7342:24
7349:13

written
7252:16
7253:15

wrong
7182:20,21
7216:24
7298:24
7302:9

wrote
7121:14
7364:12

Wuskwatim
7126:12
7141:11,14
7169:15
7180:4

Wyoming
7211:17

_____
Y
yesterday
7113:11
7126:23
7132:12
7133:11,25
7134:7
7135:17
7153:5
7160:25
7167:16
7169:8

7171:23
7193:2,16

yet 7118:14
7131:24
7206:4
7215:24
7278:17
7282:1
7314:11
7321:12
7333:5

York 7288:23

you'll
7177:9
7225:13
7344:12,13
7345:5
7358:10

yourself
7301:1
7320:2,3

you've
7113:20
7116:12,13
,17
7118:25
7143:21
7177:13
7182:23
7194:12
7236:2
7237:16
7238:9
7241:19,23
7243:9
7301:9
7327:24
7332:25
7344:6
7354:22
7357:22

———————
Z
———————
zero 7250:22
7326:7,13,
24