



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 15, 2014
Pages 6940 to 7107

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1 --- Upon commencing at 12:49 p.m.

2

3 THE CHAIRPERSON: Good afternoon. I
4 believe that everybody's in position, so that we can
5 commence this afternoon's proceedings. Before we turn
6 the microphone over to Me. Monnin I'd invite Mr.
7 Hombach to say a few words.

8 MR. SVEN HOMBACH: Yes. Good
9 afternoon, Mr. Chairman and members of the panel, and
10 thank you. This afternoon and tomorrow morning are
11 reserved for the evidence of TyPlan, an independent
12 expert consultant appointed by the PUB to review
13 socioeconomic matters in respect of the NFAT.

14 Before we get started I would like to
15 advise the parties in the room that in the CSI portion
16 of the hearing this morning the panel ruled that lines
17 5 through 7 of the transcript of April 14, 2014, which
18 was yesterday, are going to be redacted, as the panel
19 has determined that...

20

21 (BRIEF PAUSE)

22

23 MR. SVEN HOMBACH: Sorry, I misspoke,
24 that lines 11 through 17 of the transcript of April
25 14th, 2014, are going to be redacted, as the panel has

1 reached a determination that those lines contained CSI.
2 I can advise the parties that a redacted transcript
3 with those six (6) lines blacked out is going to be
4 released publically later today.

5 With that I would like to welcome Mr.
6 Russ. Tyson to the hearing. Might I suggest we turn it
7 over to Me. Monnin or Mr. Weinstein to qualify the
8 witness.

9 THE CHAIRPERSON: Before we start that,
10 I'm a bit concerned that the Intervenors have all been
11 notified -- not all been notified that we were starting
12 at quarter to 1:00. I know Ms. Saunders is not here,
13 and I -- she had expressed some interest.

14 Could you call her, please, Ms. Menzies?

15 MS. MEGHAN MENZIES: I can note that
16 Ms. Saunders is aware of the starting time. And she
17 had other matters that were ongoing this morning, but
18 she will be here this afternoon.

19 THE CHAIRPERSON: Thank you for that.
20 So with that, Me. Monnin, s'il vous plait.

21 MR. MICHAEL WEINSTEIN: Good afternoon,
22 Mr. Chair. That's all right.

23 THE CHAIRPERSON: Mr. Weinstein, I
24 apologize.

25 MR. MICHAEL WEINSTEIN: Before we turn

1 to swearing the witness I would just like to take care
2 of a bit of housekeeping with respect to exhibits. And
3 I've spoken with Mr. Secretary. We'd like to enter
4 three (3) exhibits. The first one would be TyPlan's
5 scope of work.

6 And since the report is already TyPlan
7 Exhibit 1, the scope of work will be entered at TyPlan
8 Exhibit 2.

9
10 --- EXHIBIT NO. TYP-2: TyPlan's scope of work

11
12 MR. MICHAEL WEINSTEIN: The next
13 exhibit would be the slide deck for TyPlan's
14 presentation, which we would ask be entered at TyPlan
15 Exhibit 3.

16
17 --- EXHIBIT NO. TYP-3: Slide deck for TyPlan's
18 presentation

19
20 MR. MICHAEL WEINSTEIN: And then
21 lastly, we've provided via email, but we're now going
22 to be submitting as an exhibit also, Mr. Russ Tyson's
23 expanded resume as TyPlan Exhibit 4. And I've provided
24 copies of that for members of the panel, as well.

25

1 --- EXHIBIT NO. TYP-4: Russ Tyson's expanded
2 resume
3

4 MR. MICHAEL WEINSTEIN: And with that,
5 Mr. Chair, I would now ask that we swear the witness.
6

7 IEC TYPLAN PANEL:

8 RUSSELL TYSON, Sworn (Qual.)
9

10 QUALIFICATION OF WITNESS:

11 MR. MICHAEL WEINSTEIN: Mr. Tyson,
12 you're here today on behalf of TyPlan Planning and
13 Management, which has been retained by the Manitoba
14 Public Utilities Board in order to assist the PUB to
15 conduct a needs -- conduct a Needs For and Alternatives
16 To review of Manitoba Hydro's proposed Preferred
17 Development Plan, correct?

18 MR. RUSSELL TYSON: Yes.

19 MR. MICHAEL WEINSTEIN: TyPlan prepared
20 a report in accordance with the terms of reference and
21 TyPlan's scope of work, dated September 20th, 2013,
22 which report was then filed to critically review
23 certain aspects of Manitoba Hydro's Preferred
24 Development Plan and filings.

25 Is that correct?

1 MR. RUSSELL TYSON: Yes, it is.

2 MR. MICHAEL WEINSTEIN: And was that
3 report prepared by you or under your supervision and
4 control?

5 MR. RUSSELL TYSON: Yes, it was.

6 MR. MICHAEL WEINSTEIN: Your curriculum
7 vitae has been filed with the panel as part of Exhibit
8 Hill Co. number 8 at Tab 6a, and a longer form resume
9 has been provided and was just filed as Exhibit TYP-4.

10 Could you please describe, first
11 generally, your education and experience as they relate
12 to the work you performed pursuant to TyPlan's scope of
13 work?

14 MR. RUSSELL TYSON: Yes. From an
15 educational perspective I have a master's in urban
16 regional planning from Queens University. I have a
17 master's certificate in project management from the
18 University of Victoria. I have an honours degree in
19 urban geography from the University of Western Ontario.
20 I have an executive management development business
21 program certificate from Simon Frazier University. And
22 I have a certificate in conflict analysis in management
23 from Royal Rhodes Universities.

24 I am a member of the Canadian Institute
25 of Planners; a member of the Clean Energy BC, which is

1 a group that heads up all the independent hower --
2 hydro power projects in British Columbia. I'm a member
3 of the Project Management Institute, as well as a -- a
4 member of the Planning Institute of British Columbia
5 and the Ontario Provincial Planning Institute.

6 In regard to the socioeconomic
7 components of this study, I would like to preface it by
8 stating that there are generally three (3) things that
9 one does in undertaking socioeconomic impact analysis.
10 I will provide details on the projects that I've worked
11 on, but all the aspects of the three (3) things that I
12 will speak to have been done in accordance for all the
13 projects I identified.

14 Firstly, the general socioeconomic
15 background report, which provides a conditional report
16 of the region or the local area socioeconomic
17 conditions. It is based on Statistics Canada
18 information and provides data on housing, employment,
19 occupation, a variety of different data that is
20 collected by Stats Canada.

21 In addition to that, the standard
22 socioeconomic background report looks at access issues
23 and infrastructure, include -- including emergency
24 planning, preparedness plans, as well as the
25 availability of health concerns and services in the

1 local community. That is a standard component of what
2 falls into an overall environmental impact statement,
3 which has been prepared for the PDP.

4 The second component of the analysis
5 includes what we call economic impact analysis, which
6 is basically a run of the provincial input/output
7 models to provide an indication of the contributions to
8 the GDP, employment in person years, as well as
9 provincial and federal taxes.

10 In our projects in BC we actually
11 utilize that model and disaggregate it a little bit to
12 make it more practical. We do one (1) or -- one (1) or
13 two (2) -- a couple of things. The first thing we do
14 is we get the model to give us a printout of the
15 sectors of the economy that such projects are going to
16 benefit, and we can break it down by number of person
17 years by sector of the economy. This helps out when we
18 deal with contractors in the future.

19 The other aspect of the model that we
20 can do in certain circumstances is regionalize it. The
21 model itself provides Canadian-wide as well as
22 provincial benefits. One of the biggest criticisms at
23 a more localized level is what are those benefits to
24 the region. So in certain instances we can
25 disaggregate the -- the model to come up with numbers

1 at a regional perspective.

2 The third aspect -- and that, too, by
3 the way is also a component of the Environmental
4 Assessment Act. One (1) of the unique things that we
5 do now with all of our clients is create things that we
6 call local job opportunity analysis, which basically
7 takes the strengths and weaknesses that -- that have
8 been identified in the socioeconomic background report,
9 the economic modelling, and then we match that with the
10 local economy.

11 So we find local providers, service
12 providers as well as companies, in the marketplace in
13 the local area that could potentially work on such proj
14 -- pro -- projects. Then we match them with the
15 contractor when they come on board to ensure that we're
16 optimizing socioeconomic benefits. Thank you very
17 much.

18 MR. MICHAEL WEINSTEIN: Thank you, Mr.
19 Tyson. I'm now going to ask you to just take a few
20 minutes and to go through specifically the areas under
21 your scope of work that were addressed in your report.
22 The first item in your scope of work, number 1, states:
23 "Perform a critical analysis of the
24 socioeconomic impacts and benefits of
25 Manitoba Hydro's Preferred

1 Development Plan and alternative
2 plans. This should include
3 examination of potential effects to
4 the people of Manitoba, especially
5 Northern and Aboriginal communities,
6 including such things as employment,
7 training, and business opportunities;
8 infrastructure and services;
9 personal, family, and community life;
10 and resource use, including..."

11 And I'd now ask you to speak to each of
12 these subpoints within item number 1, beginning with
13 1(a):

14 "Economic impact assessment modelling
15 to determine sector economic impacts
16 to provincial GDP, long-term and
17 short-term induced employment
18 opportunities."

19 MR. RUSSELL TYSON: Thank you. For the
20 panel's clarification, in British Columbia we also have
21 our provincial utility, but we also have a series of
22 private-sector interests developing hydro projects
23 throughout the province.

24 As part of that, one of the key issues
25 that comes up in British Columbia is that those

1 projects are basically linked directly towards
2 establishing benefit agreements with First Nations. So
3 all of the aspects of socioeconomic are rolled up --
4 that I've discussed about earlier are rolled up both
5 with the private sector and with the First Nations when
6 we do our work.

7 Specific to economic impact, the Upper
8 Lillooet Hydro Project, which is a cluster of three (3)
9 hydro power projects north of Pemberton, BC, which is
10 just north of Whistler -- Pemberton has a population of
11 about, I think, twelve hundred (1,200) people -- is one
12 (1) project where we undertook all aspects that I
13 identified at the top.

14 In addition to that, there are a cluster
15 of projects at Harrison Lake, which is about an hour
16 and a half outside of Vancouver, British Columbia,
17 where we did the exact same modelling.

18 Another project near Whistler, which is
19 the Skookum Power Project, was another example of where
20 we took the baseline, we did the economic impact, and
21 followed through with local job opportunities.

22 We also had a project of seven (7)
23 independent projects called the Pitt River Hydro Power
24 Project. There were seven (7) individual projects and
25 we ran the model to ascertain the benefits associated

1 with that.

2 In addition to working exclusively in
3 the IPP sector, we also do broader economic impact
4 analysis. And a couple of examples include the Fraser
5 River crossing project, which is a transportation
6 bridge project to link communities, as well as the UBC,
7 University of British Columbia, rapid transit line
8 which had seven (7) or eight (8) different alternatives
9 which we evaluated from an economic perspective.

10 And we've recently completed a study on
11 the economic impact of contaminated sites on the
12 provincial economy. And that was tabled last year.

13 MR. MICHAEL WEINSTEIN: Thank you.
14 Please now describe your expertise and qualifications
15 as they relate to scope of work item 1(b):

16 "Determining gross provincial
17 financial benefits by examining
18 benefits and costs over the life of
19 the project."

20 MR. RUSSELL TYSON: Another service
21 line that TyPlan Planning and Management provides is
22 that of needs assessments within communities. We have
23 contact -- conducted for the Parks Board in Vancouver
24 needs assessments for a number of community centres,
25 namely, Dunbar and the Abbafower (phonetic) Centre.

1 As part of those evaluations, we look at
2 building condition reports, environmental reports, and
3 health reports in the determination of the longevity of
4 the facility. We develop schedules and plans based on
5 that to ascertain how we can retrofit the facility to
6 increase the life cycle.

7 An interesting note: A very
8 comprehensive community needs assessment was undertaken
9 for the Northern Rockies Regional District and Fort
10 Nelson, which is Northeastern BC, in which all the
11 facilities and infrastructure within that region was
12 assessed from an engineering, health, and stability
13 perspective.

14 MR. MICHAEL WEINSTEIN: Thank you.
15 Scope of work item 1(c):

16 "Determining Canadian benefits."

17 MR. RUSSELL TYSON: I have mentioned a
18 number of projects as part of 'A'. Canadian benefits
19 are one of the results from running the input-output
20 model. So all of the projects that had been identified
21 earlier also constituted information regarding Canadian
22 benefits.

23 MR. MICHAEL WEINSTEIN: Scope of work
24 item 1(d): Northern and Aboriginal community-based
25 impacts in terms of employment opportunities, incomes,

1 community tax base, skills development, and community
2 business opportunities.

3 MR. RUSSELL TYSON: Again, as noted
4 earlier on in the presentation, we've undertaken
5 numerous studies, socioeconomic studies, for hydro-
6 related projects. As mentioned also, part of the
7 program in British Columbia is that First Nations have
8 to be involved and eventually partner with these
9 proponents to ensure that they can get a successful
10 call and develop their projects.

11 We work with First Nations in all of
12 these areas on a continuous basis to look at
13 socioeconomic issues and address them, ensuring that
14 job opportunities are available to them when the
15 project is developed.

16 MR. MICHAEL WEINSTEIN: Thank you. And
17 with respect to scope of work item 1(e):

18 "Community access improvements and
19 related health, education, and
20 cultural benefits."

21 MR. RUSSELL TYSON: One (1) of the key
22 aspects of doing a socioeconomic baseline is to include
23 conditions within the local community regarding health,
24 access, and education. That is another line summary
25 that's identified in all socioeconomic baseline

1 studies.

2 MR. MICHAEL WEINSTEIN: Scope of work
3 item 2: "Consider the economic displacement
4 impacts and effects on consumer
5 spending to the extent consumers will
6 face increased electricity rates as a
7 result of the Preferred Development
8 Plan."

9 MR. RUSSELL TYSON: As part of standard
10 socioeconomic analysis, the use of literature reviews
11 and benchmarking is a critical component to ascertain
12 issues. As part of this project, we reviewed available
13 literature and used those opinions to formulate our own
14 opinions in relation to the PUB issue.

15 MR. MICHAEL WEINSTEIN: Scope of work
16 item 3: "Identify and evaluate to
17 socioeconomic impact of five (5) key
18 alternative scenarios and provide a
19 comparison table between the
20 Preferred Development Plan and such
21 scenarios."

22 MR. RUSSELL TYSON: This component of
23 the scope of work, it reflect the multi -- multiple
24 account benefit cost analysis. And we have recently
25 completed, back in British Columbia, the Moray Bridge

1 Replacement Project, which was a multiple account cost
2 benefit analysis that had the similar accounts as to
3 the ones we evaluated within the NFAT.

4 In addition to that, TyPlan does a lot
5 of transportation planning and does a lot of option
6 analysis, where we critically evaluate different
7 alternatives to come up to a preferred.

8 MR. MICHAEL WEINSTEIN: And finally,
9 Mr. Tyson, could you please describe your
10 qualifications and expertise with respect to scope of
11 work item 4:

12 "Provide a high-level analysis on how
13 other Canadian jurisdictions maximize
14 provincial economic benefits from the
15 development of large-scale resource
16 projects and assess if the Preferred
17 Plan provides the highest level of
18 socioeconomic benefit to Manitoban."

19 MR. RUSSELL TYSON: Prior to forming
20 TyPlan, I was retained as director of real estate
21 services for Arthur Anderson, Inc. As part of the
22 overall process at Arthur Anderson, benchmarking was a
23 critical component of how we did business. We did, and
24 undertook benchmarks at a national level for CN and CP
25 Rail, as well in -- as in BC, the British Columbia

1 Building Corporation, moving forward.

2 As part of the development of benefit
3 agreements with First Nations that we have been
4 involved with in BC, we undertook a benchmark analysis
5 to find out what components should go into a benefit
6 agreement and what the key success factors are to
7 delivering such programs. Those key success factors
8 are the ones we utilized in this report.

9 MR. MICHAEL WEINSTEIN: Thank you, Mr.
10 Tyson. With that, Mr. Chair, I would ask that Mr.
11 Tyson be accepted by the Board as an expert for the
12 purpose of giving evidence on the work performed by
13 TyPlan according to its scope of work under the NFAT.

14 THE CHAIRPERSON: Thank you, Mr.
15 Weinstein. I'll turn the microphone over to Mr.
16 Williams, please.

17 MR. BYRON WILLIAMS: Thank you and good
18 afternoon, members of -- of the panel. It's -- it's
19 been a while. I -- I hope that I can fill Ms.
20 Menzies's shoes adequately. And, Mr. -- Mr. Tyson,
21 welcome to -- if I slip up and call you Mr. TyPlan,
22 you'll accept that is --

23 MR. RUSSELL TYSON: I will accept that.

24 MR. BYRON WILLIAMS: -- a good branding
25 and -- and that you've -- you've made the TyPlan brand.

1 Now, you mentioned in your initial statement of
2 qualifications that you're a member of Clean Energy BC.

3 Is that correct?

4 MR. RUSSELL TYSON: Yes.

5 MR. BYRON WILLIAMS: And that's mem --
6 members who are involved with the independent power
7 producers within the province of British Columbia?

8 MR. RUSSELL TYSON: That is correct.

9 MR. BYRON WILLIAMS: And indeed, it is
10 a major part of -- of your work that you work with
11 independent power producers in British Columbia.

12 Would that be fair?

13 MR. RUSSELL TYSON: That is fair,
14 although we do provide services in a variety of
15 ministerial and other department areas.

16 MR. BYRON WILLIAMS: And it would be
17 fair to say that you work with the majority of
18 independent power producers within British Columbia.

19 Would that be fair, sir?

20 MR. RUSSELL TYSON: That would be fair.

21 MR. BYRON WILLIAMS: And one (1) of the
22 producers you have collaborated with on the past is Run
23 of River Power producers.

24 Is that correct?

25 MR. RUSSELL TYSON: Run of River Power

1 Inc., yes.

2 MR. BYRON WILLIAMS: And if you could
3 just turn to page 7 of your curriculum vitae, marked as
4 TyPlan Exhibit number 4. And that should be the last
5 page, sir. If we scroll down just a little bit more,
6 we'll see that you worked with the Katzie, K-A-T-Z-I-E,
7 First Nation?

8 MR. RUSSELL TYSON: Yes.

9 MR. BYRON WILLIAMS: And Run of River
10 Power on the preparation of an impact benefit
11 agreement.

12 Would that be correct?

13 MR. RUSSELL TYSON: That is correct.

14 MR. BYRON WILLIAMS: And would I be
15 correct in suggesting that the proposed hydro electric
16 project involved in this impact benefit agreement
17 related to the Upper Pitt watershed?

18 MR. RUSSELL TYSON: Yes.

19 MR. BYRON WILLIAMS: And for the
20 reporter, 'Pitt' is P-I-T-T. And was the proposed
21 impact benefit agreement with Run of River Power Inc.,
22 or with its subsidiary, Northwest Cascade Power
23 Limited?

24 MR. RUSSELL TYSON: That I am not 100
25 percent sure of. I represented the firm, so.

1 MR. BYRON WILLIAMS: And who did you
2 say you represented, sir?

3 MR. RUSSELL TYSON: Well, it was Run of
4 River Power, but I believe the holding company was
5 Cascade Power.

6 MR. BYRON WILLIAMS: Okay. And in the
7 discussions, were you representing Run of River, or
8 were you representing the Katzie First Nation?

9 MR. RUSSELL TYSON: In this particular
10 instance, it was a combination of both, dare I say
11 that. As part of the development of the development
12 agreement, we spent a lot of time with Katzie
13 identifying what their key issues are and their
14 direction.

15 As part of that, a number of issues --
16 key issues emerged out of that which we reported back
17 to Run of River. And Run of River then started
18 formulated a benefit agreement with the Katzie.

19 MR. BYRON WILLIAMS: Okay. And --

20 MR. RUSSELL TYSON: The rela -- sorry.

21 MR. BYRON WILLIAMS: And if we could
22 turn to page 3 of your curriculum vitae, sir, and
23 scroll down just -- that's perfect. We'll see
24 reference to work that -- an economic impact assessment
25 that you performed with regard to the Pitt River Power

1 Project.

2 Is that correct, sir?

3 MR. RUSSELL TYSON: Yes.

4 MR. BYRON WILLIAMS: And would it be
5 correct to suggest that your work on the impact benefit
6 agreement with the Katzie First Nation related to the
7 Pitt River Power Project, sir?

8 MR. RUSSELL TYSON: It does. Yes, it
9 does.

10 MR. BYRON WILLIAMS: Now, did Pit Riv --

11 MR. RUSSELL TYSON: Although the agree
12 -- the impact agreement and the -- and the economic
13 impact assessment are separate items.

14 MR. BYRON WILLIAMS: And on the Pitt
15 River Power Project, I presume you were working for Run
16 of River or its --

17 MR. RUSSELL TYSON: Yes.

18 MR. BYRON WILLIAMS: -- or its far --
19 or its Northern Power --

20 MR. RUSSELL TYSON: Subsidiary, yeah.

21 MR. BYRON WILLIAMS: -- its subsidiary,
22 Northern Power --

23 MR. RUSSELL TYSON: M-hm.

24 MR. BYRON WILLIAMS: And the proposed
25 Pitt River Project intended to develop seven (7) small

1 hydro projects on the Upper Pitt River in the Fraser
2 Valley Regional District area, sir?

3 MR. RUSSELL TYSON: That is correct.

4 MR. BYRON WILLIAMS: And its value was
5 roughly \$329 million. Would that be right?

6 MR. RUSSELL TYSON: Yes.

7 MR. BYRON WILLIAMS: Sticking with the
8 Upper Pitt project for a moment, at page 3 of your
9 report, again, right in front of us, you reference some
10 economic impact modelling of the proposed development
11 which ultimately was filed as part of the environmental
12 impact statement.

