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YUKON UTILITIES BOARD

YUKON ENERGY CORPORATION APPLICATION FOR THE REFERRAL OF
THE ELECTRICITY PURCHASE AGREEMENT (EPA) WITH TLINGIT
HOMELAND ENERGY LIMITED PARTNERSHIP (THELP) TO THE YUKON
UTILITIES BOARD FOR REVIEW UNDER THE *PUBLIC UTILITIES ACT*

P R O C E E D I N G S

Volume 2
July 20, 2022
Held via videoconference
Whitehorse, Yukon

A. HALL, E. MOLLARD, C. OSLER

1 Proceedings taken at the Yukon Utilities Board via
2 videoconference.

3

4 Volume 2

5 July 20, 2022

6

Richard Buchan

Chair

7

Bonnie King

Vice Chair

Anne Middler

Commission Member

8

Lesley McCullough

Commission Member

9

Alison Sabo

Commission Counsel

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Deana Lemke

Commission Staff

Dwayne Ward

Commission Staff

11

P. John Landry, QC

For Yukon Energy Corporation

12

Christopher Cullingham

For ATCO Electric Yukon

13

Nathanial Yee

In his Own Stead

14

Joshua Dyck

InterGroup Consultants

15

John Maissan

In his Own stead

16

Roger Rondeau

For Utilities Consumers'
Group

17

18 Lorelee Vespa, CSR(A) RPR CRR Official Court Reporters
19 Danielle Harmata, CSR(A)

20

(PROCEEDINGS COMMENCED AT 10:02 A.M.)

21

22 **A. HALL, E. MOLLARD, C. OSLER** (For Yukon Energy

23 **Corporation), previously affirmed**

24

THE CHAIR:

Good morning, everyone. I see

25

Mr. Rondeau has been able to log on.

A. HALL, E. MOLLARD, C. OSLER

1 So just before we go, are we getting -- the
2 speakers seem to be quite loud. I'm hearing a little
3 bit of almost feedback.

4 Okay. So after our full day or almost full day
5 yesterday, we've gotten the transcript. So we've got a
6 few preliminary matters.

7 Mr. Rondeau, I gather you had some travel
8 difficulties that prevented you from attending
9 yesterday morning?

10 You're muted, Mr. Rondeau. If you can unmute
11 yourself. All right. He's unmuted now.

10:03

12 Mr. Rondeau, can you hear us now?

13 MR. RONDEAU: (Indiscernible).

14 THE CHAIR: We can't hear you at all.

15 MR. RONDEAU: (Indiscernible).

16 THE CHAIR: No, the --

17 UNIDENTIFIED SPEAKER: No one is hearing him.

18 THE CHAIR: The court reporter can't hear you.

19 All right. Mr. Rondeau, check -- did you email
20 him?

10:04

21 MS. LEMKE: Yes.

22 THE CHAIR: Check your email. You should have
23 an email from Ms. Lemke with a phone number that you
24 can call in to.

25 UNIDENTIFIED SPEAKER: It's also in the chat. You should

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1 be able to see it in the chat.

2 THE CHAIR: Well, that's -- Deana, you sent
3 him just the regular phone number that he can call in,
4 just for audio? Okay. You gave him the Zoom number?
5 Okay.

6 You got that message, Mr. Rondeau, in your chat.
7 Can you hear us now, Mr. Rondeau? And can you test --
8 give us your voice?

9 MR. RONDEAU: (Indiscernible).

10 THE CHAIR: Try speaking into your phone,
11 Mr. Rondeau.

10:06

12 MR. RONDEAU: (Indiscernible).

13 MR. YEE: This is Nathaniel Yee. I don't
14 think he's connected on the phone. I am the one
15 connected. There's a call-in user.

16 THE CHAIR: Yeah, there's another. I see.
17 Okay.

18 Well, Mr. Rondeau, we're past our start time. We
19 had a technical check-in arrangement on Monday at 3:00,
20 the very purpose of which was to overcome these kinds
21 of technical difficulties and to ensure that everybody
22 was ready to go yesterday.

10:06

23 So, in the circumstances, I think we'll have to
24 consider you as having forgone your opportunity to ask
25 any further questions today. You had the opportunity

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1 yesterday, and I'm sorry, we can't accommodate you
2 today because of these technical difficulties that
3 could have been avoided with the check-in on Monday.

4 So we'll proceed to check in with you, Mr. Landry.
5 Do you have any preliminary matters that you would like
6 to deal with before we get on with the continuing
7 examination by Ms. Sabo?