13 Is that correct, sir?

14 MR. RUSSELL TYSON: I believe it was,
15 but I cannot remember at this time.

16 MR. BYRON WILLIAMS: That's what it
17 says on your report?

18 MR. RUSSELL TYSON: M-hm. Okay.

19 MR. MICHAEL WEINSTEIN: Sorry, Mr.
20 Williams, but just for the record, you're referring to
21 the resume, not the report.

22

23 CONTINUED BY MR. BYRON WILLIAMS:

24 MR. BYRON WILLIAMS: Excuse me, I
25 misspoke. Thank you.

1 Would have had the -- would you have
2 done the modelling yourself, sir, or would you have
3 relied on the good folks at BC Stats?

4 MR. RUSSELL TYSON: I would have relied
5 on the good folks at BC Stats. However, everybody
6 running the model relies on the good folks at BC Stats.
7 Similarly, in Manitoba, the -- we rely on the good
8 folks at the Bureau of Statistics.

9 MR. BYRON WILLIAMS: And when you
10 reference to performing the -- the input model for the
11 Upper Lillooet Hydro Project, again, the -- the input
12 modelling analysis is performed by BC Stats.

13 Is that right, sir?

14 MR. RUSSELL TYSON: That is correct.
15 Both models, whether you be in Manitoba Hydro or
16 British Columbia, are proprietary. We do not get a
17 chance to see the models or manipulate the model. We
18 provide inputs into the models, and the results are
19 then provided back to us.

20 MR. BYRON WILLIAMS: And one (1) of
21 your colleagues in the writing of the report was Ms.
22 Hallin, from BC Stats.

23 Is that right?

24 MR. RUSSELL TYSON: Lillian Hallin,
25 yes.

1 MR. BYRON WILLIAMS: Oh, sorry. And
2 just to assist the reporter further, both you and I are
3 going to agree to slow down in our speaking if we can.
4 I'm not sure. We're -- we're -- that's in theory. I'm
5 not sure if we'll achieve it, Mr. Tyson, but that's the
6 plan. Does that sound okay to you?

7 Now, Ms. -- Ms. Amblin (phonetic) would
8 be a recognized expert in -- in economic impact
9 assessment modelling.

10 Would that be fair?

11 MR. RUSSELL TYSON: Ms. Amblin or Ms.
12 Hallin?

13 MR. BYRON WILLIAMS: Just give me one
14 (1) second. Who is your co-author on the project, sir?

15 MR. RUSSELL TYSON: Lillian Hallin.

16 MR. BYRON WILLIAMS: Ms. Hallin. I
17 misspoke. And Ms. Hallin would be an expert in -- in
18 economic impact assessment modelling.

19 Would that be fair?

20 MR. RUSSELL TYSON: Yes. She is very
21 familiar with the BC Stats model. And I want to
22 clarify that every province has their on -- own model
23 and their own individual that runs the models.

24 MR. BYRON WILLIAMS: Now, you do not
25 purport to have expertise in economic impact assessment

1 modelling, do you, sir?

2 MR. RUSSELL TYSON: I do not have
3 expertise in the modelling per se, because I'm not
4 allowed to do it. But I do interpret the model and
5 utilize the model to identify benefits for a variety of
6 projects.

7 MR. BYRON WILLIAMS: And --

8 MR. RUSSELL TYSON: Similarly, anybody
9 else in any other province in Canada does exactly the
10 same.

11 MR. BYRON WILLIAMS: And in the course
12 of your work on this particular project for -- as a
13 independent expert consultant, there was a Statistics
14 Canada model run for you -- analysis run for you, and
15 that was done by Statistics Can -- Canada?

16 MR. RUSSELL TYSON: Yes, it was.

17 MR. BYRON WILLIAMS: And for the
18 purposes of your analysis, sir, in this paper Ms.
19 Hallin, H-A-L-L-I-N, assisted in the review of the
20 economic impact assessment based on the input modelling
21 undertaken?

22 MR. RUSSELL TYSON: Yes. She assisted
23 with it.

24 MR. BYRON WILLIAMS: And if we could
25 just turn for a moment to TyPlan, or TYP Exhibit 1,

1 page 17, footnote 8 at the bottom.

2 Mr. Tyson, you'll see on the first line
3 of footnote -- oh, sorry, do you have it?

4 MR. RUSSELL TYSON: I have it. Thank
5 you very much.

6 MR. BYRON WILLIAMS: You'll see on the
7 first line of footnote 8 a suggestion that the -- the
8 comments provided in this review are limited in that
9 they are based on how the BC -- British Columbia IOM
10 calculates economic impacts?

11 MR. RUSSELL TYSON: Yes.

12 MR. BYRON WILLIAMS: And would I be
13 correct in suggesting that Ms. Hallin may play -- have
14 played some role in identifying this limitation?

15 MR. RUSSELL TYSON: No, I was fully
16 aware of the limitation.

17 MR. BYRON WILLIAMS: And similarly, on
18 page 20, scrolling down to the second last paragraph,
19 you'll see a reference to this analysis being limited
20 as without a full understanding of -- of either the
21 Manitoba economy or how it functions, and an
22 understanding of ongoing contractual arrangements
23 between Hydro and its service providers it is difficult
24 to under -- ascertain the extent of leakages and how
25 margins are treated?

1 MR. RUSSELL TYSON: Yes.

2 MR. BYRON WILLIAMS: And that would be
3 a -- a limitation in the analysis that you've
4 conducted, sir?

5 MR. RUSSELL TYSON: I don't see it as a
6 limitation. There are certain assumptions that
7 everybody makes by province regarding what goes in and
8 out of the input-output model. I'm not here, and nor
9 can I reference certain assumptions Manitoba Hydro has
10 maken -- has made regarding the leakages. However, we
11 made assumptions about what we thought they had done in
12 the analysis.

13 The simple fact of the matter is a
14 normal operating principle of input-output modelling is
15 that the benefits should incur in the province in which
16 you are developing the project. That was something
17 that we identified. The resultant analysis we
18 undertook was to run the Stats Canada model, which
19 suggested a higher and greater benefit to the Province
20 of Manitoba than that was illustrated by the MBS model
21 run.

22 However, I note that the Stats Canada
23 model is based on standard protocol and sta -- and
24 standard interprovincial flows between the provinces
25 that has been extensively studied.

1 Manitoba Hydro made certain assumptions
2 regarding the inputs into the model; for example, the
3 selection of a third party contractor from out of
4 province. That would have a direct impact on model
5 results. Their experience that they note regarding
6 Wuskwatim and their relevant experience within the
7 local economy does have a significant bearing on the
8 outputs of the model.

9 Our point was simply to state that,
10 based on normal operating principles and the Canadian
11 model, the benefit -- the benefits to Manitoba appear to
12 be understated. That was the whole intent of the
13 exercise.

14 MR. BYRON WILLIAMS: Okay. And -- and
15 so just so here when you say this review is limited,
16 you do not believe it limits your analysis?

17 MR. RUSSELL TYSON: No, it does not.
18 It is because we don't have a complete familiarity with
19 the Manitoba economy. We cannot make assumptions about
20 how this economy works in Manitoba.

21 MR. BYRON WILLIAMS: And -- and, Mr.
22 Chair, I was remiss. I have -- I do have one (1)
23 exhibit, CAC Exhibit 45-14, which I -- I wish to have
24 presented today. I -- I think we can probably do
25 without it in our conversation, but we'll see -- we'll

1 see how

2 Mr. Tyson, in terms of the Upper Pit
3 Power Project, apart from the economic modelling, would
4 it be fair to say that another role you performed was
5 in public consultation at meetings such as with the
6 Pitt Meadows city council in February of 2007?

7 MR. RUSSELL TYSON: That is correct.

8 MR. BYRON WILLIAMS: And it would be
9 fair to say that the Upper Pit Project was the subject
10 of some controversy in that it involved an application
11 to change the boundaries of a provincial park to allow
12 for the construction of a transmission line associated
13 with the project?

14 MR. RUSSELL TYSON: You are correct,
15 3.2 kilometres through a provincial park which
16 triggered the BC parks boundary adjustment guidelines.

17 MR. BYRON WILLIAMS: And it would be
18 accurate to say that organizations, such as the Western
19 Canada Wilderness Coalition, took issue with the
20 project?

21 MR. RUSSELL TYSON: That would be
22 correct.

23 MR. BYRON WILLIAMS: And so when
24 environmental groups appeared at the Maple Ridge
25 council in December 2007 to urge the council to oppose

1 the project, you were there on behalf of Run of River
2 Power Inc. to speak to the benefits of the project,
3 agreed?

4 MR. RUSSELL TYSON: Yes. I was also
5 there with Katzie First Nation as imminent partners to
6 the project to garner support regarding this project.

7 MR. BYRON WILLIAMS: And similarly, in
8 March of 2008, when there were meetings at the Ramada
9 Inn Pitt Meadows, you were there with Run of the River
10 and Katzie First Nation to defend the project?

11 MR. RUSSELL TYSON: Yes.

12 MR. BYRON WILLIAMS: Now --

13 MR. RUSSELL TYSON: For the Board's --
14 if I may, sir. The Pitt River Project was a very
15 contentious project, namely because it was proposed to
16 go through a provincial park. As part of the project's
17 development, we were working hard with both the Katzie
18 First Nation and the Squamish First Nation to develop
19 benefit agreements.

20 While we did not have a signed benefit
21 agreement in place at the time of the meetings that
22 have been proposed, we are well on our way to
23 establishing the benefit agreements that we were going
24 to sign off on ultimately associated with the project.

25 MR. BYRON WILLIAMS: Sir, in terms of

1 your curriculum vitae at the top of page 2, would I be
2 correct in suggesting that the one (1) regulatory
3 proceeding related to hydro that you have appeared in
4 was when you appeared as an expert witness related to
5 the BC Hydro Site C project?

6 MR. RUSSELL TYSON: Correct.

7 MR. BYRON WILLIAMS: And as part of
8 your duties in that assignment, TyPlan prepared the
9 outdoor recreation mitigation plan found in -- in that
10 filing.

11 Would that be fair?

12 MR. RUSSELL TYSON: Yes, that is
13 correct. That is one of the documents that TyPlan had
14 tabled. TyPlan -- for the panel's edification, TyPlan
15 had a responsibility for aviation and navigational
16 concerns associated with the Pitt River. As recreation
17 is a critical element associated with any reservoir's
18 creation, we were also mandated to prepare a
19 recreational opportunities plan as well as the
20 mitigation plan associated with recreation.

21 MR. BYRON WILLIAMS: So, Mr. Tyson, you
22 may have misspoke because I was talking about Site C --

23 MR. RUSSELL TYSON: Yes.

24 MR. BYRON WILLIAMS: -- and -- and you
25 spoke of Pitt River, but I'm presuming you meant --

1 MR. RUSSELL TYSON: Oh, sorry. My
2 apologies.

3 MR. BYRON WILLIAMS: -- you meant to
4 speak of --

5 MR. RUSSELL TYSON: It is Site C.

6 MR. BYRON WILLIAMS: And in terms of
7 that management plan, in essence, you presented an
8 outline of the proposed mitigation measures to support
9 the changes from river-based recreation to reservoir-
10 based activities?

11 MR. RUSSELL TYSON: That is correct.

12 MR. BYRON WILLIAMS: Now, in your
13 curriculum vitae, you indicate that you -- and this is
14 at page 6, if you're looking for a reference, sir,
15 towards the bottom -- that you prepared the navigation
16 and aviation chap -- or section 26 of the EIS for Site
17 C.

18 Is that right, sir?

19 MR. RUSSELL TYSON: That -- that is
20 correct.

21 MR. BYRON WILLIAMS: Would I be correct
22 in suggesting that Dr. Tones, T-O-N-E-S, from Golder
23 Associates, also assisted in the preparation of that
24 document?

25 MR. RUSSELL TYSON: Yes, Pat Tones did.

1 MR. BYRON WILLIAMS: And he would
2 provide much of the scientific insight into that
3 particular analysis. Would that be fair?

4 MR. RUSSELL TYSON: Could you repeat
5 the question. On the navigation and --

6 MR. BYRON WILLIAMS: Yeah, he would
7 have provided much of the scientific insight into that
8 particular analysis?

9 MR. RUSSELL TYSON: No. I provided all
10 scientific analysis. My background, in addition to
11 what I do, is I wrote the federal guidelines on how to
12 do impact assessments for hydroelectric projects. It's
13 on the Transport Canada website. And I'm known as an
14 expert in that field, as well.

15 MR. BYRON WILLIAMS: Okay. Fair
16 enough. Now, am I correct in suggesting your work on
17 Site C did not perform economic impact assessment
18 modelling?

19 MR. RUSSELL TYSON: It did not.

20 MR. BYRON WILLIAMS: And as part of
21 your work on Site C, you would not have examined the
22 economic displacement impacts and effects on consumer
23 spending engaged by a result in rate increases?

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

25 MR. BYRON WILLIAMS: At the risk of

1 humbling myself, sir, before a panel full of
2 economists, if I described econometrics to you as the
3 application of mathematics, statistical methods, to
4 economic data, would that be a simplified definition
5 that you are comfortable with?

6 MR. RUSSELL TYSON: Yes, it would.

7 MR. BYRON WILLIAMS: Would I be
8 accurate in suggesting you are not an econometrician?

9 MR. RUSSELL TYSON: I'm a -- I do a
10 significant amount of socioeconomic impact analysis. I
11 run the impact -- I don't run it, but I evaluate the
12 results of the economic impact analysis, and I've been
13 doing it for the last twenty-five (25) years. There
14 are a lot of PhDs with economics degrees that are far
15 more versed than I am, and I don't purport to be one.
16 But I am familiar with it.

17 MR. BYRON WILLIAMS: Fair enough, sir;
18 but you're not purporting to be an econometrician?

19 MR. RUSSELL TYSON: No.

20 MR. BYRON WILLIAMS: And as part of
21 your work scope assignment 2 under TyPlan Exhibit 2,
22 you were to consider the economic displacement impacts
23 and effects on consumer spending to the extent
24 consumers will face increased electricity rates as a
25 result of the Preferred Development Plan.

1 Is that correct?

2 MR. RUSSELL TYSON: That is correct.

3 MR. BYRON WILLIAMS: And in fulfilling
4 that assignment, you performed what you would describe
5 as a high-level literature review of selected
6 documents.

7 Would that be fair?

8 MR. RUSSELL TYSON: That is correct,
9 which formed the basis of the opinion that I provided
10 regarding -- to -- to Manitoba Hydro regarding the
11 potential effects. We note that a lot of the
12 information was more qualitative than quantitative, and
13 at the end of the day there were two (2) resounding
14 results that came out: that the impacts are restricted
15 to low income and the poor. And -- and we moved
16 forward from our recommendations based on that finding.

17 MR. BYRON WILLIAMS: Would it be fair
18 to say that your curriculum vitae does not set out any
19 assignments in which you examine the economic
20 displacement impacts and effects of consumer spending
21 of increased electricity rates?

22 MR. RUSSELL TYSON: That would be
23 correct.

24 MR. BYRON WILLIAMS: It would be
25 accurate to suggest that you have no peer-reviewed

1 publications in which you examine the economic
2 displacement impacts and effects of consumer spending
3 on electricity rates?

4 MR. RUSSELL TYSON: We couldn't find
5 quantifiable evidence that suggested a number to us.

6 MR. BYRON WILLIAMS: And, sir, I was
7 asking in terms of you, and that you have not prepared
8 peer-reviewed documents in this area.

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

10 MR. BYRON WILLIAMS: Now, in your scope
11 of work, and you went over this with My Learned Friend,
12 Mr. Weinstein, (1)(e), you were asked to provide a
13 critical analysis of community access improvement,
14 including those re -- related to health benefits.

15 Is that fair, sir?

16 MR. RUSSELL TYSON: That is fair.

17 MR. BYRON WILLIAMS: Sir, in terms of -
18 - if I use the term 'epidemiology' to suggest it is the
19 study of how diseases occur in different groups of
20 people and why, is that a definition that we can work
21 with?

22 MR. RUSSELL TYSON: I can work with
23 that, yes, thank you.

24 MR. BYRON WILLIAMS: And would it be
25 fair to say that epidemiological information is used to

1 plan and evaluate strategies to prevent illnesses and
2 is a guide to the management of patients in whom
3 disease has already developed?

4 MR. RUSSELL TYSON: Yes.

5 MR. BYRON WILLIAMS: And, sir, would it
6 be accurate to say that you're not an epidemiologist?

7 MR. RUSSELL TYSON: I am not an
8 epidemiologist.

9 MR. BYRON WILLIAMS: And you do not
10 purport to have expertise in clinical medicine?

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

12 MR. BYRON WILLIAMS: And you do not
13 hold any post-secondary degrees in public health?

14 MR. RUSSELL TYSON: No, I do not. But
15 I would like to clarify as part of this review for the
16 panel, the Canadian Environmental Assessment Act has
17 certain standards and protocols that are used as part
18 of a socioeconomic evaluation. We benchmarked current
19 best practice against what Manitoba Hydro had done.
20 You do not need to be a doctor to suggest otherwise.

21 MR. BYRON WILLIAMS: Sir, you mentioned
22 that you hold a master's certificate in project
23 management.

24 Is that correct?

25 MR. RUSSELL TYSON: That is correct.

1 MR. BYRON WILLIAMS: And that's out of
2 the University of British Columbia?

3 MR. RUSSELL TYSON: No, the University
4 of Victoria.

5 MR. BYRON WILLIAMS: Victoria. Excuse
6 me. I misspoke. And would I be right in suggesting
7 that that involves about eighteen (18) days of in-house
8 courses over a four (4) month period?

9 MR. RUSSELL TYSON: I would -- yes,
10 that seems correct, based on what's on the website.

11 MR. BYRON WILLIAMS: And after
12 completing your master's, then you go on to the -- the
13 courses, you go on to write the exam.

14 Is that fair?

15 MR. RUSSELL TYSON: Yes. It's called a
16 PMP.

17 MR. BYRON WILLIAMS: Thank you.

18 Mr. Chair and members of the panel, with
19 regard to this witness, we appreciate his
20 acknowledgement, as we understand it, that he is not an
21 expert in economic impact assessment modelling, in
22 economic -- in econometrics, excuse me, in
23 epidemiology, clinical medicine, or public health.

24 Our client certainly sees value in
25 hearing his wev -- evidence. In giving weight to his

1 evidence, we suggest the panel take those limitations
2 into account. And those are -- would be our
3 submissions in this regard.

4

5 (BRIEF PAUSE)

6

7 THE CHAIRPERSON: Thank you, Mr.
8 Williams.

9 MR. SVEN HOMBACH: I suggest that we
10 next turn it over to Mr. Hacault.

11 THE CHAIRPERSON: Me. Hacault, s'il
12 vous plait.

13 MR. ANTOINE HACAULT: Oui, M.
14 President. On behalf of MIPUG, we have no objections
15 to the qualification of Mr. Tyson as an expert,
16 subject, however, to the comments made by Mr. Williams
17 on economic modelling and the other items that he's
18 listed. I won't re-list them.

19 THE CHAIRPERSON: Mr. Williams, for the
20 benefit of my notes, would you repeat those
21 limitations, please?

22 MR. BYRON WILLIAMS: Yeah, I noted five
23 (5): and -- economic impact assessment modelling,
24 econometrics, epidemiology, clinical medicine, and
25 public health. I do want to note that the witness, as

1 I understand it, will -- would say that he does,
2 through his practice, as well as through his training
3 in -- he would have experience in interpreting the
4 results of the modelling. And I should have noted that
5 originally.

6 THE CHAIRPERSON: Mr. Williams, you
7 mean interpreting the results of all five (5) areas?

8 MR. BYRON WILLIAMS: I'm just going off
9 his evidence on the one (1). He can -- if he wants to
10 say anything more. I was just speaking to economic
11 impact assessment modelling.

12 THE CHAIRPERSON: In terms of the --
13 I'm looking for... I don't believe Mr. Gange is here.

14 MR. SVEN HOMBACH: Mr. Gange advised
15 that he won't be in attendance this afternoon. He will
16 be in attendance tomorrow. I do note, Mr. Chairman,
17 that his client is in the back. I don't know if Dr.
18 Miller wants to speak to whether or not there's any
19 objections. But perhaps if the panel's prepared to
20 hear from Dr. Miller, he can indicate whether GAC has
21 any concern.

22 THE CHAIRPERSON: Dr. Miller, please.
23 Have you any comments about this witness?

24 DR. PETER MILLER: I think we'll find
25 him acceptable, subject to the enumerated

1 qualifications.

2 THE CHAIRPERSON: Thank you for that,
3 Dr. -- Dr. Miller. And, Mr. Orle, please.

4 MR. GEORGE ORLE: Thank you. I just
5 have a few questions. And I'm not going to go over the
6 areas that have been ably covered by Mr. Williams, but
7 I do have a few questions on that.

8 When I go to page 2 of your long-form
9 resume, where you indicate at the top of the page that
10 you provided expert witness advice, can you tell me on
11 how many occasions you've been qualified as an expert?

12 MR. RUSSELL TYSON: Sorry, it would be
13 two (2) times. I presented in front of the Alberta
14 Public Utilities Board regarding a land use and
15 economic development proposal from a gas company in
16 relation to a farmer who had a property of land
17 abutting the Town of Bonnyville.

18 And the second one was for the Site C
19 Clean Energy project specific to navigation and
20 aviation.

21 MR. GEORGE ORLE: Have you ever been
22 qualified as an expert in dealing with the impact of
23 rate increases upon consumers?

24 MR. RUSSELL TYSON: No.

25 MR. GEORGE ORLE: I note that many

1 parts of your report begin with the sentence that a
2 review of literature. And I've looked at some of the
3 literature that you have referred to, particularly in
4 dealing with rate impacts.

5 And I note at page 40 of your report
6 sets out information that you obtained from a CBC
7 report?

8 MR. RUSSELL TYSON: CBC Broadcasting
9 article.

10 MR. GEORGE ORLE: Were you aware of who
11 the experts or the people making the conclusions in
12 that -- that news report -- or who they were, or what
13 their qualifications were?

14 MR. RUSSELL TYSON: No, I was not.

15 MR. GEORGE ORLE: I also note that you
16 use Wikipedia as a source reference for a number of
17 your comments.

18 Do you regard Wikipedia as a -- a good
19 source of information, or research information?

20 MR. RUSSELL TYSON: I find it -- I did
21 not -- I find Wikipedia adequate for review of certain
22 questions.

23 MR. GEORGE ORLE: Okay. Have you
24 yourself prepared any reports or any articles for peer
25 reviewed publications dealing with rate impacts upon

1 consumers?

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

3 MR. GEORGE ORLE: Have you yourself
4 done any evaluation or statistical analysis of First
5 Nations' consumer use of -- of electricity?

6 MR. RUSSELL TYSON: No.

7 MR. GEORGE ORLE: Are you aware of what
8 income category the majority of First Nations in
9 Manitoba fall into?

10 MR. RUSSELL TYSON: Yes, lower income
11 sectors.

12 MR. GEORGE ORLE: Okay. And do you
13 know that from a review of any literature, or is that
14 from a -- just a personal opinion on your part?

15 MR. RUSSELL TYSON: A review of
16 literature as filed in an NFAT business case and the
17 supporting EIS sections.

18 MR. GEORGE ORLE: Okay. Thank you, Mr.
19 Chairman. I have the same reservations that Mr.
20 Williams does. Other than that, we'll -- we'll accept
21 the qualifications in the other areas.

22 THE CHAIRPERSON: Thank you, Mr. Orle.
23 I'll call on Ms. Saunders, please.

24 MS. JESSICA SAUNDERS: The MMF has no
25 objection to the qualifications of the expert as

1 presented, as well subject to the comments made by Mr.
2 Williams and Mr. Orle. Thank you.

3 THE CHAIRPERSON: Thank you. I believe
4 that the appropriate thing would be for the panel to
5 stand down for a -- a few minutes so that we can
6 consult with each other and we will back very shortly.
7 Mr. --

8 MR. SVEN HOMBACH: Mr. Chairman, before
9 we do that, I would suggest that Manitoba Hydro be
10 given an opportunity to speak to the matter. And I
11 understand that Mr. Weinstein may want to --

12 THE CHAIRPERSON: I -- I apologize. I
13 for -- I over -- I've overlooked that.

14 MS. ODETTE FERNANDES: Thank you. If I
15 could just have one (1) minute please?

16 THE CHAIRPERSON: Please.

17

18 (BRIEF PAUSE)

19

20 THE CHAIRPERSON: Ms. Fernandes,
21 please?

22 MS. ODETTE FERNANDES: Thank you, Mr.
23 Chairman. In terms of the discussion that occurred
24 around the economic impact assessment, Manitoba Hydro's
25 view is that you don't need to actually run the input-

1 output models in order to interpret the results from an
2 economic impact per -- assessment perspective. And the
3 twenty-five (25) years of experience that Mr. Tyson
4 brings is more than sufficient to comment on the
5 economic impacts of the Preferred Development Plan and
6 its alternatives. And -- like, for an example,
7 Manitoba Hydro has similarly had to rely upon people at
8 the Manitoba Bureau of Statistics to run their
9 provincial input-output model in order to interpret
10 those results.

11 And I think it might be important, just
12 as an overview, we've heard quite a bit of what
13 individuals believe Mr. Tyson is not an expert in. I
14 think it might be useful for Mr. Tyson to remind us all
15 of what he is an expert in, just as an overview.

16 THE CHAIRPERSON: Given that
17 suggestion, I think there's an opening for Mr. Tyson to
18 comment on his expertise.

19 MR. SVEN HOMBACH: Right. And, Mr.
20 Chairman, I understand that Mr. Weinstein may want to
21 make some brief submissions as well, which would be
22 appropriate given the concerns raised by Intervenors.

23 THE CHAIRPERSON: Okay. Mr. Weinstein,
24 please.

25 MR. MICHAEL WEINSTEIN: Thank you, Mr.

1 Chair. Just before Mr. Tyson is allowed an opportunity
2 to remind us of his expertise, I just have some
3 information to provide the panel to assist them in
4 their deliberations once we're all finished speaking.

5 The -- the first point that I wanted to
6 make is that in addition to the comments just made --
7 made by My Learned Friend Ms. Fernandes, the economic
8 impact assessment modelling, Mr. Tyson does have
9 expertise in economic impact assessment, and the
10 modelling, as he has said, is proprietary. So he's
11 confined to dealing with the proprietary modelling
12 results that he's given to work with.

13 And I also echo Manitoba Hydro's
14 comments with respect to his expertise in econometrics
15 where he said that he has twenty-five (25) years of
16 experience doing that type of analysis. However, he's
17 not trying to take the step of holding himself out as
18 an econometrician.

19 Thirdly, with respect to the issue of
20 whether he's an expert in clinical epidemiology, Mr.
21 Chair, I submit that there was nothing in his scope of
22 work that asked him to undertake a -- a report of a
23 clinical epidemiological nature. Nor was there
24 anything requiring him to be an expert in public
25 health. Rather, he was required to do socioeconomic

1 analysis and to consider health benefits, which is what
2 he did in his report, and which we submit he
3 established he has expertise to -- to do so.

4 I would also like to refer the panel to
5 the comments the Supreme Court in the case of R. v.
6 Marquard, which is a leading case on the admissibility
7 of expert opinion. And in that decision, the court, in
8 explaining that in most cases we are talking about not
9 necessarily needing to have the ultimate expert in that
10 opinion. The -- the issue is that the only
11 requirement, and I quote:

12 "The only requirement for the
13 admissibility of expert opinion is
14 that the expert witness possesses
15 special knowledge and experience
16 going beyond that of the trier of
17 fact. Deficiencies in the expertise
18 go to weight, not admissibility."

19 So, again, we would urge the panel to
20 consider that this may be a consideration when going to
21 weight, but not in terms of the admissibility of the
22 expert's opinion on these points.

23 THE CHAIRPERSON: Could you re --
24 reread the -- the extract from the judicial opinion,
25 please?

1 MR. MICHAEL WEINSTEIN: The -- and I
2 want to be clear, Mr. Chair -- actually, the first
3 portion of this -- oh, no, sorry, the entire thing is a
4 quote:

5 "The only requirement for the
6 admissibility of expert opinion is
7 that the expert witness possesses
8 special knowledge and experience
9 going beyond that of the trier of
10 fact. Deficiencies in the expertise
11 go to weight, not admissibility."

12 Now, Mr. Chair, I've brought copies of
13 that decision from the Supreme Court if the panel would
14 like them, and I've brought copies for My Friends if
15 they would like to have a copy as well.

16 The last thing I'd speak to, Mr. Chair,
17 is that Mr. -- My Learned Friend Mr. Orle made
18 reference to Mr. Tyson's review of the literature in
19 this area. And I just wanted to be clear on the
20 exercise of reviewing literature. And for this, I'm
21 going to quote from a textbook on witnesses written by
22 Peter J. Sankoff of the Faculty of Law at University of
23 Western Ontario. In it, he says:

24 "It thus appears there are two (2)
25 very distinct types of facts that may

1 be used by an expert in formulating
2 an opinion. The first, to adopt the
3 distinction drawn by Lawton LJ and R.
4 v. Turner are those that form part of
5 the expert's judgmental expertise.
6 These are not facts that are
7 concerned with the specific case
8 before the court, but are general
9 facts and data, a knowledge of which
10 forms part of the training and
11 expertise of the expert. They are to
12 be found in such things as textbooks,
13 articles, writings, and reports
14 prepared for the profession
15 generally, and with which an expert
16 in the particular field involved may
17 be expected to be familiar, and which
18 he or she may be expected to consult
19 in the preparation of an opinion.
20 Indeed, absence of such knowledge or
21 consultation may be grounds for
22 attacking the weight to be accorded
23 to the opinion."

24 And, Mr. Chair, I also have copies of
25 this excerpt from that text.

1 Those are all my comments. Thank you.

2 THE CHAIRPERSON: Mr. Wein -- thank
3 you, Mr. Weinstein.

4 Mr. Tyson, would you like to comment on
5 your expertise, please, for the benefit of the panel?

6 MR. RUSSELL TYSON: Thank you. All I
7 know is that in British Columbia, I'm a respected
8 practitioner. I have a lot of repeat clients that
9 respect the information that I provide. And I'm
10 constantly known for pushing the envelope of procedural
11 requirements and improving them so that we can optimize
12 socioeconomic benefits for First Nations and the
13 communities in which we live.

14 I referenced earlier the local job
15 opportunities analysis. The majority of my clients
16 have bought into that program, and the environmental
17 assessment office supports these type of activities
18 because the intent is to make sure that, as we move
19 forward with these projects, we do not just table
20 reports, but we table tangi -- tangible benefits for
21 the local communities in which these projects are being
22 developed.

23 I have run the econo -- I have -- I have
24 interpreted the economic impact analysis, but as our
25 friends at Manitoba Hydro have said, the models are

1 proprietary and I can't get my hand on them. It is a
2 matter of interpreting the results of the model. I do
3 it, as well as other practi -- practitioners, and
4 essentially, I believe, and Manitoba Hydro can correct
5 me if I'm wrong, that's exactly what happened in the
6 case of the economic impact assessment that was done by
7 the Bureau of Statistics.

8 THE CHAIRPERSON: Thank you, Mr. Tyson.
9 I just want to confirm that -- with you though that,
10 based on the discussion, you do not profess to be an
11 expert on econometrics -- I'm sorry, econo -- could you
12 --

13 MR. RICHARD BEL: Econometrics.

14 THE CHAIRPERSON: -- econometrics,
15 sorry. My language is showing through.

16 MR. RUSSELL TYSON: I would agree.

17 THE CHAIRPERSON: Okay. And impact
18 assessment modelling? Or you consider yourself an
19 expert on --

20 MR. RUSSELL TYSON: I cannot use the
21 model, so I would not purport to be one.

22 THE CHAIRPERSON: Epidemiology and the
23 --

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

25 THE CHAIRPERSON: -- and clinical

1 medicine and public health?

2 MR. RUSSELL TYSON: No.

3 THE CHAIRPERSON: Okay. I just want to
4 confirm something else here.

5

6 (BRIEF PAUSE)

7

8 THE CHAIRPERSON: Okay, I think that
9 covers all the bases. So I think we should stand down
10 for a few minutes so the panel can discuss. Oh, I'm
11 sorry. Mr. Hombach...?

12 MR. SVEN HOMBACH: I don't have any
13 further questions to the witness. So if the panel
14 wants to stand down and deliberate, now would be an
15 appropriate time to do so.

16 THE CHAIRPERSON: I think we should.
17 Let's take a few minutes. And we -- say, take ten (10)
18 minutes.

19

20 --- Upon recessing at 1:45 p.m.

21 --- Upon resuming at 2:05 p.m.

22

23 RULING:

24 THE CHAIRPERSON: I believe that
25 everybody's in position now, so we can continue with

1 the proceedings.

2 The Board has considered the submission
3 of the parties and has also considered the case law
4 that was referenced by Mr. Weinstein. The Board has
5 concluded -- the panel has concluded that Mr. Tyson has
6 a requisite expertise to be qualified as an expert
7 witness, both expert witness with respect to the areas
8 outlined in his report.

9 Any comments from the parties that we've
10 heard today will go to the weight that the panel
11 ultimately attributes to the evidence we hear from --
12 we hear and read from Mr. Tyson. With that, I hope
13 that we can continue.

14 MR. MICHAEL WEINSTEIN: Mr. Chair --

15 THE CHAIRPERSON: Mr. Weinstein,
16 please.

17 MR. MICHAEL WEINSTEIN: Thank you.

18 MR. CHRISTIAN MONNIN: Merci.

19

20 EXAMINATION-IN-CHIEF BY MR. MICHAEL WEINSTEIN:

21 MR. MICHAEL WEINSTEIN: Just before Mr.
22 Tyson begins his presentation, I would like to please
23 tender the two (2) authorities as exhibits. So if I
24 could add these to the TyPlan exhibits. And the first
25 one would be the case from the Supreme Court, which is

1 R. v. Marquard, M-A-R-Q-U-A-R-D.

2

3 --- EXHIBIT NO. TYP-5: Authority: R. v. Marquard

4

5 MR. MICHAEL WEINSTEIN: And the -- the
6 second authority is from a textbook called 'Witnesses'.
7 This will be TYP-6, and the authors are Mewett, M-E-W-
8 E-T-T, and Sankoff, S-A-N-K-O-F-F.

9

10 --- EXHIBIT NO. TYP-6: Authority from textbook
11 called 'Witnesses' by
12 Mewett and Sankoff

13

14 MR. MICHAEL WEINSTEIN: Now, if it
15 pleases you, Mr. Chair, I'll pass it over to Mr. Tyson
16 to begin his direct presentation.

17 THE CHAIRPERSON: Mr. Tyson, please.

18 MR. RUSSELL TYSON: Thank you very
19 much, Mr. Chair, and thank you panel. I appreciate the
20 opportunity to give this presentation. As noted, the
21 component of our work was the socioeconomic review.
22 And I'll just go through a series of slides to outline
23 what we did by task and also explain some of the
24 nuances associated with the Canadian Environmental
25 Assessment Act and the Environmental Impact assess --

1 sorry.

2

3 (BRIEF PAUSE)

4

5 MR. RUSSELL TYSON: So thank you very
6 much. It's -- it's a pleasure to be here. And I'd
7 like to just go through a series of slides that
8 document -- or outline the findings of our report. And
9 I would hopefully like to clarify for the panel and
10 everybody in this room some of the nuances associated
11 with the Environmental Impact Assessment Guidelines as
12 well as the Canadian Environmental Assessment Act and
13 its requirements, which may alleviate some of the
14 concerns that were identified prior.

15 In terms of the scope of work, I think
16 we spent enough time on running through what we did. I
17 don't want to reinvent the wheel, so I'll bypass that
18 as quickly as possible. I would like to state,
19 however, that the scope of objectives was to provide a
20 high level review of the approach, methodologies, and
21 findings of the NFAT business case and the EIS
22 submissions that summorted -- supported the plan. It
23 was to confirm the reasonableness of the results and
24 also benchmark against Canadian best management
25 practices.

1 In terms of an overview on how we
2 approached the review, there were three (3) specific
3 components and corresponding reports that were
4 referenced in the assessment. From an economic point
5 of view, the economic impact analysis utilized the
6 provincial input/output modelling to provide
7 indications of employment and GDP. And as noted
8 earlier in this hearing, each province has their own
9 input/output model, which is proprietary, and the
10 results are then interpreted.

11 The second component is the social,
12 which can be found in the environmental impact sta --
13 statement and also specifically in the socioeconomic
14 environment resource use and heritage resources
15 documents, Section 3, that discussed the economy;
16 Section 4, population, infrastructure, and services;
17 and Section 5, personal, family, and community life.

18 We also make reference to the
19 Environmental Management Plans and the corresponding
20 Socioeconomic Environmental Management Plan that has
21 been prepared for Manitoba Hydro to address issues and
22 residual effects of this project. We also reference
23 the adverse effects agreements that have been
24 established with some of the -- with all of the First
25 Nations regarding moving forward and addressing issues.

1 The third component of our review was
2 the multiple account benefit cost analysis, which, as
3 the panel knows, is the standard approach used to make
4 policy decisions. And as highlighted in -- in the
5 deliberations to date, we note that the multiple cost -
6 - benefit cost analysis, sorry, is intended to
7 highlight the advantages and disadvantages and enable
8 tradeoffs to be considered. Okay.

9 Broader non-monetized societal issues
10 are also introduced into this model for interpretation.
11 The focus is less on the actual number, but more on the
12 tradeoffs people have to make in their determination of
13 which plan moves forward. On the left side of screen I
14 illustrate the inner relationships; I've talked about
15 the reports that were utilized in coming up with the
16 review conclusions made in this assessment.

17 From an economic impact assessment
18 perspective, the approach that was taken by Manitoba
19 Hydro was to utilize the Manitoba Bureau of Statistics
20 input/output model and obtain results from that. At a
21 high level, the PDP was compared to that of the simple
22 gas turbine and the combined gas turbine. And we note
23 that there was a variation in the number of inputs into
24 the commodity tables; namely, forty-one (41) for the
25 PDP and only six (6) for the simple gas turbine, which

1 would have a effect on the results.

2 However, in light of the fact that the
3 IO models are linear, you can make a comparison. So by
4 upping the capital costs associated with the other
5 projects to mask Keeyask, you can have an indication of
6 which projects would be more ben -- beneficial.

7 Our analysis suggested that the Keeyask
8 generating project contributes about twice as many jobs
9 as the combined gas or simple gas project. And this is
10 in -- intuitive and simple because of the capital
11 nature of hydroelectric projects. It costs more to
12 make these things. And as a result, there's more
13 benefits in terms of jobs and opportunities.

14 The next step in the equation was to go
15 in a little more detail regarding the Physical
16 Development Plan and the results presented. What we
17 did, as part of our review, was at a high level look at
18 how the model is developed; namely, what were the
19 construction cost inputs. And then we looked at the
20 allocation of costs into the input/output categories,
21 and then we removed expenditures with no provincial
22 economic benefit, which, in accordance with the model,
23 are leakages from the provincial economy.

24 An example I can cite to you is the
25 importation of turbines, a significant cost to the

1 project when they are built outside of province,
2 outside of Canada, and brought in.

3 And then the key issue that comes out of
4 this was how the margins were dealt with. As we don't
5 know how they're dealt with, because they're based on
6 assumptions within the mod -- modeller's perusal, and
7 the margins are defined as the differences between the
8 total sales and the cost of goods sold, essentially
9 what we're talking about are the wholesalers and
10 retailers in the province as they are viewed as
11 intermediaries. We don't have a good handle on that as
12 well as the (UNREPORTABLE NOISE).

13 At the end of the day the cost inputs
14 provided by Manitoba Hydro were Class 2. They talked
15 about that in the engineering and construction cost
16 panel. They are adequate to run the model and detailed
17 enough. Manitoba Hydro allocated the cost input into
18 the IO categories, for the most part, correctly. We
19 noted a couple of small mistakes that would not
20 materially change the results of the report; and that
21 Manitoba Hydro did remove a series of expenditures with
22 no provincial economic benefit that were identified as
23 leakages.

24 However, what we were not sure of was
25 that the treatment of many purchases as leakages from

1 the economy may underestimate the contributions to the
2 provincial economy and overstate the contributions to
3 the Canadian economy. The key issue is how the margins
4 were dealt with and treated as part of the model, i.e.
5 the transportation, wholesaling, and taxes costs.

6 I noted earlier, a generally accepted
7 principle of IOM modelling is that the direct benefits
8 are incurred in the jurisdiction in which the project
9 is developed. We can -- compared the Manitoba
10 input/output results with the Statistics Canada
11 interprovincial input/output economic simulation model,
12 which is the same data as the Manitoba input/output
13 model. And their results are presented on Table 5 of
14 the main report.

15 The key difference in the difference in
16 the results is the approach that Stats Canada model
17 reflects typical interprovincial patterns in each
18 industry, whereas the Manitoba Hydro input/output model
19 uses project specific expenditures. Both approaches
20 are reasonable. And I want to emphasize that, that
21 both approaches are reasonable.

22 We -- the Stats Canada model, at the end
23 of the day, suggests that the significant difference
24 between Manitoba and the rest of Canada, it was based
25 on the structure of the Manitoba economy as Stats Can

1 knows it. The key difference here is that Manitoba
2 Hydro, based on their experience with Wuskwatim and all
3 the contracts that they get to review, they have a good
4 local understanding of where the leakages would occur,
5 and they have allocated appropriately.

6 The net result is that if we look at the
7 Stats Canada result compared to the Manitoba
8 input/output model and reference Stats Canada, it would
9 suggest that the benefits overall to Manitoba are
10 greater than stipulated in the Manitoba input/output
11 modelling.

12 I note as part of my career that many
13 conservative efforts -- con -- conservative
14 observations are presented as part of these analysis,
15 so that ultimately the benefit would be bene -- better
16 than what was ide -- identified in the input/output
17 modelling presented by Manitoba Hydro.

18 The example that I can provide you is
19 that as part of the process the \$1.4 billion in civil
20 construction has been awarded to an out-of-province
21 contractor. The net result is the fact that there will
22 be leakages associated with that. The issue that comes
23 up is: Are there margins associated with bringing
24 people, products, and services into the province and
25 are they captured within the input/output model.

1 Manitoba Hydro suggests that they are not, based on
2 their experience, but the Stats Canada model suggests
3 there might be more benefits than identified.

4 The observations associated with
5 economic impact assessment is that the overall
6 assumptions by Manitoba Hydro associated with
7 construction and operations are reasonable. The second
8 point is that when we ran the Stats Canada model, we
9 found that there would likely be a greater proportion
10 of benefits in Manitoba than the rest of Canada
11 benefits, as the model reflects the typical expenditure
12 patterns in the each industry rather than project-
13 specific expenditures. But we note that the Stats
14 Canada model does not benefit from local -- local
15 knowledge and the experience that Manitoba Hydro has in
16 projects such as Wuskwatim.

17 At the end of the day, we still believe
18 that the benefits to Manitobans are somewhat
19 understated and that the margin embedded in the
20 purchase cost of those goods and services may not have
21 been attributed to the Manitoba producers who may be
22 producing such services, such as transportation or
23 wholesale.