8 MR. LANDRY: Can you hear me okay, Mr. Chair?

9 THE CHAIR: You might need to increase the
10 volume on your microphone or try.

10:08

11 MR. LANDRY: Is that a bit better?

12 THE CHAIR: That's much better, thank you.

13 MR. LANDRY: Okay. Thank you. I apologize.

14 Just in terms of Mr. Rondeau's issue, that was one
15 of the reasons why I asked the question yesterday after
16 -- before Ms. Sabo started, was for the very issue that
17 we're now dealing with, so I wasn't aware of
18 accommodation for Mr. Rondeau. But, in any event,
19 you've made your ruling, sir.

20 Mr. Chair, what we do have, though, I think that
21 will help, is, I think there were three undertakings
22 left yesterday, if I have that correct. If we could,
23 Ms. Sabo, Mr. Chair, have the panel deal with those
24 three undertakings first before we continue with the
25 cross-examination by Ms. Sabo, that would be helpful.

10:08

A. HALL, E. MOLLARD, C. OSLER

1 THE CHAIR: Yes, that would be good. So, yes.

2 MR. LANDRY: Okay. So the first two will be
3 dealt with, just so everybody is aware and the court
4 reporter, will be dealt with by Mr. Osler, and the
5 third will be dealt with by Mr. Mollard.

6 And just a small technical issue, virtual hearing
7 type thing, the first one will deal with an Excel
8 spreadsheet. I think it's a couple of pages. He will
9 speak to it, Mr. Chair, and then what we'll do is once
10 we're done with that, we'll email a copy, and then it
11 can be formally introduced as an exhibit, if that works
12 okay with you.

10:09

13 THE CHAIR: Yeah, that's -- unless, are we
14 able to have it -- enable the YEC panel to put it up on
15 the screen? Would it be easier to do it that way so
16 that it would be on the screen while Mr. Osler speaks
17 to it?

18 A. MR. MOLLARD: Unfortunately, Mr. Chair, we're
19 not set up to share documents.

20 THE CHAIR: Oh, I see. Okay. All right.

10:09

21 A. MR. MOLLARD: Yeah, yeah. So we'll file it --
22 we'll file it at the first break.

23 MR. LANDRY: Yeah. Let's do it this way,
24 Mr. Chair, because I totally get -- it's the one
25 problem -- not a problem, one issue with the virtual

1 hearing. Let's see if we speak to it, and then see how
2 it goes. It will get formally filed.

3 But, obviously, if there's further questions on
4 it, once it's filed, it probably would be better once
5 it has an exhibit number, so we can do that at the
6 break.

7 THE CHAIR: Very good. Okay.

8 UNDERTAKING RESPONSES:

9 MR. LANDRY: Okay. Thank you.

10 Mr. Osler, would you like to deal with the first
11 couple of undertakings? 10:10

12 A. MR. OSLER: Okay. Morning, everyone. The
13 first undertaking I'm going to deal with related to
14 page 145 on the transcript -- sorry, page 103 on the
15 transcript -- I misspoke -- where we were asked to
16 provide the calculations in an Excel spreadsheet,
17 explain the numbers that were provided in Footnote 16
18 in the amended filing, Exhibit B-5.

19 The numbers were for the levelized cost of
20 capacity for a thermal plant, and they showed how we
21 came to a number of \$200 per kilowatt, which was
22 between the numbers, in 2024 dollars, of
23 193 per kilowatt and \$220.60 cents per kilowatt. So
24 the question was how did we calculate and show us in an
25 Excel spreadsheet the 193 and the 220.6. 10:11

1 The sheet we will file will show how the
2 calculations were done, and I'll just go through the
3 assumptions so they're on the record. They're also in
4 the -- in the document.

5 So the first set of numbers came from a Midgard
6 report in 2019, for a 12.5 megawatt new diesel plant in
7 Takhini, costing \$32.5 million for the 12.5 megawatts
8 and a fixed annual O&M cost of \$806,000.

9 The Midgard analysis assumed a weighted average
10 cost of capital that they were provided with at that
11 time by YEC of 4.92 percent and an assumed inflation at
12 2 percent per year.

10:12

13 The result, as shown in the calculations that are
14 sent to you, is in 2019 dollars. The levelized cost of
15 capacity is \$175,000 per megawatt. Escalated at
16 2 percent per year, that becomes \$193,770 per megawatt.
17 So that shows how the \$193,000 number which, if
18 rounded, really, becomes 194, but how that number was
19 calculated, and it shows that, Mr. Chairman, how the
20 calculations were done year by year over 40 years,
21 present values and everything else that were used.