24 An example that came up and was
25 discussed as part of this review was cement. I know

1 that there are no cement plants in Manitoba and that
2 the cement will be coming from Alberta. However, to
3 get the cement from Alberta to the job site, to mix the
4 cement in the batch plant, and to pour the cement in
5 the batch plant, there are most likely some margins
6 that may be attributed to the Province of Manitoba as
7 opposed to being a leakage outside of Manitoba. That
8 is one of the examples that we have for why our
9 assessment suggests there would be more benefits.

10 Turning on to slide 13, an assessment of
11 gross provincial benefits over the life of the project,
12 we talk about economic life. The economic life
13 considers the life cycle of the facilities. In a
14 hydroelectric dam perspective, that economic life is
15 seventy-eight (78) years. From other resource options,
16 such as gas, the economic life is thirty (30) years.
17 So after that thirty (30) year period, that facility
18 has to be replaced.

19 Past the economic life, which is an
20 important part, a key element of dam maintenance is the
21 maintenance, safety, and rehabilitation that is
22 undertaken. And Manitoba Hydro, as well as all
23 utilities, have strong policies in place to maintain
24 their facilities.

25 It is likely that the economic life of

1 the dam can be expanded to a hundred years, and the
2 concrete associated with the dam can last up to a
3 hundred and fifty (150) to two hundred (200) years. We
4 note, however, the electromechanical components of that
5 dam would have to be replaced.

6 That said, the bequest value -- or
7 bequest value associated with the project is that, over
8 time, over and past the economic life of the project,
9 there will still be revenues being derived from such a
10 project in the provincial economy. I provide as an
11 example the Anicut dam, which was build in the second
12 century, has been rehabilitated by the British and is
13 still in operation today.

14 When we speak to Northern and Aboriginal
15 community-based impacts, I just want to highlight some
16 nuances regarding the environmental assessment
17 requirements. Our review was based on experiencing
18 developing benefit agreements with First Nations, as
19 well as other hydroelectric developments associated
20 with the independent power producers in BC. We also
21 reviewed the Eastman 1-A Rupert diversion project --
22 Quebec-Hydro's -- as well as Churchill Falls and the
23 recent work we have conducted with Clean Energy on the
24 Site C Clean Energy project.

25 It is noted that Manitoba Hydro also

1 referenced and found benchmarks and best practices from
2 a number of these projects that have been referenced
3 and utilized in the development of their benefit
4 agreements.

5 Closer now? Sorry. You're not making
6 me feel warm here, you know. That's all right.

7 So based on our experience and based on
8 what we've looked at, we identified best practices that
9 would be utilized to evaluate whether or not benefits
10 to Northern communities and First Nations would be
11 evident. And they're simple: a proactive approach to
12 engagement. Start early, start often, and make sure
13 you build the relationship.

14 One (1) of the key aspects of any
15 relationship with a First Nation is that trust that has
16 to be established. It takes a lot of time and effort.
17 We know there's eight (8) years between Manitoba
18 Hydro's start to finish to create the Joint Keeyask
19 Development Agreement.

20 The establishment of benefit agreements
21 is absolutely critical, and community ratification and
22 support is also a critical element of any plan going
23 forward. Obviously, equity ownership is a key
24 component of the review, as well as the identification
25 of skill sets, training, education, and jobs. Do not

1 underestimate the importance of this one. I spent nine
2 (9) months with one (1) First Nation trying to identify
3 skill sets and training opportunities that the band
4 members would pursue.

5 Linkages with federal and provincial
6 agencies. We've noted earlier in the panel
7 deliberations that Manitoba Hydro has sourced other
8 federal and provincial departments to secure additional
9 funding for training and education, as well as
10 establishment of clear mandates and performance
11 measures.

12 The provision of management and
13 administrative support is another critical issue that
14 we've noticed on our projects in BC where, even though
15 we can come to the table, the availability of proper
16 management and administrative tools is lacking in
17 certain areas. And provided you come and help, then we
18 can respond accordingly.

19 Another key issue is pilot projects
20 obviously, and then post-project funding opportunities.
21 As noted earlier, Manitoba Hydro has referenced a
22 number of project experiences, such as Wuskwatim, the
23 Lower Churchill, as well as Eastman 1-A Rupert
24 diversion project in their development of what they
25 thought would be key components to the plan. We

1 suggest that Manitoba has met best practices in that
2 regard. And simply to highlight, the Joint
3 Keeyask Development Agreement signed by the four (4)
4 Nations is a comprehensive document. I'm not saying
5 it's perfect, but it will have to continue to evolve as
6 time goes on.

7 The next one is the development of the
8 Keeyask Infrastructure Project currently underway,
9 which represents a pilot project in which the training
10 and the education that has been set in place now can be
11 moved into action with local First Nations, and then,
12 hopefully, be a jumping board onto the Keeyask, or,
13 eventually, the Conawapa projects.

14 At this time, do I -- I just open it up
15 for the panel. Do you have any questions that you
16 might want to ask?

17 MS. MARILYN KAPITANY: Mr. Tyson, I
18 noticed that you say that the benefits may have been
19 underestimated, the benefits to Manitoba.

20 MR. RUSSELL TYSON: Yes.

21 MS. MARILYN KAPITANY: Does the model
22 or any of the work you do say anything about the
23 distribution of those benefits within Manitoba?

24 MR. RUSSELL TYSON: I'm not sure
25 whether we could do that in the Manitoba context. In

1 the Canadian context, I can sometimes regionalise the
2 benefits. I'm not sure how the Manitoba model is set
3 up, so I don't know whether it could do that. But that
4 would have to be something you ask the Bureau of
5 Statistics.

6 MS. MARILYN KAPITANY: Okay.

7

8 (BRIEF PAUSE)

9

10 MR. RUSSELL TYSON: To continue, a
11 couple of key aspects associated with Northern and
12 Aboriginal groups: One (1) of the key things that all
13 of these projects have to embrace is the concept of
14 lessons learned. We know there's going to be mistakes.
15 We know there's differences between a contractor's
16 continued focus on schedule and meeting deadlines,
17 versus Aboriginal or culturally-specific spiritual
18 days, so on and so forth. This is an evolving process
19 and has to be looked at in that light, that, over time,
20 certain things will get resolve and continue to be
21 resolved.

22 Monitoring is another key element. And
23 we note that the adver -- Advisory Group on Employment,
24 AGE, as well as the Construction Advisory Committee,
25 are available to First Nations and employees to address

1 issues going forward.

2 In addition, a series of standard EIS
3 practices include the construction management plans and
4 more recently an evolving plan regarding socioeconomic
5 impact modelling, which is a critical element of EISs
6 going forward.

7 As identified on slide 18, I'd like to
8 reference the reports that are utilized in the
9 socioeconomic review. We've mentioned these before,
10 but I just want to highlight them again. And it is in
11 our opinion, having worked on numerous EISs, that the
12 work that Manitoba Hydro has done in this regard does
13 meet best practice. And that is specifically the
14 Keeyask generating station and the supporting volume,
15 Socio-Economic Environment, Resource Use and Heritage
16 Resources, and all the appendices.

17 Those documents were authored by the
18 partnership. The development of those documents
19 incorporated the Cree world view and some of the issues
20 inherent in moving forward.

21 Again, one (1) of the critical issues
22 that we all have to understand associated with the work
23 that was done is that there are standard practices and
24 approaches that the Canadian Environmental Assessment
25 Act requires people to follow, of which all studies

1 being undertaken have to look at the environmental
2 setting, which is the baseline, undertaken an
3 environmental effects assessment, follow through with
4 mitigation, and then identify residual project effects
5 to be addressed going forward.

6 In addition to that, adverse effects
7 agreements have been put in place with all First
8 Nations involved in the project. And they have been
9 designed specifically to address and resolve all known
10 and foreseeable project adverse effects.

11 From a health perspective, although I am
12 not a doctor, we will reference back into the role of
13 the environmental assessment in this review. Again,
14 health is addressed in Section 5: Personal, Family, and
15 Community Life.

16 And as part of the environmental impact
17 assessment guidelines, they create something called
18 VECs: Value Environmental Components. These are the
19 key topics that will be studied as part of the
20 evaluation. And in terms of the health effects, they
21 looked at community government's goals and plans,
22 community health, mercury and human health, public
23 safety and worker interaction, as well as travel,
24 access and safety, and aesthetics.

25 Again, I emphasize that our standard

1 approaches and requirements associated with the
2 Environmental Assessment Act, which Manitoba Hydro has
3 followed.

4 Education. This is driven by the
5 benefit agreements that have been established with
6 First Nations. But I do note that the Mackenzie Valley
7 gas pipeline, the Eastman 1-A and Rupert diversion, as
8 well as the Lower Churchill Project Falls (sic) studies
9 were referenced in the development of the plans.
10 Recent experience with Wuskwatim also was utilized to
11 eventually come up with a plan for addressing
12 educational and job opportunities. The Joint Keeyask
13 Development Agreement is also referenced.

14 Culture. We can do this quickly.
15 Again, valued environmental components were established
16 as part of the environmental impact statement guideline
17 requirements which confirms with the public what areas
18 of study will be undertaken. Subsequent to that, the
19 environmental impact assessment is done in accordance
20 with best practices associated with that.

21 In regard to more global perspectives on
22 best management practices, we -- we reference the
23 Hydropower Sustainability Assessment Protocol. The
24 Keeyask Limited Partnership had a third-party review
25 based on that document, and the results indicated that

1 the project meets or exceeds basic good practice in all
2 of the twenty-two (22) categories studied, and it meets
3 best proven practice in sixteen (16) categories. We
4 note that there are some gaps identified, but all of
5 those gaps can be somewhat rationalized by the fact
6 that there are different regulatory requirements in
7 Canada compared to the rest of the world.

8 From a human health risk assessment, we
9 note that both Health Canada and the World Health
10 Organization, and the United States Environmental
11 Protection Agency, USEPA, utilize the human health risk
12 accept -- assessment framework for assessing health
13 impacts associated with projects. We note that a study
14 based on the human health risk assessment model was
15 undertaken for this project.

16 We also note that the habitat health
17 impact consulting report was undertaken in regard to
18 how the human health risk assessment compared to health
19 impact assessment. And health impact assessment is an
20 emerging process in which it tries to align itself
21 closer to the intent of an environmental impact
22 assessment. And the results of that rep -- report, I
23 quote, state:

24 "The approach to community health
25 effects in the Keeyask EIS closely

1 parallels HIA and addresses a broad
2 range of associated health issues and
3 exemplifies the inclusion of
4 stakeholders in the EIA/HIA process.
5 While some smaller gaps remain in the
6 assessment of health impacts and
7 mitigation strategies, the overall
8 quality of the assessment of
9 community health is high."

10 Another key issue that we have to bring
11 to the table because it is important, again from an
12 environmental impact assessment, is the identification
13 of a local study area versus a regional study area.
14 Some of the World Bank recommendations suggest
15 broadening the scope in the area of the impact
16 assessments to include more communities and more
17 groups.

18 Under the Environmental Assessment Act
19 as part of the environmental impact statement guideline
20 preparation and delivery of the project, a local study
21 area and a regional study area has to be est --
22 established and then discussed with the community prior
23 to moving forward. In the case of Keeyask and Conawapa
24 as part of the PDP, this local study area is presented
25 on your screen on -- on the left side, which includes

1 Thompson, Gillam, and the Cree Nation communities.

2 And the effect, essentially, is that the
3 project impacts for the most part will occur and will
4 be studied within that local study area. So spatially
5 delineating where the study is being undertaken is a
6 critical element of this. We noted in our Site C
7 project that was one (1) of the key issues as part of
8 the EA deliberations.

9 In addition to that any EIS is now
10 subject to incredible scrutiny. But in my opinion what
11 is happening in today's world is that ongoing
12 monitoring remains the critical element to -- to
13 ensuring that project residual effects and the effects
14 on all users are addressed accordingly. A number of
15 monitoring programs have been in place. We have looked
16 at those monitoring programs in comparison to what was
17 done on other major projects, and we find that they are
18 similar. At this time I'm on slide 24. Do we have any
19 questions regarding that?

20

21 (BRIEF PAUSE)

22

23 MR. RUSSELL TYSON: Okay. So community
24 access improvements related to health, education, and
25 cultures. The general observations is that issues have

1 been identified based on discussions with affected
2 parties, past experience inclusive of traditional
3 knowledge. A Cree world view approach was taken, and
4 the partners actually were the ones that authored their
5 reports.

6 Adverse effect agreements were designed
7 to address and resolve all known foreseeable project
8 adverse effects. And specific to the environmental
9 impact statement, comprehensive reporting was done in
10 Sections 3, 4, and 5, which provide best practices in
11 accordance with our experience with EIS preparations.

12 We also note, in conclusion, independent
13 third-party reviews undertaken that supported the
14 general findings outlined above.

15 I would now like to briefly discuss
16 consumer displacement impacts and effects on consumer
17 spending. I provide for your review a high-level
18 overview of the current status of rates. From a global
19 perspective, the screen illustrates that Canada has one
20 (1) of the lowest rates in the global economy and that
21 Quebec, Manitoba, and British Columbia, for the most
22 part, had the lowest rates. This is presumably because
23 of the historic investment in hydro electric facilities
24 that these provinces made.

25 As noted, there are rate application

1 increases throughout the majority of utilities in
2 Canada, including SaskPower, BC Hydro, Ontario Hydro,
3 and Quebec-Hydro. It is expected that these rate
4 increases will increase over time.

5 Our literature review of increased
6 energy costs on consumers confirmed that the middle
7 class and upper class are not affected as much because
8 those costs get absorbed through the greater disposable
9 income. However, lower income and those on fixed
10 income households, and the poor, are most affected by
11 any proposed rate increase.

12 In terms of solutions to this issue, the
13 literature also suggests that energy efficiency
14 programs are one of the key aspects of moving things
15 forward. We note that Manitoba Hydro does have a
16 number of Power Smart programs that should be focussed
17 on -- towards addressing this issue: affordable energy,
18 the Power Smart and First Nations, and the
19 refrigeration replacement projects.

20 Continued focus was a recommendation of
21 our report, that we have to improve these programs to
22 ensure that they are actually doing what they intend to
23 do. But participation is two (2) ways. Manitoba Hydro
24 has to promote these to the general public, and the
25 public themselves have to correspondingly come to the

1 table and utilize what's been provided to them.

2 In summary, Canada exhibits one of the
3 lowest utility rates in a global context. Manitoba,
4 Quebec, and British Columbia have the lowest rates in
5 Canada, presumably from the historic investments in
6 hydro projects. Rates are expected to increase
7 substantially over the next decade. And literature
8 suggests that ener -- energy efficiency programs,
9 whether it be the broader DSM or the Power Smart
10 programs, are the means and solutions to move it
11 forward. The key economic sector that's impacted are
12 the low income households and those on fixed income
13 regardless of location. And that the key issue of the
14 success of this program will all be about the proper
15 implementation and monitoring of the specific programs.

16 Shall I continue? I will just briefly
17 discuss the socioeconomic impact of the alternatives.
18 Again, we highlight the use of multiple account --
19 multiple account benefit cost analysis. And the intent
20 of that process is to identify both tradeoffs, as well
21 as the advantages and disadvantages, keying in on the
22 incremental revenue of these projects. I'll try and
23 run through this quickly for you.

24 From an account perspective, the market
25 evaluation is obviously based on the discount rate that

1 is utilized. A 6 percent discount rate has been
2 utilized for the NFAT. It does appear reasonable with
3 the literature that was presented both in the NFAT and
4 the literature that we reviewed. We note that BC Hydro
5 uses a rate of 5.5 and 6 percent. We therefore
6 conclude that it was a reasonable assumption.

7 The Manitoba Hydro customer, obviously
8 rates are going to increase. Our analysis indicated
9 that all projects will require rate increases
10 associated with -- with households and that the
11 cumulative increase for the PDP would be a hundred and
12 eight (108), as stated in the NFAT. An annual rate
13 increase of 3.9 percent. The projected cumulative
14 rate, an increase of -- for the PDP would be 108
15 percent, an annual -- equating to a rate increase of
16 3.95 percent annually. Similar projects have similar
17 impacts, although the key issue that results from this
18 is pay now versus pay later.

19 From a Manitoba government perspective,
20 the key is in and around the water rentals that are
21 generated and the capital taxes that are created.
22 Obviously, the hydro projects are the ones that
23 generate the most in that regard.

24 From a Manitoba economy point of view,
25 the concept of economic rent is introduced and we look

1 at a comparison of gross ranges over alternative life
2 cycles as well as a comparison of the incremental
3 income based on the assumptions regarding economic rent
4 and jobs being filled based on regional employment
5 differences. We agree with the principle of economic
6 rent being applied here. It is something that other
7 economists also use.

8 From a social account, this is where the
9 bequest value comes in. We talked about over the life
10 of the project, that hydro projects over time continue
11 to provide revenues to the provincial government.

12 One of the areas that planners like are
13 -- is in regard to the significance of the pathways
14 that were identified in this report. I note that I've
15 cut off some of the left side of this illustration on
16 page 64 of the report. A detailed summary was there.

17 Suffice it to say, the InterGroup's
18 report concluded that the pathways are more important
19 than the plans. I concur, as a planner with that; the
20 pathways are critical element, providing flexibility in
21 the decisions going forward. However, it is noted
22 certain critical time frames are identified upon which
23 decisions would have to be made.

24 So in conclusion, the socioeconomic
25 impact multiple account benefit cost analysis is an

1 appropriate approach to look at these things. It
2 provides tradeoffs to be identified,
3 advantages/disadvantages to be highlighted, and
4 incremental revenues to be defined. The issue of using
5 a seventy-eight (78) year metric was identified by La
6 Capra in their reporting and is an issue going forward.
7 Pathways are more important than plans.

8 And finally, I would like to conclude
9 with a high-level review of provincial economic
10 benefits based on other projects.

11 THE CHAIRPERSON: Well, before you go
12 there, could I ask you to go back to 39 -- the bottom
13 of 39?

14 MR. RUSSELL TYSON: Yes.

15 THE CHAIRPERSON: The -- the last
16 bullet there:

17 "Government to provide PUB direction
18 regarding reducing risk and
19 uncertainty."

20 I'm not sure what you're referring to
21 there.

22 MR. RUSSELL TYSON: Yeah, this was in
23 relation to Conawapa and the decision point with
24 Conawapa. We -- we noted that that was a critical
25 timeline associated with making program decisions.

1 So when identifying projects that would
2 be benchmarked, we had to say -- we had to find some
3 that are in the same geographic location that have
4 similar -- forest ecologies, that have similar capital
5 costs, and projects that are built on rivers with
6 existing hydroelectric facilities.

7 The benchmarks we identified for this
8 review included the Newfoundland, Labrador, Churchill
9 Falls, and Quebec-Hydro Eastmain Project. As you can
10 see on this slide, they are located in the North. And
11 the processes they followed to ascertain economic
12 benefits were similar to what was done with Manitoba
13 Hydro.

14 And some of the program initiatives,
15 such as procurement methodologies, so on and so forth,
16 were also implemented as part of the Manitoba Hydro
17 process. Quebec-Hydro has similar things. They
18 identified nine (9) supporting agreements -- or seven
19 (7) supporting agreements to move forward and address
20 local concerns with First Nations and Aboriginal
21 groups.

22 So the key conclusions of this review
23 was to provide a high level but critical review of the
24 reasonableness of the approach, methodology, and
25 findings from a socioeconomic perspective.

1 The economic impact assessment results
2 are reasonable. However, the Stats Canada model, if
3 you reference that model, provides and suggests a
4 greater Manitoba benefit than -- than what was proposed
5 by the Manitoba Hydro input/output model results. The
6 key there is how you address leakages, as well as the
7 local experience regarding contracts and where sources
8 of employment and supplies were coming from.

9 The multiple account benefit cost
10 analysis is an appropriate methodology to determine
11 socioeconomic benefits in which tradeoffs, advantages
12 and disadvantages and net incremental revenues can be
13 identified.

14 The use of a seventy-eight (78) metric
15 restricts the understanding for the shorter-term
16 implications. And the focus on energy efficiency
17 program delivery, namely specifying project -- or Power
18 Smart programs, is one (1) of the critical issues to be
19 addressed going forward.

20 Manitoba Hydro has optimized Northern
21 and Aboriginal benefits via partnership agreements and
22 so on, and the key is in the implementation and
23 monitoring of the programs that they have identified.

24 Manitoba has followed the best practices
25 exhibited throughout Canada and our experience with

1 other projects.

2 Thank you very much.

3 DR. HUGH GRANT: I just wanted to ask a
4 few things about the input/output model you've used. I
5 don't doubt at all the sort of general conclusions you
6 reach, because I think it's fairly intuitive that these
7 large construction projects have a pretty big
8 employment impact. They're pretty labour intensive and
9 stuff.

10 I'm just going to quarrel though a bit
11 with a few things you said. And -- and I think
12 Manitoba Hydro said the same thing, that an
13 input/output table is linear and therefore scalable.
14 And the -- the general critique of input/output tables
15 is that it's -- the -- they're these fixed
16 coefficients, and they're essentially not scalable if
17 you have any kinds of economies of scale in an
18 industry.

19 So, for example, suppose Winnipeg's
20 retail sector was made up of a lot of small, owner-
21 operated stores, and you wanted to estimate the impact
22 of IKEA coming. Then -- then you're going to take
23 input/output coefficients appropriate to some mom and
24 pop stores and scale it up and try to predict the
25 impact of -- of IKEA.

1 And so my concern is you've got an
2 input/output table. I'm looking at the Stats Canada
3 one for --

4 MR. RUSSELL TYSON: Okay.

5 DR. HUGH GRANT: -- 2009. It's a
6 snapshot of that particular industry at that time, and
7 then it's projected, used to forecast what might be the
8 impact of a very large-scale project. And -- and so
9 that's one (1) of the concerns I had.

10 And just -- another thing I'm noting,
11 because I was just looking these things and using again
12 the Stats Canada figures and the table you'd provided
13 on page 90, electric power generation, transmission,
14 and distribution --

15 MR. RUSSELL TYSON: M-hm.

16 DR. HUGH GRANT: -- three point six
17 (3.6) jobs per -- I think it's a million dollars of
18 output.

19 MR. RUSSELL TYSON: M-hm.

20 DR. HUGH GRANT: Okay. So it's, you
21 know, something to work with. But if you just go to
22 the same figure for Quebec, which is another hydro one,
23 I was surprised to see it's one point o-six (1.06).

24 MR. RUSSELL TYSON: Yes.

25 DR. HUGH GRANT: And so you've got --

1 you know, it's three and a half (3 1/2) times
2 difference for what you would think would be fairly
3 similar based industries. And the BC number is one
4 point nine-one (1.91).

5 And so I'm just a bit concerned about
6 how reliable these sort of simple numbers are as a
7 guide to these sorts of things.

8 MR. RUSSELL TYSON: Yes, and I'll try
9 and answer both questions. The original input/output
10 model was simply based on commodities. The whole focus
11 was on the commodity groups.

12 Over time, the input/output model has
13 evolved, and now they are using more inputs in regard
14 to the products and services or the whole -- or the
15 wholesale and the retailers. They're recognizing the
16 importance of that sector in modelling, and now the
17 distribution of the codes within the modelling have
18 changed to reflect the importance of the local retail
19 and wholesaling marketplace.

20 That's an evolving process, but you're
21 absolutely right. Somewhere along the line, there's a
22 lot of ambiguity with what the results would suggest.
23 But at the end of the day, what we're finding now is
24 that there is a constant underestimation of the value
25 of the smaller wholesale and retail areas.

1 As for the comparison of the provincial
2 numbers and the multipliers, again, we -- we referenced
3 the Stats Canada model, which is based on a whole
4 series of databases. And then we compared that to the
5 Manitoba Hydro model assumptions, and we thought that
6 was a little different.

7 Where the truth is, I do not know, and I
8 admit to that. Where the truth, I think it will be, is
9 somewhere in the middle.

10 DR. HUGH GRANT: Okay. I'm just -- I
11 guess my only point is that it would come as a pretty
12 big surprise to me to say that an extra million dollars
13 of output of electrical power generation and
14 distribution in Manitoba creates three (3) times as
15 many jobs as the same increase in output would in -- in
16 Quebec, which is -- I'm just reading the input/output
17 table here.

18 But -- but despite that, I accept the
19 basic premise that I think these large labour-intensive
20 construction projects have the biggest economic impact.

21 My second one, though, and it's been
22 over -- I don't know, it's been three (3) or four (4)
23 days since we talked about discount rates. I hope this
24 process never ends, because if you're lecturing to
25 students, they just walk out of the room on you when

1 you bore them to tears. But here, at least the panel
2 has to stay and listen to me.

3 You said 6 percent is reasonable as a
4 discount rate. You noted -- you note that it's a very
5 important high sensitivity to the outcome. And you
6 said 6 percent is reasonable.

7 Reasonable in what respect? Because
8 we're surrounded by lawyers in the room, so I'm getting
9 carried away here. But I used to do work for some
10 ambulance chasing lawyers in the city and I would do
11 this economic compensation stuff, and they would just
12 hand me 3 percent. That's what you use. It's -- it's
13 leg -- it -- it said there in writing: 3 percent is the
14 real rate of interest that you use.

15 Part of my reason for asking this
16 question is maybe to speak through you to Manitoba
17 Hydro and others, but we heard Mr. Rainkie say the
18 other day that he cares about future generations
19 intensely long after I'm dead. We hear about bequest
20 values. And then you select a discount rate that
21 basically turns all of those concerns about the future
22 into nothing.

23 So I guess I'm saying if you're going to
24 be consistent to care about the future, it seems quite
25 plausible in a time when the real rate of interest

1 right now is what, 1 percent, 1 1/2 percent, that you
2 would use an extremely low discount rate to measure
3 these things.

4 Is that not warranted?

5 MR. RUSSELL TYSON: It would be
6 warranted. Again, a big part of what we did was we
7 looked at best practices and other examples that are
8 out there, and we referenced the Site C project of BC
9 Hydro. And because they were similar rates, we just
10 assumed as a result of that that would be an applicable
11 rate to use, as it's been done in other areas.

12 I agree with you, however, that the
13 range of rates is astronomical from what the pure
14 economists would suggest.

15 DR. HUGH GRANT: And -- and I think
16 there -- there -- the variation is for a reason often--

17 MR. RUSSELL TYSON: Yes.

18 DR. HUGH GRANT: -- when you get,
19 often, private sector groups who want to exaggerate the
20 social cost of capital to make public projects look
21 less appealing.

22 MR. RUSSELL TYSON: Yes.

23 DR. HUGH GRANT: So I think, you know,
24 I would look for a similar critical perspective on just
25 saying 6 percent is reasonable. Sure, it's within the

1 range of acceptability, but, you know, maybe providing
2 more guidance as to how we should -- what kind of
3 discount rates we should use to sort of look at these
4 things. That's it. Thanks.

5 MR. RUSSELL TYSON: Thank you.

6 MR. SVEN HOMBACH: May I interject for
7 one (1) moment? Not purporting to give evidence, but
8 having been an ambulance chasing lawyer, at least
9 having dealt with personal injury matters, I -- I
10 thought I could briefly speak to the 3 percent discount
11 rate. And for what it's worth that discount rate is
12 actually mandated by Subsection 83(2) of the Court of
13 Queen's Bench, and so it's not that the lawyers have a
14 choice.

15 DR. HUGH GRANT: Mr. Speaker --
16 supplementary, Mr. Speaker. I would like to reference
17 the Canadian Bar Association document that gives a very
18 careful explanation and rationale for that 3 percent.
19 So it may be not you as an individual lawyer, but it's
20 your collusive cabal of lawyers that are setting this
21 in use. I'm not going to speak again through the
22 hearing.

23 THE CHAIRPERSON: Mr. Soldier's
24 daughter is a lawyer.

25

1 (BRIEF PAUSE)

2

3 THE CHAIRPERSON: Mr. Soldier's
4 daughter is a lawyer. Is that what you said?

5

6 (BRIEF PAUSE)

7

8 THE CHAIRPERSON: The panel has no
9 further questions for the time being, so I'll turn the
10 microphone over to -- or perhaps it's a good time to
11 have a break? Let's take a break then for ten (10)
12 minutes, and then back here at three o'clock.

13

14 --- Upon recessing at 2:53 p.m.

15 --- Upon resuming at 3:05 p.m.

16

17 THE CHAIRPERSON: Everyone's in
18 position, so we could continue with the proceedings.
19 So with that I will turn the microphone over to Mr.
20 Williams.

21

22 CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

23 MR. BYRON WILLIAMS: Mr. Tyson, I'll
24 maybe do a little cleanup on a conversation you had
25 with the chairperson. If you go to -- first of all, if

1 we could go to slide 39 of TyPlan number -- Exhibit 3.

2 In the last two (2) bullets, sir, you're
3 discussing the risks and uncertainty related to
4 Conawapa. Is that right, sir?

5 MR. RUSSELL TYSON: I state that risk
6 and uncertainty associated with the decision between
7 2014 and 2018 regarding Conawapa should be studied.

8 MR. BYRON WILLIAMS: Okay. And -- and
9 we see -- if -- if I went into your report itself,
10 would I be correct in suggesting to you that the -- the
11 recommendation you make is that the government should
12 be providing the PUB legislative authority to review
13 such plans as such risks are addressed?

14 MR. RUSSELL TYSON: I made that
15 statement. The intent was to provide some type of
16 organizational structure, so that those risks can be
17 evaluated.

18

19 (BRIEF PAUSE)

20

21 MR. RUSSELL TYSON: Oh, yeah, some --
22 some type of government body in which -- if you were to
23 proceed with Conawapa, the risks and uncertainties
24 identified at the hanel -- as part of the hearings to
25 date, La Capra's findings, so on and so forth, exports

1 and so on and so forth, could be addressed prior to
2 proceeding on Conawapa.

3 MR. BYRON WILLIAMS: And so if I look
4 at the thrust of your recommendation, you're really
5 seeking some sort of independent review of Conawapa
6 prior to the decision point.

7 Is that correct, sir?

8 MR. RUSSELL TYSON: No, I would not go
9 that far. I'm saying before an ultimate decision is
10 made on Conawapa there are issues that should be
11 studied and addressed prior to making that decision in
12 2018; if that makes sense.

13 I don't -- I'm not inferring that
14 independent review be proceeded at this time. I am
15 suggesting that there are risk and uncertainty
16 regarding the decision point at 2018 that should be
17 studied in a little more detail, or provided by
18 Manitoba Hydro to be resolved.

19 Does that make sense?

20 MR. BYRON WILLIAMS: I think so. And -
21 - and the thrust of your recommendation as it appears
22 at page 65 of your report is that you're think --
23 you're seeking -- suggesting a mandate for the PUB to
24 review such plans?

25 MR. RUSSELL TYSON: Whether it be the

1 PUB or some other body, yes.

2 MR. BYRON WILLIAMS: Okay. Thank you.

3 Now, just going back to slide 35 of -- of your report.

4 And, Mr. Chair, I was negligent. I was probably just
5 too hurt by the ambulance chaser comment to -- to be at
6 the top of my game, although I did assume Dr. Grant was
7 -- was referring to Mr. Hombach, so I wasn't too...

8 But we -- we do have an exhibit we wish
9 to introduce, CAC-14. And for the benefit of the court
10 reporter, it should have seven (7) tabs, the first
11 being the colourfully named, "Sucking energy out of
12 households," the CIBC Report, and the seventh being an
13 excerpt from the BC Hydro Environmental Impact
14 Statement.

15 And, Mr. Chair, we would suggest that be
16 marked as CAC Exhibit 45-14.

17

18 --- EXHIBIT NO. CAC-45-14: Seven (7) tabs, the first
19 being "Sucking energy out
20 of households," the CIBC
21 Report, and the seventh
22 being an excerpt from the
23 BC Hydro Environmental
24 Impact Statement

25

1 CONTINUED BY MR. BYRON WILLIAMS:

2 MR. BYRON WILLIAMS: Sir, at slide 35
3 you present some information regarding customer rate
4 impacts.

5 Is that right, sir?

6 MR. RUSSELL TYSON: That is correct.

7 MR. BYRON WILLIAMS: And just so I'm
8 aware, this -- this analysis you're presenting would be
9 based upon the application prior to the significant
10 increases in capital rela -- expenditures related to
11 Keeyask and Conawapa.

12 Is that fair, sir?

13 MR. RUSSELL TYSON: Sorry, I -- could
14 you repeat that?

15 MR. BYRON WILLIAMS: Well, let me back
16 up. The -- the numbers you present here in terms of
17 rate increases, am I correct in suggesting that they're
18 based upon the original business case?

19 MR. RUSSELL TYSON: These are directly
20 from the NFAT business case --

21 MR. BYRON WILLIAMS: Okay.

22 MR. RUSSELL TYSON: -- if that's what
23 you're referring to.

24 MR. BYRON WILLIAMS: And if -- if --
25 and have you, sir, had the opportunity to follow the

1 hearing and -- and consider what, if any, amendments to
2 the Hydro business base have been presented in the
3 course of this hearing?

4 MR. RUSSELL TYSON: I am familiar with
5 the changes to section 13 -- or Chapter 13 on the
6 economic rent, but I am not familiar with anything
7 else.

8

9 (BRIEF PAUSE)

10

11 MR. BYRON WILLIAMS: And just so I
12 understand, sir, are you aware that there were
13 increases in the estimated capital expenditures
14 associated with Keeyask?

15 MR. RUSSELL TYSON: Yes.

16 MR. BYRON WILLIAMS: And you're aware
17 that there were increases in the estimated capital
18 expenditures associated with Conawapa?

19 MR. RUSSELL TYSON: Yes.

20 MR. BYRON WILLIAMS: To the tune of
21 \$800 million or so?

22 MR. RUSSELL TYSON: Yes, I understand
23 Keeyask was 300 million.

24 MR. BYRON WILLIAMS: Okay. And you
25 were aware as well that there have been significant

1 changes to the DSM scenarios put forward by Manitoba
2 Hydro?

3 MR. RUSSELL TYSON: I am aware that
4 changes have been identified. I do know -- not know
5 what they are.

6 MR. BYRON WILLIAMS: Now, in terms of -
7 - you referenced changes to the economic rent in
8 Chapter 13.

9 And by that, do you mean adjustments to
10 the calculations of Dr. Shaffer, based upon the changed
11 capital estimates?

12 MR. RUSSELL TYSON: I believe that is
13 correct, yes.

14 MR. BYRON WILLIAMS: And so you've had
15 the opportunity to review --

16 MR. RUSSELL TYSON: I have briefly
17 glanced the table that was presented.

18 MR. BYRON WILLIAMS: Okay. And if --
19 perhaps if we could pull up Manitoba Hydro Exhibit 166
20 Revised.

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: And if we could
25 scroll down just a little bit.

1 (BRIEF PAUSE)

2

3 MR. BYRON WILLIAMS: Mr. Tyson, does --
4 does this look at -- look like some of the work of Dr.
5 Shaffer that you're familiar with?

6 MR. RUSSELL TYSON: I can't comment on
7 it. And this is the first time I've seen that table.

8 MR. BYRON WILLIAMS: Okay. Were you
9 aware, sir, of evidence from Dr. Shaffer in the hearing
10 that in terms of the monetized net benefit, the results
11 for Plan 14, Plan 6, and Plan 12 were very similar?

12 MR. RUSSELL TYSON: Yes, I believe I do
13 recall that.

14 MR. BYRON WILLIAMS: And, sir, in terms
15 of that evidence did you adjust your opinion in any way
16 in response to that?

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

18

19 (BRIEF PAUSE)

20

21 MR. BYRON WILLIAMS: And you have not
22 explored, sir, whether the implications of expanded DSM
23 scenarios may benefit some plans as compared to others
24 under Dr. Shaffer's analysis?

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

1 MR. BYRON WILLIAMS: I wonder if we
2 could turn to page 22 of your evidence, TYP Exhibit 1.
3 If we could scroll down.

4

5 (BRIEF PAUSE)

6

7 MR. BYRON WILLIAMS: And, sir, you'll
8 recall during the earlier part of our discussion that
9 we did discuss a review -- I mean, a limitation in
10 terms of your review, in terms of your full
11 understanding of the Manitoba economy and how it
12 functions?

13 MR. RUSSELL TYSON: Yes. I stated
14 that, because I'm not familiar with the Manitoba
15 economy as well as the British Columbia economy, there
16 are certain assumptions we would make that we do not
17 fully understand.

18 MR. BYRON WILLIAMS: And here on page
19 22, your -- in the second paragraph under Section
20 3.2.3.4, you're -- you're putting a big 'if' in front
21 of the expectation that most of the people working on
22 the project will come from outside of Manitoba.

23 Would that be fair?

24 MR. RUSSELL TYSON: Yes.

25 MR. BYRON WILLIAMS: And if we went to

1 page 26 of your evidence, sir -- scrolling down,
2 please. Scroll down a little bit more. Right there.

3 You'll see the third full paragraph on
4 this page, being page 26 of TYP Exhibit 1, you point to
5 a disconnect in your view between the Statistics Canada
6 model estimate of all direct jobs and the Manitoba
7 Hydro estimate of all direct jobs.

8 Is that correct, sir?

9 MR. RUSSELL TYSON: It is a difference
10 based on the assumptions that are made in the models,
11 the change.

12 MR. BYRON WILLIAMS: And you -- you go
13 on to suggest that the overall percentage of jobs in
14 Manitoba appears to be very low, correct?

15 MR. RUSSELL TYSON: Correct, presumably
16 resulting from external employment in the province. I
17 reference that comment based on the fact that, on the
18 BC Hydro input/output model, we assume that 80 percent
19 of the employment would be from British Columbia as
20 opposed to elsewhere.

21 But we do note differences in the
22 provincial economy in Manitoba that may suggest that
23 there may be a significant labour shortage in Manitoba
24 that would allow that balance or that proportion to be
25 there.

1 MR. BYRON WILLIAMS: Thank you. And --
2 and you're aware that the designated trades, including
3 journeypersons, are likely to be a significant element
4 of the Keeyask and Conawapa labour force, sir?

5 MR. RUSSELL TYSON: Yes. They are a
6 component.

7 MR. BYRON WILLIAMS: And for the
8 purposes of your analysis in this report, did you
9 review the percentage of journeypersons from outside of
10 Manitoba hired for Wuskwatim?

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

12 MR. BYRON WILLIAMS: I'm wondering if
13 we can pull up CAC Exhibit 45-7, Tab 1. And just got
14 the cover page. So scroll down one (1) page after Tab
15 1.

16 Sir, you see here a report marked as CAC
17 Exhibit 45-7 from Deloitte addressing Wuskwatim
18 training and employment initiatives, evaluation report,
19 final?

20 MR. RUSSELL TYSON: Yes.

21 MR. BYRON WILLIAMS: And, sir, for the
22 purposes of your analysis in this proceeding, would
23 this document have been available to you prior to the
24 completion of your report?

25 MR. RUSSELL TYSON: Yes, it would have

1 been available, and we did read the executive summary.
2 Our interpretation of the document pursuant to my
3 presentation and comments provided earlier that in the
4 development of benefit agreements with First Nations,
5 they are constantly evolving and developing, and that
6 the performance measures set forth in the initial
7 agreements generally never come to fruition.

8 However, with due diligence and with the
9 implementing lessons learned, we can all move towards a
10 more effective and efficient calculation of benefits
11 and jobs for the -- I note that I'm personally involved
12 in a \$2.3 billion project in British Columbia regarding
13 the building of a bridge where we did have the exact
14 same labour issues associated with employment for
15 Aboriginal groups that we had to manage throughout the
16 process.

17 THE CHAIRPERSON: I think we're missing
18 some of your testimony. I wonder if --

19 MR. RUSSELL TYSON: Oh, sorry. Again?
20 Okay? All right.

21

22 CONTINUED BY MR. BYRON WILLIAMS:

23 MR. BYRON WILLIAMS: So, sir, just so I
24 understand your -- your evidence, you read the
25 executive summary of the report, but you -- you did not

1 read the report?

2 MR. RUSSELL TYSON: Not in entirety.

3 MR. BYRON WILLIAMS: Okay. So any
4 analysis found in the report related to the percentage
5 of journeypersons hired from outside of Manitoba for
6 Wuskwatim was not considered by you?

7 MR. RUSSELL TYSON: No.

8 MR. BYRON WILLIAMS: Now, I noticed you
9 in the -- the crowd yesterday -- crowd may be the wrong
10 term, but listening to the evidence of Knight Piesold
11 for part of their presentation, sir?

12 MR. RUSSELL TYSON: For two (2) slides,
13 or three (3) slides.

14 MR. BYRON WILLIAMS: You weren't there
15 for all the slides?

16 MR. RUSSELL TYSON: No, I was not.

17 MR. BYRON WILLIAMS: Okay. I wonder if
18 we can pull up Knight Piesold Exhibit 4, slide 27?

19

20 (BRIEF PAUSE)

21

22 MR. BYRON WILLIAMS: Sir, in -- in
23 preparing your report were you aware whether or not
24 Knight Piesold was looking at the number of hires for
25 the project expected inside of Manitoba as outside of

1 Manitoba?

2 MR. RUSSELL TYSON: No, I was not. And
3 I was not aware of this.

4 MR. BYRON WILLIAMS: Okay. And so I'm
5 showing you an excerpt from slide 7 -- excuse me, slide
6 27 of KP-4, suggesting that 40 percent of overall
7 project workforce for Wuskwatim were out of province,
8 60 percent for generating station structure, and
9 suggesting that Keeyask demand would be greater and the
10 situation likely to be even worse.

11 And what you're telling me, if I'm
12 correct, sir, is that you did not have an opportunity
13 to review this and prepare in your evidence?

14 MR. RUSSELL TYSON: No, I did not
15 reference this.

16 MR. BYRON WILLIAMS: Okay. And --

17 MR. RUSSELL TYSON: My reference was
18 specific to bringing employees in from out of province
19 to undertake the project, and we used the Stats Can
20 model to look at the interprovincial trade numbers to
21 make comparisons.

22 MR. BYRON WILLIAMS: And, sir, what I'm
23 asking you is in preparing your evidence, did you
24 consult with Knight Piesold in terms of their
25 expectations in terms of --

1 MR. RUSSELL TYSON: I did not.

2 MR. BYRON WILLIAMS: You -- you've got
3 to let me finish, just for the court reporter.

4 MR. RUSSELL TYSON: Sorry, I apologize.

5 MR. BYRON WILLIAMS: So I'll finish and
6 then you can answer and -- you did not consult with
7 Knight Piesold in terms of their expectations of out-
8 of-province hires.

9 Would that be fair, sir?

10 MR. RUSSELL TYSON: Yes.

11 MR. BYRON WILLIAMS: Okay. I wonder if
12 we could flip back to CAC Exhibit 45-7, page 73 for a
13 moment? You can scroll up just a little bit.

14 Mr. Tyson, in your report you'll --
15 you'll agree with me that -- or you'll agree that you
16 discussed les -- lessons learned from Wuskwatim.

17 Would that be fair?

18 MR. RUSSELL TYSON: Yes.

19 MR. BYRON WILLIAMS: And you have a
20 discussion in your report, we don't need to turn there,
21 but you'll accept, subject to check, at page 12,
22 discussing workplace conditions in the construction
23 camp with regard to the -- the next projects associated
24 with the Preferred Development Plan.

25 Would that be fair?

1 MR. RUSSELL TYSON: Yes. We looked at
2 best practices in regards to moving Keeyask forward and
3 the establishment of a work camp, and the KIP project
4 was identified.