10:13

22 The second number that is referenced in the
23 Footnote 16 is the \$199 number in 2019 dollars or
24 220.6000 in 2024 dollars.

25 That calculation assumed the same capital costs

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Undertaking Responses

1 for the 12.5 megawatts, the same operating cost without
2 taxes, but then added on an additional amount
3 for income -- for property taxes if located in City of
4 Whitehorse. And it was a minimum estimate of what the
5 incremental cost would be for the property taxes.

6 So that, effectively, the annual cost per megawatt
7 for fixed operation increased from \$64,000 in the
8 Midgard numbers to \$91,000 per year in the example,
9 assuming the location is in Whitehorse.

10 So that was the major change. The other change in
11 the calculation was that YEC used the weighted average
12 cost of capital from its 2021 GRA filing, where,
13 effectively, they had filed 8.7 percent for equity and
14 2.9 percent for debt for a weighted average cost of
15 capital of 4.79 percent. So it's slightly different
16 than Midgard's.

17 Based on that, the numbers are shown to come out
18 to be 199,783,000 per megawatt for 2019, and 220
19 thousand 576 thousand for 2024. There are notes to
20 each of those two tables to explain what I just
21 finished saying, but I think, Mr. Chairman, that --
22 that is the essence of what the tables will show, and
23 we will provide them by email as soon as possible.

24 I think --

25 THE CHAIR:

Thank you, Mr. --

10:14

10:15

1 A. MR. OSLER: I think the idea is you want to
2 give an exhibit number after you get the table, but
3 there will have to be an exhibit number for this
4 document, so...

5 THE CHAIR: Yeah. So I think based on our
6 exhibit list, the B series of exhibits are the YEC
7 documents, and it would appear B-16 would be the
8 appropriate exhibit number.

9 A. MR. OSLER: Thank you. When we send it, then,
10 Mr. Chairman, we will put that exhibit number on the
11 Excel file document so that it's clear.

10:15

12 THE CHAIR: Very good. Thank you, Mr. Osler.

13 A. MR. OSLER: So that was the first undertaking.
14 A good way to start the day, with a bunch of numbers.

15 The second undertaking was to do with page 145 of
16 the transcript, and it was following our discussion
17 about modelling of the water and our review of
18 YUB-YEC-2-29, which explain information on how
19 SNC-Lavalin had done some modelling, and also how
20 Knight Piésold had done some modelling and how they
21 were brought together into a ratio of
22 70 percent/30 percent for the modelling that was used
23 in the amended application.

10:16

24 And the question we were asked to deal with was to
25 confirm that the 51 modelled years that we see in the

1 filing, Table A1 if you like, are based on four years
2 of actual flow data. And we were asked to explain, you
3 know, any extra points we had to make about it or, if
4 that statement was wrong, what would be the correct
5 statement, effectively.

6 In the process of reviewing this last night, sort
7 of talked to the people in YEC who deal with the
8 modelling a bit and also sort of read more thoroughly
9 and refreshingly the information from SNC-Lavalin that
10 had been provided to YEC.

10:17

11 The general point about using four years to get a
12 model calibrated and then extrapolating it for 51 years
13 is correct, but it may imply things that are a little
14 bit more cavalier than the engineers would certainly
15 ever want anybody to think.

16 They have a very comprehensive model they call
17 "SWAT," soil and water assessment tool, and what they
18 were doing was looking at the Surprise Lake over four
19 years and seeing exactly how much water is implied to
20 have to have gone into that lake in order to match the
21 recorded levels of the lake.

10:18

22 So, in order to calibrate the model, they say in
23 the quote from YUB-2-29: (as read)

24 "An inflow series into Surprise Lake was
25 reconstituted based on the available

1 lake level data from 2015 to 2018 and
2 the hydraulic properties of the outflow
3 structures."

4 So they were doing a calculation based on those years to
5 constitute and derive inflow data based on what they
6 just finished saying.

7 They then have a comprehensive model of climate
8 data, temperatures, precipitation, and such other and
9 things, as well as land data on the terrain and the
10 properties of the terrain, and they used that data to
11 develop their model, their SWAT model comprehensively
12 over those four years and getting the correlation from
13 the climate data and the inflow data that they had just
14 derived as I described it.

10:19

15 They then took that model, which they claimed to
16 have now been properly calibrated and looking quite
17 accurate, and they then took all the climate data that's
18 on record for precipitation, temperature, as well as the
19 land data that I just described, because it's a land and
20 water model, and they extrapolated for the years 2000 --
21 1964 to 2020. And the numbers that ended up in
22 exhibit -- in our filing were 1970 through to 2020.