5 MR. BYRON WILLIAMS: Okay. And in
6 terms of your review of the Deloitte report executive
7 summary, would you have had occasion to review
8 comments, if any, in the Deloitte report regarding the
9 survey of workers, regarding the camp facilities at
10 Wuskwatim?

11 MR. RUSSELL TYSON: No, I did not
12 review that section. If you could reference I would
13 appreciate that.

14 MR. BYRON WILLIAMS: It's -- it's --
15 and I don't want to be unfair to you, sir, but there's
16 a page here right in front of us. For example, you'll
17 see in the middle of the page, a -- a suggestion by
18 Deloitte that a -- the vast majority of workers were
19 actually quite laudatory about the camp facilities.

20 Do you see that?

21 MR. RUSSELL TYSON: Okay. I can read
22 that.

23 MR. BYRON WILLIAMS: Okay. Although
24 there are some concerns with partying, et cetera.

25 So that would not have been an analysis

1 that you reviewed in preparing your report, sir?

2 MR. RUSSELL TYSON: We are aware of
3 issues related to that on other projects, yes.

4 MR. BYRON WILLIAMS: You're aware of
5 issues, sir, but I guess what I'm asking you is were
6 you aware of the suggestion by Deloitte that the vast
7 majority of workers were pretty laudatory about the
8 camp facilities?

9 MR. RUSSELL TYSON: We did read that
10 they thought that the camp facilities were okay.

11 MR. BYRON WILLIAMS: So 'camp was
12 awesome' you would equate with 'okay'?

13 MR. RUSSELL TYSON: Awesome.

14 MR. BYRON WILLIAMS: Sir, at page 31 of
15 your report you reference the -- the Burntwood Nelson
16 Collective Bargaining Agreement.

17 Is that correct, sir?

18 MR. RUSSELL TYSON: Yes.

19 MR. BYRON WILLIAMS: And if we want to
20 scroll down to footnote 18, and I don't know -- keep --
21 you highlight the fact that an important element of the
22 Burntwood Nelson Agreement is the employee preference.

23 Would that be fair, sir?

24 MR. RUSSELL TYSON: Yes.

25 MR. BYRON WILLIAMS: In preparing your

1 actual analysis would have reviewed the Burntwood
2 Nelson Agreement?

3 MR. RUSSELL TYSON: I did not review it
4 in its entirety. I believe I read two (2) or three (3)
5 pages of it to obtain the gist. And what I took out of
6 that was that the Aboriginal peoples who work in
7 northern community projects had a preference in
8 regarding construction projects.

9 MR. BYRON WILLIAMS: And I appreciate
10 your commentary on the preference. Would you be
11 familiar with the term 'named hires', which I suggest
12 to you means hires following exhaustion of the
13 preference categories under the BNA? Is that a term
14 you're familiar with?

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

16 MR. BYRON WILLIAMS: Sir, at the time
17 of your preparation of the report, were you aware of
18 any commentary in the Deloitte report, or otherwise,
19 expressing concerns that employers were, in effect,
20 sidestepping the preference requirements by claiming a
21 higher level or more specific skills than were
22 necessary for particular jobs?

23 MR. RUSSELL TYSON: Yes, I was aware of
24 that issue. That issue does occur on a number of
25 projects. And we've personally been involved in a

1 number of projects where skill sets and training has
2 been an issue, and contractors have subsequently used
3 that as a vehicle in which certain employees can be
4 removed from the job site.

5 So we are familiar with that issue. And
6 pursuant to early conversations -- or discussions
7 provided herewith, we recognize that no agreement is
8 perfect as they've set in place, but provided lessons
9 learned and best practices are implemented going
10 forward, all these agreements do get better over time.

11 MR. BYRON WILLIAMS: Okay. And are you
12 familiar with the layoff clauses under Section 12.4.1.1
13 -- it'd be 12.4.1.2 of the BNA?

14 MR. RUSSELL TYSON: No, I'm not, but I
15 do not think that was part of my scope of work, to go
16 into detail regarding contractual obligations
17 associated with benefit agreements.

18 MR. BYRON WILLIAMS: But in fairness,
19 sir --

20 MR. RUSSELL TYSON: I must have an
21 understanding -- I apologize for interrupting --

22 MR. BYRON WILLIAMS: No, that's okay.

23 MR. RUSSELL TYSON: -- but I have to
24 have an understanding of the agreement in principle.

25 MR. BYRON WILLIAMS: And you also, in

1 fairness, sir, would want to understand if there are
2 provisions in the collective agreement which may serve
3 to impede the achievement of -- of Aboriginal
4 preference.

5 Would that be fair?

6 MR. RUSSELL TYSON: That would be fair.

7 MR. BYRON WILLIAMS: Now, in your work
8 on this report did you examine whether the layoff
9 clauses under the sections I've named previously had
10 been amended?

11 MR. RUSSELL TYSON: No. Pursuant to
12 what I've already discussed, I did not review those
13 clauses regarding layoffs.

14 MR. BYRON WILLIAMS: In your report at
15 pages 33 and 34, sir -- and the report I'm referencing
16 is TYP Exhibit 1 -- you reference the Hydro Northern
17 Training and Employment Initiative, or, I believe,
18 HNTEI, as My Learned Friends from Hydro call it.

19 Is that right, sir?

20 MR. RUSSELL TYSON: Yes.

21 MR. BYRON WILLIAMS: And for the
22 purposes of your analysis, did you examine the Deloitte
23 evaluation of the training results associated with the
24 designated trades?

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

1 fact that a -- such a program was identified and was
2 tied into by Manitoba Hydro was of import to me,
3 because it was -- it represented one (1) of the best
4 practices that we identified earlier on in the report
5 on how to optimize employment opportunities.

6 Operational issues and performance
7 measures associated with -- with the agreements between
8 the parties, I do not believe, is part of my scope of
9 work. However, I do acknowledge that issues do arise
10 and that maybe performance measures were not met.
11 However, provided both parties -- or all three (3)
12 parties, inclusive of First Nations, Manitoba Hydro,
13 and the contractor, and I -- I specifically note the
14 contractor, come to the table to address differences
15 and approaches to employment, we can move forward to
16 start optimizing benefits.

17 I have been involved in numerous
18 agreements with First Nations and contractors that
19 suggest certain employment targets be met, and in a
20 number of instances they cannot be met because of skill
21 sets and training and because of specific issues. All
22 I can say going forward is that provided that all
23 parties are agreeable to move forward and have the
24 mechanisms in place within those agreements to resolve
25 disputes, then practices are being met.

1 And provided good, prudent measures are
2 taken, we can move forward and optimize these
3 opportunities. That's the extent of my evaluation.

4 MR. BYRON WILLIAMS: Thank you for that
5 answer. And just so I have the thrust of it, you were
6 aware that HNTEI, H-N-E-T-I (sic), was in place. You
7 did not examine, whether through the Deloitte report or
8 otherwise, its success in achieving goals in terms of
9 creating opportunities for the designated trades.

10 Would that be fair, sir?

11 MR. RUSSELL TYSON: That's fair.

12 MR. BYRON WILLIAMS: And accepting your
13 premise that it is important in the event that there
14 are shortcomings in terms of meeting those objectives,
15 did you examine, sir, post-HNTEI efforts to enhance
16 access to the designated trades for the -- whether it's
17 the Keeyask Cree Nation partners, specifically, or more
18 generally Northern and Aboriginal people, including
19 Metis people?

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

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: In your assessment
25 of the socioeconomic benefits linked to the Preferred

1 Development Plan, sir, would you have had reference to
2 or access to analysis, whether found in Deloitte or
3 elsewhere, in terms of the percentage of hires of
4 Northern Aboriginal people related to the remainder of
5 the workforce at Wuskwatim?

6 MR. RUSSELL TYSON: I did not review
7 data in regard to that.

8 MR. BYRON WILLIAMS: And, sir, would
9 you have reviewed data with regard to the turnover rate
10 of Northern Aboriginal people related to the remainder
11 of the workforce at Wuskwatim?

12 MR. RUSSELL TYSON: I do acknowledge
13 that turnover issues were evident as part of the
14 agreement and that turnover was identified as a key
15 issue moving forward, and how to reduce it. As I
16 mentioned earlier, my current experience on similar
17 projects suggests that contractors have one (1) or two
18 (2) obligations. They have a schedule to meet and they
19 have something to build. Everything else in their mind
20 is irrelevant.

21 Firstly, on the other side of the fence
22 we have First Nations that require employment
23 opportunities that address specific spiritual and
24 cultural aspects of doing business. Sometimes they do
25 not mesh. And I have been in meetings where conflicts

1 constantly arise in regard to this. And my solution
2 and my recommendation as part of this report is to make
3 sure that the mechanisms are in place between the
4 parties to resolve disputes going forward.

5 MR. BYRON WILLIAMS: And, sir, if --
6 would your advice be as well, to the extent that the
7 panel is not satisfied that appropriate mechanisms are
8 put in place, for example, to provide opportunities
9 within the designated trades, that a more cautious or
10 go-slow approach might be prudent?

11 MR. RUSSELL TYSON: Could you ask that
12 question again, please?

13 MR. BYRON WILLIAMS: Well, sir, you've
14 -- you've offered advice about the importance of
15 working together to correct past deficits.

16 Fair enough?

17 MR. RUSSELL TYSON: That would be fair.

18 MR. BYRON WILLIAMS: And I'm --

19 MR. RUSSELL TYSON: Sorry, if I may.

20 MR. BYRON WILLIAMS: Yeah.

21 MR. RUSSELL TYSON: In context to the
22 agreements that are set in place between the parties on
23 a go -- on going forward -- forward basis. I noticed
24 the CAC and the AGE committees that were established to
25 facilitate issues like this. I'm aware that those

1 committees did not function as effectively as they
2 could.

3 However, I do emphasize that, provided
4 parties come to the table, negotiate more effectively,
5 and understand the tradeoffs that are required to
6 resolve such issues, I am sure that the performance
7 measures can be get met moving forward.

8 I did not go into detail regarding the
9 number of employees that were established. What I do
10 note as part of my assessment was that all of the
11 training, the linkages with the federal and provincial
12 agencies to support programs and develop them, are
13 things that we do not see very readily in the projects,
14 specifically the ones we saw in British Columbia.

15 I note in Manitoba, this was something
16 that I found very interesting and very applaudable to -
17 - to recommend as we're doing all the right things to
18 move it forward.

19 MR. BYRON WILLIAMS: So, sir, would you
20 agree with me that, as a necessary precondition for
21 maximizing the benefits from the Preferred Development
22 Plan, it would be important to have confidence that a
23 structure was in place to maximize the opportunities
24 for Aboriginal people and Northern Aboriginal people,
25 including Metis, to maximize their opportunities within

1 the designated trades?

2 MR. RUSSELL TYSON: I would agree with
3 that.

4 MR. BYRON WILLIAMS: If we could turn
5 to page 36 of your evidence, sir, and scroll down --
6 scroll down through 36, if you would, Diana, and then
7 onto the next page. Scroll down a bit more. Okay.
8 And then scroll back to the -- the top of Section
9 3.6.2. Thank you.

10 Sir, what we have here is your comments
11 with regard to community health in this report.

12 Would that be fair?

13 MR. RUSSELL TYSON: Yes.

14 MR. BYRON WILLIAMS: Would it be fair
15 to say that your community health analysis percent --
16 presented in this report occupies about one (1) page?

17 MR. RUSSELL TYSON: Yes.

18 MR. BYRON WILLIAMS: For the purposes
19 of your analysis, sir, would you have looked at the
20 report by Lerer, L-E-R-E-R, or -- and Scudder, S-C-U-D-
21 D-E-R, 'Health Impacts of Large Dams', found in Impar -
22 - Environmental Impact Assessment Review?

23 MR. RUSSELL TYSON: No, I did not
24 review that report. As I mentioned in the PowerPoint
25 presentation, there were Sections 3, 4, and 5 of the

1 EIS that I referred to in regard to community health
2 and health.

3 MR. BYRON WILLIAMS: Okay. And, sir,
4 for the purposes of your report, would you have
5 referred to the work of Ross et al, 'Income Equal' --
6 'Inequality as a Determinant of Health in Healthier
7 Societies'?

8 MR. RUSSELL TYSON: No, I did not
9 review that report.

10 MR. BYRON WILLIAMS: In your report --
11 oh, sorry. Did I interrupt you?

12 MR. RUSSELL TYSON: No. Go ahead.

13 MR. BYRON WILLIAMS: We're doing so
14 well now, Mr. Tyson. In your report at page 36, you
15 make the point that health is shaped by a variety of
16 factors including the social and economic environment,
17 the physical environment, and a person's individual
18 characteristics and behaviours, agreed?

19 MR. RUSSELL TYSON: Agreed.

20 MR. BYRON WILLIAMS: And would you,
21 sir, agree with the proposition that the relative gap
22 between the highest and lowest income earners in any
23 given community -- i.e., income disparity -- heavily
24 influences health outcomes?

25 MR. RUSSELL TYSON: I would agree.

1 MR. BYRON WILLIAMS: And so you would
2 agree, sir, that when it comes to health outcomes, it
3 cannot be said with certainty that a rising tide lifts
4 all boats?

5 MR. RUSSELL TYSON: I would agree. I
6 would like to preface this that Sections 3, 4, and 5 of
7 the environmental impact statement do talk
8 comprehensively about the Cree world view on things and
9 how everything is interconnected. The -- the agreement
10 and the reports therein prepared by the partnership
11 Cree Nations exhibit the partnerships that have been
12 established with Manitoba Hydro to address this issue.

13 MR. BYRON WILLIAMS: Thank you. Now,
14 you offer some commentary on the Keeyask EIS when it
15 comes to the assessment of health effects.

16 Would that be fair?

17 MR. RUSSELL TYSON: Yes. If I may
18 clarify. As part of the EIS and going back towards the
19 requirements of the Canadian Environmental Assessment
20 Act, VECs -- value environmental components -- are
21 identified at the start of all these projects and are
22 studied in detail as part of the process. That
23 includes involvement with third parties to identify the
24 issues and includes involvement of those parties in
25 addressing the impacts and the potential mitigation, as

1 well addressing residual effects associated with those
2 effects.

3 This is standard operating protocol
4 associated with the Canadian Environmental Assessment
5 Act and formats the foundation of our assessment
6 regarding whether or not prudent best practices have
7 been implemented in community health assessment.

8 MR. BYRON WILLIAMS: Sir, for the
9 purposes of your analysis of health effects, would it
10 be accurate to suggest that you did not address the
11 question of whether projects of this size tend to
12 increase income disparities within communities?

13 MR. RUSSELL TYSON: No, I did not look
14 at that.

15 MR. BYRON WILLIAMS: If we can turn to
16 page 41 of your evidence. You present here, sir, your
17 high-level review of the impact of increased energy
18 costs on consumers and their spending patterns.

19 Would that be fair?

20 MR. RUSSELL TYSON: That is fair.
21 Thank you for noting 'high-level review'.

22 MR. BYRON WILLIAMS: And, of course,
23 the reason you and I have noted it is because you did
24 not conduct any estimate of the impacts on consumers of
25 the rate increases?

1 MR. RUSSELL TYSON: No, we did not.
2 What we found, if I could clarify this for the panel,
3 as -- as part of our literature review we looked at
4 reports that were available to us to try and discern
5 what the issues were. We found that there was limited
6 quantitative but more qualitative evidence suggesting
7 impacts.

8 That led us to the conclusion that low
9 income and the poor were the most affected. We then
10 said -- asked the question: What does one do to
11 address this issue? And that's where energy efficiency
12 programs came from, and that's what we identified in
13 context to our review.

14 The magnitude we did not comment on.
15 And I would not comment on the magnitude. Let alone
16 the summary and the concept here is that we acknowledge
17 that low income and the poor are most affected and all
18 the policies should be in place to address that issue.

19 MR. BYRON WILLIAMS: Now, sir, if we
20 went -- if -- if you would go with me to the cover page
21 for Exhibit CAC-45-14.

22 You'll -- you'll see here reference to
23 excerpts from four (4) of the studies that you did look
24 -- look at, sir?

25 MR. RUSSELL TYSON: Yes.

1 MR. BYRON WILLIAMS: One (1) of them is
2 the CIB report by Tal from 2011, correct?

3 MR. RUSSELL TYSON: Yes. Sorry.

4 MR. BYRON WILLIAMS: And another is the
5 Pan-African Investment and Research Services report
6 from 2011, agreed?

7 MR. RUSSELL TYSON: Yes.

8 MR. BYRON WILLIAMS: Another is from
9 the curiously named American Coalition For Clean Coal
10 from February of 2012.

11 Is that right, sir?

12 MR. RUSSELL TYSON: That is correct.

13 MR. BYRON WILLIAMS: And another one is
14 from the Scotiabank. Fair enough? Yes?

15 MR. RUSSELL TYSON: Fair enough.

16 MR. BYRON WILLIAMS: And of the four
17 (4) reports that I've presented here, sir, or that you
18 have examined, would it be fair to say that the one (1)
19 report that attempts to examine the relative impacts on
20 the economy of significant rate ince -- increases as
21 compared to the impacts of capital expenditures would
22 be the South African study?

23 MR. RUSSELL TYSON: Yes, you would be
24 correct. However, put in context, it is South African
25 study. There is an analogy of a third-world country

1 developing hydroelectric facilities for future economic
2 development, so it's a little different in context
3 compared to the established first-world hydroelectric
4 developments that we see here.

5 MR. BYRON WILLIAMS: And we'll get to
6 those caveats in -- in a second, but that's -- in terms
7 of the thrust of your analysis, sir, I think you've
8 aptly stated it that it's your view that the -- those
9 on fixed incomes and low incomes will be the hardest
10 hit --

11 MR. RUSSELL TYSON: That is correct,
12 yes.

13 MR. BYRON WILLIAMS: You've got to let
14 me finish, sorry.

15 MR. RUSSELL TYSON: Oh, sorry, I
16 thought you had.

17 MR. BYRON WILLIAMS: Okay. Let's try
18 it again. We've agreed -- or you -- your -- your
19 position is that those most hard hit will be the poor
20 and those on fixed incomes, correct?

21 MR. RUSSELL TYSON: Correct.

22 MR. BYRON WILLIAMS: And you would note
23 that the overall impact in the retail sector will
24 depend on a variety of factors including income
25 distribution in the community, energy cost,

1 consumption, and needs.

2 Would that be fair?

3 MR. RUSSELL TYSON: That is fair.

4 MR. BYRON WILLIAMS: And a key
5 mechanism that you see as a measure to mitigate or
6 alleviate the impact of rapid rate increases would be
7 energy efficiency, correct?

8 MR. RUSSELL TYSON: Energy efficiency
9 ini -- initiatives, yes. Presumably, Power Smart
10 programs that are available to the public. I also note
11 in our analysis that that it is up to both parties,
12 both the public as well as Manitoba Hydro, to provide
13 for and implement such programs. One (1) of the
14 disconnects that we've had and we see in British
15 Columbia is eve -- even though the programs are
16 available, they're not fully utilized.

17 MR. BYRON WILLIAMS: Now, in preparing
18 your analysis, sir, on this specific issue, would you
19 have had the opportunity to conduct any interviews of
20 low-income persons in Manitoba in terms of any
21 challenges they may be having in accessing energy
22 efficiency programming with Manitoba Hydro?

23 MR. RUSSELL TYSON: No, I did not
24 interview any low-income Aboriginal groups as part of
25 this.

1 MR. BYRON WILLIAMS: And in preparing
2 this analysis, sir, would you have reviewed any
3 evidence offered by Mr. Philippe Dunsky filed in past
4 general rate applications before this Public Utilities
5 Board?

6 MR. RUSSELL TYSON: Oh, I have not
7 reviewed those.

8 MR. BYRON WILLIAMS: So you would not
9 be in a position to comment in terms of whether or not
10 he has filed evidence in the past relating to barriers
11 to implementing low income programming in this
12 province?

13 MR. RUSSELL TYSON: I would not be
14 aware of them, but I do know and acknowledge barriers
15 do exist.

16 MR. BYRON WILLIAMS: And, sir, in your
17 analysis for this report, would you have had the
18 opportunity to look at Public Utility Board Order 5/'12
19 and any analysis therein relating to challenges in
20 supporting low-income persons in terms of energy
21 efficiency or income support programs?

22 MR. RUSSELL TYSON: No, I did not
23 review that information.

24 MR. BYRON WILLIAMS: And would it be
25 fair to say that you also did not review Public Utility

1 Board Order 43/'13?

2 MR. RUSSELL TYSON: Yes.

3 MR. BYRON WILLIAMS: Okay. Now, just
4 turning for a moment to CAC-45-14 and page 35, sir.
5 You'll agree with me that this is a -- a neat little
6 report from the Scotiabank Group, the Global Economics
7 Research?

8 MR. RUSSELL TYSON: Yes.

9 MR. BYRON WILLIAMS: And I guess we
10 should premise -- or caveat this discussion to say that
11 a fair bit of the Scotiabank analysis is in the context
12 of high energy costs, in terms of gasoline.

13 Would that be fair, sir?

14 MR. RUSSELL TYSON: That would be fair.
15 And as part of our benchmark, we noted a lot of the
16 review that we undertook was specifically related to
17 gasoline.

18 MR. BYRON WILLIAMS: The message from
19 Scotiabank, we can see it in the first full paragraph,
20 is that higher energy costs were taking a toll on
21 consumer confi -- confidence, purchasing power, and
22 efficiency, agreed?

23 MR. RUSSELL TYSON: Agreed.

24 MR. BYRON WILLIAMS: And it would be
25 fair to say that in the Scotiabank analysis, high

1 energy costs have dampened spending on other less
2 discretionary purchases.

3 Would that be fair?

4 MR. RUSSELL TYSON: Yes.

5 MR. BYRON WILLIAMS: Now, I want to
6 take you to the Eskom report, or the excerpt from it,
7 which is found at CAC-45-14, page 5.

8 And, sir, when I used the term 'Eskom',
9 you'll understand that I'm referring to the work in
10 South Africa looking at the impact of electricity price
11 increases and Eskom's six (6) year capital investment?

12 MR. RUSSELL TYSON: Yes.

13 MR. BYRON WILLIAMS: And just for the
14 purposes of context, and you adverted to this before,
15 sir, this report was authored at a time when it was
16 argued that there -- there was a -- a need to expand
17 infrastructure in South Africa to set the foundation
18 for broad, sustainable growth.

19 MR. RUSSELL TYSON: Yes.

20 MR. BYRON WILLIAMS: Would it be fair
21 to say that one (1) of the research questions posed in
22 this report which you cite is: What are the impacts on
23 the economy of price increases?

24 MR. RUSSELL TYSON: Yes.

25 MR. BYRON WILLIAMS: And would it also

1 be fair to say that an additional research question
2 posed was: What sectors of industry and what persons
3 were hardest hit by the price increases?

4 MR. RUSSELL TYSON: Yes.

5 MR. BYRON WILLIAMS: And then another
6 important research question posed, recognizing the
7 heavy capital expenditures, was: What is the impact on
8 the economy of these capital investments?

9 MR. RUSSELL TYSON: Yes.

10 MR. BYRON WILLIAMS: And you've made
11 the point, sir, that in examining these results, we
12 should be very aware of the distinct contextual
13 realities of -- of South Africa.

14 MR. RUSSELL TYSON: Correct.

15 MR. BYRON WILLIAMS: If we could just
16 for a moment, let's turn to Table 2 of that report,
17 which we can find at page 15 marked in the bottom
18 right-hand corner.

19 And, Mr. Tyson, you'll understand that
20 I've only put in the excerpt from this report and not
21 the entire report, which is in excess of a hundred
22 (100) pages?

23 MR. RUSSELL TYSON: Yes.

24 MR. BYRON WILLIAMS: And what -- what
25 Table 2 presents are the estimates of the eco --

1 economy-wide impact of electricity price hikes based on
2 a couple -- a number of scenarios.

3 Would that be fair?

4 MR. RUSSELL TYSON: Yes.

5 MR. BYRON WILLIAMS: And I will not
6 torture you or I, sir, with -- with walking through
7 those tables, but I just want the panel to be aware
8 that they're there. And if we turn to the next page,
9 we'll see -- if we can scroll down a bit with Table 3 -
10 - that they present estimates in terms of the economy-
11 wide impacts of an increase in -- in the capital
12 expenditures of the state-owned utility in question.

13 Is that correct, sir?

14 MR. RUSSELL TYSON: Yes.

15 MR. BYRON WILLIAMS: So in essence,
16 what this report attempts to do is to assess both the
17 effects on the economy of increased prices as com -- as
18 compared to the effects on the economy of increased
19 capital investment.

20 Would that be fair?

21 MR. RUSSELL TYSON: Yes, in relation to
22 the contributions to the GDP growth. What I took out
23 of this report is that there are effects on both sides.
24 In South Africa's circumstance, the investment in
25 hydroelectric power does have a contribution to the

1 GDP.

2 However, I also discount this report in
3 context to the economic environment in which South
4 Africa exists because the socioeconomic characteristics
5 of the majority of residents in there is a lot
6 different and totally erroneous to what's happening in
7 a developed country such as Canada.

8 But it is acknowledged that certain
9 areas are impacted, as I've mentioned in my report.

10 MR. BYRON WILLIAMS: And if we turn to
11 the next page, being page 7...

12

13 (BRIEF PAUSE)

14

15 MR. SVEN HOMBACH: Sorry for the
16 interruption, Mr. Williams, but it looks like we've now
17 resolved the issue.

18

19 (BRIEF PAUSE)

20

21 CONTINUED BY MR. BYRON WILLIAMS:

22 MR. BYRON WILLIAMS: If we just focus
23 on the conclusions of this analysis, and recognizing
24 your -- your context, in essence, first of all, the
25 electricity pricing impact analysis suggested negative

1 implications on the macro and sectoral economy.

2 Fair enough?

3 MR. RUSSELL TYSON: Fair enough.

4 MR. BYRON WILLIAMS: Secondly though,
5 there were positive implications on the economy related
6 to the six (6) year capital investment, agreed?

7 MR. RUSSELL TYSON: Agreed. In -- in
8 the opinion of the authors of this report, the
9 magnitude of the price impacts on major variables in
10 the negative way was found to be higher than those of
11 the capital expenditure impacts.

12 Would that be fair?

13 MR. RUSSELL TYSON: That's what it
14 states.

15 MR. BYRON WILLIAMS: And then, of
16 course, we do have the context as well of the social
17 need of -- of developing infrastructure in this
18 particular jurisdiction?

19 MR. RUSSELL TYSON: Yes.

20 MR. BYRON WILLIAMS: If we could turn
21 to page 62 of CAC Exhibit 45-14 marked in the bottom
22 right-hand corner. Sir, this document will look
23 familiar to you, being a newsletter associated with the
24 project on the Upper Pitt.

25 Would that be fair?

1 MR. RUSSELL TYSON: Yes, that is
2 correct.

3 MR. BYRON WILLIAMS: And you heard me
4 joking earlier about using the nomenclature of clean
5 coal. You remember that?

6 MR. RUSSELL TYSON: Yes, I do.

7 MR. BYRON WILLIAMS: I see in the
8 bottom -- if we could scroll down to the bottom. On
9 the bottom right-hand side you provide a definition --
10 or a description of what you consider to be green
11 energy, sir?

12 MR. RUSSELL TYSON: That is a
13 definition provided by Run of River Power. I was a
14 consultant to Run of River Power and cannot talk about
15 where they sourced that.

16 MR. BYRON WILLIAMS: Okay. So you
17 played no role in the development of this document?

18 MR. RUSSELL TYSON: I assisted in its
19 preparation, but the final authorization was made by
20 their corporate head office. This is not my document.

21 MR. BYRON WILLIAMS: And we'll parse
22 that in just a second, sir. But in the Run of River
23 document they distinguish between Run of River projects
24 and large scale hydro projects.

25 Is -- would that be fair, sir?

1 MR. RUSSELL TYSON: Yes, it would be
2 fair. And for the panel's edification, in BC, as noted
3 earlier, we do have BC Hydro, which has the major dams.
4 And we also have a series of smaller independent power
5 producers that secure contracts with BC Hydro to
6 produce power at smaller megawatts, generally, 50
7 megawatts and below.

8 MR. BYRON WILLIAMS: And in this
9 document, Run of River argues that green projects can
10 be distinguished from large scale hydro projects in
11 that they do not require dams for water storage,
12 thereby eliminating the environmental impacts
13 associated with dams?

14 MR. RUSSELL TYSON: As a matter of
15 clarification, smaller headponds are required for these
16 projects that are not the size of reservoir headponds;
17 they're a lot smaller. And a result of that, the
18 industry has taken a position that these headponds are
19 less environmentally damaging than larger reservoir
20 projects.

21 MR. BYRON WILLIAMS: And just so I
22 understand, sir -- and if you're uncomfortable
23 answering this question you'll let me know -- do you
24 endorse this definition?

25 MR. RUSSELL TYSON: No, I don't endorse

1 the definition, nor can I provide one. I do support
2 renewable energy in all its forms.

3 MR. BYRON WILLIAMS: Okay. Now, I note
4 -- we don't need to turn there, and -- but when you
5 discuss Site C in British Columbia you use the
6 adjective 'clean energy'.

7 Would that be fair, sir?

8 MR. RUSSELL TYSON: That is correct.

9 MR. BYRON WILLIAMS: It would be
10 accurate, sir, to say that, by its own admission, BC
11 Hydro would accept that there are significant residual
12 effects associated with Site C?

13 MR. RUSSELL TYSON: Residual effects
14 have been identified as part of the environmental
15 impact Assessment, yes.

16 MR. BYRON WILLIAMS: Significant ones,
17 sir?

18 MR. RUSSELL TYSON: There are
19 significant effects. The panel must appreciate that I
20 did not write the entire Environmental Impact
21 Statement. I wrote a number of sections towards that,
22 namely navigation and aviation. So I'm not an expert
23 to comment on any other of the areas that are
24 associated in that report, although I am familiar with
25 the authors and what was inputted into those reports.

1 MR. BYRON WILLIAMS: Sir, what I'm
2 interested -- oh.

3 MR. RUSSELL TYSON: Sorry.

4 MR. BYRON WILLIAMS: Sir, what I'm
5 interested in is the adjective 'clean'. And in your
6 view it is appropriate -- let me back up. You would
7 agree hydro is renewable?

8 MR. RUSSELL TYSON: Yes.

9 MR. BYRON WILLIAMS: In your view,
10 notwithstanding the identified significant residual
11 effects, you believe it's appropriate to use the
12 adjective 'clean'?

13 MR. RUSSELL TYSON: I would believe so.
14 But I don't make the definition, nor the law regarding
15 the definitions.

16

17 (BRIEF PAUSE)

18

19 MR. BYRON WILLIAMS: Sir, again, I
20 don't think we need to go there, but in your evidence
21 you do discuss the socioeconomic criteria employed by
22 Manitoba Hydro in its NFAT analysis? If you need a
23 reference, it is page 15.

24 MR. RUSSELL TYSON: Okay.

25 MR. BYRON WILLIAMS: You -- you can

1 check there, just --

2 MR. RUSSELL TYSON: I would like to
3 just reference it for my own edification, please.

4 MR. BYRON WILLIAMS: Yep.

5

6 (BRIEF PAUSE)

7

8 MR. MICHAEL WEINSTEIN: Page 5-0, Mr.
9 Williams?

10 MR. BYRON WILLIAMS: Page 15.

11 MR. MICHAEL WEINSTEIN: One-five (15).

12 Thank you.

13

14 CONTINUED BY MR. BYRON WILLIAMS:

15 MR. BYRON WILLIAMS: Sir, you make a
16 reference in the second paragraph to the socioeconomic
17 criteria of Manitoba Hydro.

18 MR. RUSSELL TYSON: Oh, okay. Now that
19 it's put in context, yes.

20 MR. BYRON WILLIAMS: Okay.

21 MR. RUSSELL TYSON: As part of the
22 Appendix 9.1, fifteen (15) development plans were
23 identified and they were evaluated based on a series of
24 socioeconomic criteria, yeah.

25 MR. BYRON WILLIAMS: And at page 50 and

1 51 of your evidence you offer some discussion of the
2 multiple account benefit analysis, agreed?

3 MR. RUSSELL TYSON: Yes.

4 MR. BYRON WILLIAMS: In looking at the
5 multiple account benefit analysis and the comparison of
6 the plans, sir, did you address your mind to whether
7 the different portfolios had been optimized to maximize
8 their socioeconomic benefits?

9 MR. RUSSELL TYSON: No, I did not. I
10 valued the five (5) different alternative scenarios.

11 MR. BYRON WILLIAMS: So -- so you took
12 them as -- as Hydro gave them to Dr. Shaffer and as he
13 --

14 MR. RUSSELL TYSON: Evaluated as a
15 result of that. I do clarify -- or I would like to
16 clarify that based on our modelling, based on the
17 economic impact assessment, we know that hydro electric
18 projects do generate the greatest economic benefit in
19 terms of jobs, DDP, so on and so forth.

20 MR. BYRON WILLIAMS: Sir, you did not
21 explore, for example, how the competing portfolios
22 might have been optimized to provide additional
23 benefits to Aboriginal communities that are affected by
24 the Hydro project, but are not part of the Keeyask?

25 MR. RUSSELL TYSON: No, I did not, and

1 I don't believe that's part of my scope of work. I
2 eval -- I think my scope of work specifically states,
3 evaluate five (5) scenarios.

4 MR. BYRON WILLIAMS: Okay. And I'm
5 going to gild the lily here for a moment, sir.

6 So you would not have looked at, for
7 example, optimizing the competing portfolios by adding
8 DSM energy efficiency investments into remote First
9 Nation communities?

10 MR. RUSSELL TYSON: No, I did not, and
11 nor was that part of my scope of work. Again, we have
12 to be clear that there was limited opportunities to do
13 that and nor was it part of the scope of work that was
14 identified.

15 I would imagine the experts that have
16 provided witness here could ask -- answer those
17 questions. I cannot.

18 MR. BYRON WILLIAMS: Okay. If we can
19 quickly refer -- turn to the transcript of March 27th,
20 page 4205.

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: And Mr. Tyson,
25 I'll give you a moment to -- to review it, and if

1 you're not familiar with it and you're uncomfortable,
2 we can pro -- we can move on.

3 But just take a moment to look at that -
4 - that reference if you would.

5

6 (BRIEF PAUSE)

7

8 MR. BYRON WILLIAMS: Sir, you -- you'll
9 see, starting at line 3 and finishing at line 14, a
10 discussion between myself and Ms. Kidd-Hantscher from
11 Manitoba Hydro in terms of arrangements for the
12 Nisichawayasihk Cree Nation to receive a -- a certain
13 annual amount in water rentals?

14 MR. RUSSELL TYSON: Yes.

15 MR. BYRON WILLIAMS: Were you aware of
16 that arrangement in -- in performing any of your
17 analysis?

18 MR. RUSSELL TYSON: No, I was not.

19 MR. BYRON WILLIAMS: Okay. If we can
20 scroll down farther on the page, you'll see as well a
21 reference to preliminary arrangements for the Keeyask
22 Cree Nations to perhaps receive water rentals from the
23 province.

24 Do you see that reference, sir?

25 MR. RUSSELL TYSON: Yes.

1 MR. BYRON WILLIAMS: And were you
2 familiar with that in -- in conducting your analysis?

3 MR. RUSSELL TYSON: No, I was not. I
4 note that in BC, water rentals are an issue and First
5 Nations have approached the Province of British
6 Columbia to suggest that some of the water rentals
7 derived from these projects should be provided to local
8 First Nations.

9 MR. BYRON WILLIAMS: Would I be
10 correct, sir, in suggesting to you that none of the
11 portfolios analyzed looked at the -- the idea of
12 optimizing benefits for other First Nations than the
13 NCN and KCN in terms of using water rentals as a way to
14 mechanise -- optimize those portfolios, to your
15 knowledge?

16 MR. RUSSELL TYSON: Not to my
17 knowledge.

18 MR. BYRON WILLIAMS: Just a couple last
19 questions about your high level review of approaches in
20 other jurisdictions.

21 Perhaps we could turn to page 68? And
22 at -- scrolling down to the bottom of that page, sir,
23 you make reference to the Lower Churchill Project
24 Impacts and Benefits Agreement.

25 Am I correct?

1 MR. RUSSELL TYSON: Yes.

2 MR. BYRON WILLIAMS: And you identify
3 that one (1) of the financial benefits for the -- the
4 First Nation -- or, excuse me -- Innu quest --
5 community in question is 5 percent of net project
6 revenue.

7 Am I right, sir?

8 MR. RUSSELL TYSON: Yes.

9 MR. BYRON WILLIAM: Just so I
10 understand, is that particular community obliged to
11 make an investment as a -- an equity investment in the
12 project to receive those benefits?

13 MR. RUSSELL TYSON: That I am not sure
14 of. I guess the word is 'undertaking' if you want that
15 sorted out. I'd have to find that out.

16 MR. BYRON WILLIAMS: Yeah. I -- I
17 wonder if by way of Undertaking you could provide
18 information in terms of whether the impact benefits
19 agreement providing for a 5 percent share of net
20 project revenue is -- whether a pre-condition for it is
21 an equity investment in the project, or whether it's --
22 there isn't?

23 MR. MICHAEL WEINSTEIN: Mr. Williams,
24 Mr. Tyson advises me that he is maybe unlikely to be
25 able to get his hands on that agreement. So we can

1 give the undertaking subject to Mr. Tyson's ability to
2 complete the undertaking, but I -- I don't think he can
3 firmly commit to being able to follow through on that
4 undertaking.

5 MR. BYRON WILLIAMS: So that's
6 acceptable from our client's perspective. And for the
7 reporter, subject to the ability to lay hands upon the
8 impacts and benefits agreement, my understanding that
9 counsel for TyPlan is -- is agreeing that they will
10 examine whether the financial benefits associated with
11 the Lower Churchill Projects impacts and benefits
12 agreement have, as a pre-condition, a equity investment
13 in the project.

14 MR. MICHAEL WEINSTEIN: To be candid,
15 Mr. Williams, I think Mr. Tyson may have provided the
16 word 'undertaking' without considering that he doesn't
17 expect to be able to acquire this agreement.

18 So I don't know that there's any value
19 in giving the undertaking, because he doesn't expect to
20 be able to fulfill it.

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: Sir, would it be
25 fair to say that in undertaking this analysis, you did

1 not explore whether there was an equity investment tied
2 to the receipt of the 5 percent of net project revenue?

3 MR. RUSSELL TYSON: That would be fair.

4 MR. BYRON WILLIAMS: Sir, at page 71 --

5 THE CHAIRPERSON: So the record should
6 definitely indicate that there is no undertaking.

7 MR. BYRON WILLIAMS: Undertaking is
8 withdrawn. I apolo -- yes.

9 THE CHAIRPERSON: Okay, thank you.

10 MR. BYRON WILLIAMS: At page -- excuse
11 me -- 73 of your report, scrolling down to the bottom
12 of the page, sir, you make reference to the -- an
13 agreement between the Quebec government and the Grand
14 Council of the Crees, being the Peace of the Braves.

15 Is that fair, sir?

16 MR. RUSSELL TYSON: Yes.

17 MR. BYRON WILLIAMS: And it would be
18 accurate to say that there are certain benefits flowing
19 to the Cree people as a result of the Peace of the
20 Braves.

21 MR. RUSSELL TYSON: Yes.

22 MR. BYRON WILLIAMS: And, sir, in
23 examining the Peace of the Braves, did you address your
24 mind to whether or not a equity investment in the
25 project was required?

1 MR. RUSSELL TYSON: No, I did not. The
2 intent for our review was to identify whether or not
3 high level agreements had been put in place with the
4 various Cree Nations and whether or not specific
5 benefit agreements had been identified as part of the -
6 - part of the package moving forward to compare those
7 with what's happening with Manitoba Hydro.

8 MR. BYRON WILLIAMS: So if I were to
9 suggest to you that the Peace of the Braves does not
10 require an equity investment, you would not be in a
11 position to --

12 MR. RUSSELL TYSON: Not in a position
13 to comment.

14 MR. BYRON WILLIAMS: -- you would not
15 be in a position to respond, agreed?

16 MR. RUSSELL TYSON: Sorry, I apologize.
17 I interrupted again.

18 MR. BYRON WILLIAMS: But the answer
19 was: You would not be in a position to respond.

20 MR. RUSSELL TYSON: That's correct.

21 MR. BYRON WILLIAMS: Mr. Chair, I would
22 note that there were some Information Requests posed by
23 CAC of -- of TyPlan that we have not received. I don't
24 expect that we would have any questions flowing from
25 those Information Requests.

1 I understand they're -- they're being
2 scrubbed or sanitized as we speak, but I am prepared to
3 close my cross-examination subject to something arising
4 in those Information Request that requires follow-up,
5 if that's the will of the Board.

6 THE CHAIRPERSON: That's an appropriate
7 approach. Thank you.

8 MR. BYRON WILLIAMS: And, Mr. Tyson, I
9 thank you for your time.

10 MR. RUSSELL TYSON: Thank you.

11 MR. SVEN HOMBACH: Mr. Chairman, I note
12 it's a quarter past 4:00. We are a little bit behind
13 schedule since the qualification process took a little
14 bit longer than anticipated.

15 That said, I've canvassed counsel. The
16 CSI session originally scheduled for tomorrow for an
17 hour won't have to take place. If it's acceptable to
18 the panel and lawyers, I would suggest that perhaps we
19 proceed till five o'clock today. That should allow Mr.
20 Hacault to finish, and we should be able to go through
21 the remaining parties tomorrow.

22 THE CHAIRPERSON: Yes, I canvassed the
23 panel beforehand, and we're prepared to sit as long as
24 we have to to make sure that we stay on schedule.

25 So Me. Hacault, s'il vous plait.

1 MR. ANTOINE HACAULT: Merci, M.

2 President.

3

4 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

5 MR. ANTOINE HACAULT: Mr. Tyson, my
6 name's Antoine Hacault. I represent the Manitoba Power
7 Industrial Users Group, a group of ten (10) companies
8 that are significant users of power in this province.
9 We also have consulted various chambers of commerce
10 with respect to their concerns or -- or issues with --
11 on this particular application.

12 So I have some pretty specific areas
13 that I'd like to canvass with you. The first one is
14 turning your attention to page 53 of your report, which
15 is marked as Exhibit 1. It relates to the government
16 account. Five three (53).

17 And I'd like to draw your attention to
18 the first two (2) paragraphs under the heading 5.2.3.,
19 Manitoba Government. In that paragraph, you indicate:

20 "This account assesses the net
21 benefit of cost (incremental net
22 revenue) of the different plans to
23 the Manitoba government (ultimately
24 the taxpayer). The key assumption
25 under this account is to remove tax

1 impacts that do not constitute
2 incremental net revenues to the
3 government."

4 Then you continue:

5 "The account identifies only direct
6 incremental taxes and fees paid by
7 Manitoba Hydro net of incremental
8 government costs or risks."

9 And in the next paragraph, you identify
10 a couple of the payments that would fall in this
11 category. At least that's how I understand the
12 paragraph.

13 You identify capital tax firstly,
14 correct?

15 MR. RUSSELL TYSON: Yes, capital taxes.

16 MR. ANTOINE HACAULT: The next one that
17 you identify as net benefit to the Province of Manitoba
18 is water rentals, correct?

19 MR. RUSSELL TYSON: Correct.

20 MR. ANTOINE HACAULT: And finally,
21 there's other ones, but the next one in line is the
22 debt guarantee fee, correct?

23 MR. RUSSELL TYSON: Correct.

24 MR. ANTOINE HACAULT: The -- that was
25 just deal -- because there's some different views in

1 this hearing as to whether or not that's a -- a net
2 benefit to the government. So that's why I just wanted
3 to confirm that that was your intent.

4 And it continues to be your opinion
5 today, sir?

6 MR. RUSSELL TYSON: Yeah. The major
7 difference is just -- from my perspective, the
8 differences in the plans resides in the water rentals
9 as well as the capital taxes.

10 MR. ANTOINE HACAULT: Okay. Thank you.
11 The next subject that I want to deal with -- and I'll
12 deal with it in the context of a couple statements, an
13 analysis made in your report, sir. In your report,
14 with respect to an electricity rate impacts, as I read
15 your report you focussed largely on the residential
16 sector.

17 Is that correct?

18 MR. RUSSELL TYSON: Yes, I did.

19 MR. ANTOINE HACAULT: And there's been
20 various slides put to this panel. One (1) in the
21 financial panel was that the residential sector
22 represents about 28 percent of the revenue, and the
23 commercial and industrial sector represents about 40
24 percent of the revenue.

25 You may not have been aware of that, but

1 are you willing --

2 MR. RUSSELL TYSON: I was.

3 MR. ANTOINE HACAULT: -- to go along
4 with that?

5 MR. RUSSELL TYSON: I was aware of
6 that, yes.

7 MR. ANTOINE HACAULT: Okay. So, Mr.
8 Williams, who was speaking to you earlier, referenced
9 the Pan-African study. But before I get into that, in
10 your report at the beginning, when you discuss the
11 various matters that were in the scope of your review,
12 one (1) of the things that you mention was a sectorial
13 analysis of the rate impacts.

14 How did you understand that instruction?
15 Was it limited to the residential sector, or did it go
16 further than that?

17 MR. MICHAEL WEINSTEIN: Mr. Hacault,
18 can you please refer us to where on the report you're
19 referring.

20

21 CONTINUED BY MR. ANTOINE HACAULT:

22 MR. ANTOINE HACAULT: Sure. The --
23 it's -- I have it in page -- little -- it's 1a of page
24 1 of the report, so there's some Roman numerals, and
25 then page 1. There's paragraph 1a. This is in the

1 introduction, and then 1.2 -- it's Section 1.2, Scope
2 of Work.

3

4 (BRIEF PAUSE)

5

6 MR. ANTOINE HACAULT: Yes, Diana's
7 found it.

8 MR. RUSSELL TYSON: Yes, where it does
9 say --

10 MR. ANTOINE HACAULT: So you could see
11 at the first -- the first phrase says, 1a:

12 "Economic impact assessment to
13 determine sector economic impacts."

14 But as a read your report, sir, your
15 sectors were limited to the residential sector,
16 correct?

17 MR. RUSSELL TYSON: Yes, it was.

18 MR. ANTOINE HACAULT: And if we were to
19 contrast that, the African report that Mr. Williams
20 looked at actually broke down the commercial and
21 industrial areas into eight (8) different sectors and
22 looked at the economic impacts on those sectors,
23 correct?

24 MR. RUSSELL TYSON: Yes.

25 MR. ANTOINE HACAULT: Okay. So I

1 guess, unfortunately, we don't have your views of the
2 potential impacts, whether they would be positive or
3 negative, on the industrial sector, part of which is
4 represented by Manitoba Power Industrial Users Group,
5 correct?

6 MR. RUSSELL TYSON: That would be
7 correct.

8 MR. ANTOINE HACAULT: Now, in your
9 report at page 52 you reference rates. You see --
10 initially, you record correctly that Manitoba was doing
11 a financial projection, that if it met the 75:25 target
12 there would be rate increases 9 -- or 3.95 percent
13 annually, correct?

14 MR. RUSSELL TYSON: Correct.

15 MR. ANTOINE HACAULT: I know there's
16 been an influx of a lot of information. Were you aware
17 that Manitoba Hydro filed some new financial
18 information based on some updated capital costs and DSM
19 scenarios?

20 MR. RUSSELL TYSON: I'm aware that they
21 filed information, the content of which I am not versed
22 in.

23 MR. ANTOINE HACAULT: Okay. Diana, I
24 think you have now on -- in your databank, Exhibit 104-
25 12, they were fairly large files. Point three (.3) --

1 or dash three (3). There's -- the 1st page is the --
2 what I call the reference case, page 61. It's Level 2
3 DSM.

4 I don't know if it's still loading for
5 you, Diana.

6

7 (BRIEF PAUSE)

8

9 MR. ANTOINE HACAULT: I think there's
10 another way to deal with that while this is loading.
11 Can you also try to load 104-12-2. It's a summary
12 table.

13 Now, firstly, if we can go to -- there's
14 a numerical ordering of these plans. And the eleventh
15 item on the left-hand side, we'll see if we go down,
16 it's an All Gas Plan.

17 Do you see that on the screen, sir?

18 MR. RUSSELL TYSON: Yes.

19 MR. ANTOINE HACAULT: Okay.

20 MR. RUSSELL TYSON: On line 11?

21 MR. ANTOINE HACAULT: On line 11. This
22 is on page 1 of 3 of Exhibit 104-12-2.

23 Now, the numbers with respect to the All
24 Gas Plan, if we go across the -- that line 11, you'll
25 see that there's a column B on the top that says

1 "Projected Even Annual Rate Increases," and if we've
2 gone across line 11, we see that Hydro, under these re-
3 run financials for All Gas, is projecting 3.36 percent
4 rate increases.

5 MR. RUSSELL TYSON: Yes.

6 MR. ANTOINE HACAULT: Do you see that?

7 MR. RUSSELL TYSON: I see that.

8 MR. ANTOINE HACAULT: And then the one
9 (1) thing that financial pro formas would show us that
10 -- that these are increases over eighteen (18) years,
11 and then if we go across two (2) further columns down,
12 it's column D in the Excel -- well, this sheet, we see
13 that the cumulative increases as of 2031/'32 would be
14 82 percent.

15 Do you see that?

16 MR. RUSSELL TYSON: Yes.

17 MR. ANTOINE HACAULT: Okay. And then
18 if -- is it your understanding, sir, that the Preferred
19 Development Plan is still to proceed with Keeyask and
20 then Conawapa with the 750 megawatt line?

21 MR. RUSSELL TYSON: That is the
22 Preferred Development Plan, yes.

23 MR. ANTOINE HACAULT: Yes.

24 MR. RUSSELL TYSON: But I also note,
25 just for everybody's edification, the significance of

1 the pathways that I had identified in the report that
2 provide flexibility, which would change the numbers
3 going forward. And as a planner, I find that
4 interesting, 'cause I think in -- in my opinion, the
5 flexibility in those pathways is a critical element
6 that has to be looked at in detail, which would change
7 the results here. Right?

8 MR. ANTOINE HACAULT: We'll take it one
9 (1) step at a time. I agree that pathways is
10 important.

11 MR. RUSSELL TYSON: Okay.

12 MR. ANTOINE HACAULT: But one (1)
13 pathway might lead us to the line 15 on the left-hand
14 side, which pathway is going down the road of Keeyask19
15 with a 'W' -- with the sales, and C31 is Conawapa31.
16 That's Plan 14 with Level 2 DSM.

17 Do you see that, sir?

18 MR. RUSSELL TYSON: I'm looking.

19 MR. ANTOINE HACAULT: So we start on
20 the left-hand side.

21 MR. RUSSELL TYSON: Yeah. Yeah.

22 MR. ANTOINE HACAULT: Line 15. And
23 then we go across, that's Plan 14 with DSM Level 2, and
24 if we go to the same column B as in 'Bob', under this
25 line 15 and do a cross-section, we see that the annual

1 increases are not 3.36 percent, but the revised pro
2 formas show that Manitoba Hydro, if it wants to achieve
3 the 75/25 target, would have to do 4.63 percent --

4 MR. RUSSELL TYSON: Yes.

5 MR. ANTOINE HACAULT: -- increases for
6 each of those years leading up to 2031/2032, correct?

7 MR. RUSSELL TYSON: Correct.

8 MR. ANTOINE HACAULT: Okay. And if we
9 go two (2) lines further, we see when we compare the
10 All Gas Plan at 80 -- 82 percent cumulative nominal
11 rate increases, that compares to the plan we were just
12 looking at, Plan 14 with Level 2 DSM for a total of 125
13 percent increases, or some 43 percent greater increases
14 over that time period.

15 MR. RUSSELL TYSON: Yes, I see that.

16 MR. ANTOINE HACAULT: And some
17 mathematicians might say, if you look at 82 percent,
18 you're actually looking at a 50 percent increase over
19 the All Gas, because you're basically taking half of
20 that 40 -- or 82 percent, taking 50 percent of that and
21 adding it on.

22 So you're having a 50 percent increase
23 in -- in between the two (2) plans, correct?

24 MR. MICHAEL WEINSTEIN: I just want to
25 -- that -- point out that Mr. Tyson's not a

1 mathematician, so I'm not sure that he can comment on
2 the equation that you're positing here, Mr. Hacaault.

3

4 CONTINUED BY MR. ANTOINE HACAULT:

5 MR. ANTOINE HACAULT: Can you or can
6 you not?

7 MR. RUSSELL TYSON: I'm not a
8 mathematician.

9 MR. ANTOINE HACAULT: Okay.

10 MR. RUSSELL TYSON: But I guess your
11 point is, Does this Gas Plan, because it's got a lower
12 rate, repre -- change my mind regarding the analysis?
13 Is that kind of where you're going with it?

14 MR. ANTOINE HACAULT: Well, did you
15 analyze, sir, what impact there would be on ratepayers,
16 residential ratepayers firstly, of seeing that quantum
17 of increase from a total of 82 percent up to a total of
18 125 percent rate increases over that time period?

19

20 (BRIEF PAUSE)

21

22 MR. ANTOINE HACAULT: If you didn't,
23 it's okay if...

24 MR. MICHAEL WEINSTEIN: Are you asking
25 him the revised numbers, Mr. Hacaault?

1 MR. ANTOINE HACAULT: That's on the
2 revised numbers. I assumed he was just going to say
3 no, but...

4 MR. MICHAEL WEINSTEIN: No, because he
5 hasn't had an opportunity to be versed in those new
6 numbers, so I don't think he'd -- I think the answer is
7 no, but the point is that he hasn't had an opportunity.

8

9 CONTINUED BY MR. ANTOINE HACAULT:

10 MR. ANTOINE HACAULT: So --

11 MR. RUSSELL TYSON: No.

12 MR. ANTOINE HACAULT: Thank you, sir.
13 Now, if I go to page 58 of your report, you also drew
14 some conclusions based on some, I'm going to call old
15 graphs, which you sourced from Chapter 13 of the Hydro
16 material, correct?

17 MR. RUSSELL TYSON: Correct.

18 MR. ANTOINE HACAULT: Were you able to
19 follow the record to see how this graph has changed
20 subsequent to change in methodology to remove common
21 costs?

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

23 MR. ANTOINE HACAULT: Okay. The reason
24 why I ask that question, sir, is that you draw some
25 conclusions with respect to the S-curves, and those S-

1 curves have now changed. So if the S-curves have
2 changed, your conclusions on that page, and I'll draw
3 your attention to the conclusion that I'm thinking of,
4 may also have changed, and that relates to the risk of
5 the All Gas Plan that goes way to the left. That's the
6 blue line?

7 MR. RUSSELL TYSON: Yes.

8 MR. ANTOINE HACAULT: So you note under
9 the -- in the first full paragraph after this drawing,
10 in the second sentence of that first full paragraph,
11 and I'm quoting:

12 "While a wide range of outcomes are
13 presented, the PDP does offer the
14 greatest upside potential, whereas
15 the Gas Plan's the most downside
16 potential."

17 But that was a comment that you made
18 based on this graph, sir.

19 Isn't that correct?

20 MR. RUSSELL TYSON: That is correct.

21

22 (BRIEF PAUSE)

23

24 MR. RUSSELL TYSON: I had also noted
25 for the panel's understanding that this is based on a

1 seventy-eight (78) metric, and that the variation in
2 the plans based on the years is an important
3 consideration on looking at this S-curve.

4 MR. ANTOINE HACAULT: And we don't yet
5 have full -- fully updated information with all the
6 plans and how they compare for a full quilt, but that's
7 why I was taking you through some of this information
8 that we have received only pretty recently, quite
9 frankly. So I -- I -- I'm not -- it's -- I'm not being
10 critical at all of you, sir, I -- I just wanted to the
11 panel to understand that when you're making comments
12 with respect to certain information, they have to
13 understand that it's in context of what you were
14 provided initially in preparing your report.

15 Is that fair?

16 MR. RUSSELL TYSON: That is fair.

17 MR. ANTOINE HACAULT: Okay.

18

19 (BRIEF PAUSE)

20

21 MR. ANTOINE HACAULT: Okay. Now,
22 you've had a -- a brief conversation with Dr. Grant on
23 the discount rates that were chosen and your conclusion
24 that a 6 percent real discount rate was reasonable.

25 Would you acknowledge that there may be

1 Manitoba Hydro customers that might have different
2 views on a financial analysis as to the value of money
3 to them, and as a result, they might have different
4 views on what an appropriate rate to use would be?

5 MR. MICHAEL WEINSTEIN: I don't think
6 Mr. Tyson can speculate as to the views of -- of those
7 individuals, Mr. Hacaault.

8 MR. ANTOINE HACAULT: He -- I'm not
9 asking him to speculate on the views. He acknowledged
10 that there was a range of discount rates being
11 discussed in the materials that he's read. If -- if he
12 can't acknowledge that there would be diffe --
13 different perspectives, I'm not too sure why he would
14 reference that there's different rates in the
15 materials.

16 MR. MICHAEL WEINSTEIN: Well, he -- he
17 may be able to speak to it -- acknowledge if there are
18 different perspectives, but he was asked if other
19 individuals might view different rates as reasonable,
20 and I think only those individuals can speak to that
21 and not Mr. Tyson.

22

23 CONTINUED BY MR. ANTOINE HACAULT:

24 MR. ANTOINE HACAULT: Well, sir, were
25 there rates that were higher and lower than the 6

1 percent you chose?

2 MR. RUSSELL TYSON: Were there rates
3 higher and lower?

4 MR. ANTOINE HACAULT: Yes.

5 MR. RUSSELL TYSON: Observed, what we
6 looked at, there was a range of rates between -- I'd
7 have -- I -- just give me a second and I'll reference
8 it. That was referenced in the NFAT. I think it was
9 five (5) to seven point three (7.3) in reference to
10 what has been done on Site C. Even though it has
11 limited application, it is a similar project. They
12 used 5.5 to 6 percent.

13 MR. ANTOINE HACAULT: Thank you, sir.

14

15 (BRIEF PAUSE)

16

17 MR. ANTOINE HACAULT: Those are all the
18 questions that I had of this witness. I thank you very
19 much for being cooperative, sir, and answering the
20 questions that I asked to the best of your ability.

21 MR. RUSSELL TYSON: Thank you.

22 THE CHAIRPERSON: Thank you. We have
23 available time, so --

24 MR. SVEN HOMBACH: Well, Mr. Chairman,
25 there's three (3) parties that still need to cross-

1 examine, namely, Ms. Saunders, Mr. Gange, who will be
2 here tomorrow -- sorry, three (3) Intervenor parties
3 that still have to cross-examine: Ms. Saunders, Mr.
4 Gange, and Mr. Orle.

5 I'm advised Manitoba Hydro will have
6 approximately half an hour of questions, and I -- I
7 certainly will not be longer than that. So if the
8 panel wants to err on the side of caution, and if Ms.
9 Saunders is ready, my suggestion would be to continue
10 to five o'clock.

11 Alternatively, if the panel prefers to
12 break right now, we'll try to finish on time in the
13 morning.

14 THE CHAIRPERSON: I just noticed that
15 Me. Hacaault has a -- a question.

16 MR. ANTOINE HACAULT: There's just one
17 (1) thing, and when I looked here that I forgot to ask
18 this witness it.

19 THE CHAIRPERSON: Please go ahead.

20 MR. ANTOINE HACAULT: It won't be very
21 long. It's two (2) or three (3) questions.

22

23 CONTINUED BY MR. ANTOINE HACAULT:

24 MR. ANTOINE HACAULT: Diana, could you
25 bring up MIPUG-20-5, please, page 180?

1 Sir, the question I'll be asking you
2 relates to your comments in your report and your slides
3 on electricity rates, and how Manitoba rates fare
4 compared to other jurisdictions.

5 And this is a document that's part of
6 the proceedings. It's a Minnesota Power report. You
7 may be aware that there's a tie-line, a 750 megawatt
8 line, going down to -- to that area, and Minnesota
9 Power is championing that line.

10 Are you aware of that?

11 MR. RUSSELL TYSON: I am aware of the
12 line, yes.

13 MR. ANTOINE HACAULT: And if we go
14 further down that page, Diana -- oh, sorry, it was one
15 eighty-eight (188), I believe. At the second last
16 paragraph on that page, Minnesota Power is reporting
17 that its average retail electric rate is five point
18 nine-seven (5.97) cents per kilowatt hour, which was
19 the fourth lowest in the US among a hundred and sixty-
20 nine (169) providers surveyed.

21 Were you aware of that, sir?

22 MR. RUSSELL TYSON: No, I was not.

23 MR. ANTOINE HACAULT: Okay. And
24 Minnesota Power also reports that its retail electric
25 rate was the second lowest in the west north central

1 region, which had an average rate of seven point eight
2 (7.8) cents per kilowatt hour, and finally, the lowest
3 in Minnesota, which has an average of eight point zero-
4 nine (8.09) cents per kilowatt hour.

5 Were you aware of that?

6 MR. RUSSELL TYSON: No, I was not aware
7 of that.

8 MR. ANTOINE HACAULT: Thank you.

9 THE CHAIRPERSON: Merci, Me. Hacault.

10 Mr. Orle, will -- will you be prepared
11 to -- do you have any questions for these -- for Mr.
12 Tyson, or are you prepared to go ahead today, or?

13 MR. GEORGE ORLE: I -- I will have some
14 questions. I'm not prepared at this time. I was to
15 caucus with Mr. Anderson this evening after this
16 evidence was heard, and I was expecting to go tomorrow.
17 I -- I will not be longer than twenty (20) minutes. I
18 can assure the panel of that.

19 THE CHAIRPERSON: Thank you for that.
20 Ms. Saunders, are you prepared to go ahead now?

21 MS. JESSICA SAUNDERS: I'm in somewhat
22 the same position, Mr. Chair. I don't anticipate
23 taking longer than twenty (20) minutes as well, but
24 given some of the questions asked today, I may want
25 some time to reflect on those questions, if -- if

1 that's okay. I -- I could proceed, but I -- I may
2 prefer to go tomorrow, if that's all right.

3 THE CHAIRPERSON: I believe that
4 concludes the session for today, unless there's some
5 other business to attend to.

6 MR. SVEN HOMBACH: We'll -- we'll
7 enforce time limits tomorrow, Mr. Chair, and we should
8 be fine. I am advised by Manitoba Hydro counsel that
9 Manitoba Hydro has some undertaking responses to speak
10 to.

11 THE CHAIRPERSON: Okay. Let's address
12 those right away then.

13 MS. JANET MAYER: Good afternoon.
14 Janet Mayer for Manitoba Hydro. We have -- I was a
15 given a huge pile of documents that I will hand out
16 once the proceedings are adjourned.

17 So we have Manitoba Hydro Exhibit 177.
18 It is made up of a number of parts, so when individuals
19 receive that, they should look at it. There's a number
20 of sub-parts to this, and these are Manitoba Hydro
21 responses to CAC Exhibit 51. There are, as well, some
22 Excel spreadsheets that will be filed electronically
23 with -- with the panel as part of that exhibit.

24 There is another exhibit, and that one
25 will be Exhibit 177.

1 --- EXHIBIT NO. MH-177: Manitoba Hydro responses to
2 CAC Exhibit 51 and Excel
3 spreadsheets
4

5 MS. JANET MAYER: Sorry, I should have
6 done these in a different order. I've got them
7 backwards. Manitoba Hydro Exhibit 176 is Manitoba
8 Hydro's response to a number of PUB questions, and that
9 as well is in three (3) sub-parts.
10

11 --- EXHIBIT NO. MH-176: Manitoba Hydro's response
12 to a number of PUB
13 questions; in three (3)
14 sub-parts
15

16 MS. JANET MAYER: There is, as well, a
17 revision to Manitoba Hydro Exhibit 171 that is being
18 filed, and that is a one (1) page chart relating to
19 economics of the 750 megawatt interconnection plans.
20

21 --- EXHIBIT NO. MH-171-REVISED:
22 A one (1) page chart
23 relating to economics of
24 the 750 megawatt
25 interconnection plans

1 MS. JANET MAYER: And lastly, as we're
2 filing is Manitoba Hydro Exhibit 104-4-1, the DSM
3 analysis economic summary tables using 4.65 percent
4 discount rate.

5

6 --- EXHIBIT NO. MH-104-4-1:

7 DSM analysis economic
8 summary tables using 4.65
9 percent discount rate

10

11 MS. JANET MAYER: So those are all the
12 answers to undertakings and documentation for today.

13 THE CHAIRPERSON: Thank you. I believe
14 that concludes the session for today, so I wish you all
15 a good evening, and we'll see each other again tomorrow
16 morning at nine o'clock sharp. Thank you.

17 (PANEL RETIRES)

18

19 --- Upon adjourning at 4:41 p.m.

20

21 Certified correct,

22

23 _____

24 Cheryl Lavigne, Ms.

25

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