10:19

23 So, yes, they took four years and then they
24 extrapolated it, but they would certainly want me to
25 make very clear that they were using a comprehensive

1 model that they call "SWAT" to correlate information
2 from the four years with water data, and then used a
3 whole bunch of other actual precipitation and climate
4 data to derive the numbers that they provided.

5 So that's the direct question on the SNC-Lavalin
6 model. I don't have the same degree of information
7 available on the Knight Piésold model, but they were
8 using a slightly different model, and they were using
9 Spruce Creek watershed model data calibrated, but they
10 too were using four years.

10:20

11 And the answer to the question YUB-2-29 tells you
12 the rest, Mr. Chairman, in terms of the one model came
13 out with one set of numbers and the other model came out
14 with the -- a slightly different set, and there's a
15 graph that shows the difference.

16 And the final result, just for the record, is the
17 amalgam of the two. It isn't just SNC-Lavalin. It's
18 SNC-Lavalin and Knight Piésold, as described in the
19 answer.

20 The only other thing that I looked at in the spare
21 time between last evening and this morning was that
22 there was a reference in our answers to
23 Morrison Hershfield. And I can recall, when we were
24 doing the amended application and talking to people,
25 that the point was made as follows: Originally everyone

10:21

1 started with Morrison Hershfield's data that were
2 derived the way they derived them going back 1964,
3 et cetera. And Morrison Hershfield came up with numbers
4 that we were originally using when we started this
5 negotiation process which were higher than any of the
6 numbers we're talking about right now. I think they had
7 around 46 gigawatt hours for the annual average,
8 long-term average, and about 38 or so million kilowatt
9 hours for the winter period, as we define it nowadays.

10 So during the process of negotiating the original
11 EPA, I have -- now can confirm that around March of
12 2021, SNC-Lavalin, working with THELP, came forward with
13 an adjusted set of numbers, still using, basically, the
14 Morrison Hershfield data, but adjusting it for how they
15 thought the actual operations would work, and that
16 reduced the numbers down to the numbers you saw in the
17 original application. Quite a lot lower than
18 Morrison Hershfield.

19 And as people said to us during the amended
20 application process, the amended EPA, between
21 SNC-Lavalin and Knight Piésold, they effectively came
22 back up a little bit towards where Morrison Hershfield
23 had been in these amended model -- more recent modelling
24 and totally new approach.

25 And on that basis, YEC's general conclusion, as

10:22

10:22

1 stated in the answer, was: "We've had three different
2 groups of engineers look at this. We're pretty
3 comfortable that the actual results must be somewhere in
4 this range." And we can discuss the implications for
5 the EPA and customers if the answer differs a little
6 bit, but we were pretty comfortable that these people
7 had all come up with something that's pretty close to
8 what's going to happen within that range.

9 Now, Mr. Chairman, I think that's about as good we
10 can do in responding to more information on the
11 modelling.

10:23

12 THE CHAIR: Thank you very much, Mr. Osler.
13 Yeah, your elaboration definitely helps to expand our
14 understanding of where those numbers came from.

15 Mr. Landry, you have one other of your panel
16 members?

17 MR. LANDRY: Yes, Mr. Mollard will give the
18 answer to the third undertaking, Mr. Chair.

19 A. MR. MOLLARD: Thank you, Mr. Landry.

20 Good morning, Mr. Chair.

10:24

21 Yes, I'll address the undertaking that's flagged
22 in the transcript at page 171:

23 "To advise what disclosure was made to
24 stakeholders of available options to the
25 20-megawatt plant, including whether one

1 option was the continuing use of rental
2 diesel generators."

3 So just a point of clarification on this exercise, the
4 focus of the exercise undertaken in 2019 was
5 specifically to address options for a permanent fossil
6 fuel project more specifically looking at the preferred
7 location and the fuel type.

8 So the report that we attached to YUB-YEC-1-36 does
9 summarize a couple of points that I think goes to this
10 undertaking. Stakeholders pretty clearly supported
11 renewables over fossil fuels, talking about batteries
12 and geothermal, biomass, wind/solar.

10:24

13 On the rental side of things, rentals were not
14 specifically mentioned as an option, although a number
15 of stakeholders did raise rentals; and in that context,
16 their position was that rentals made sense as a
17 short-term solution to allow the utility time to further
18 plan and explore opportunities for permanent renewable
19 solutions.

20 That concludes my response, Mr. Chair.

10:25

21 THE CHAIR: Thank you, Mr. Mollard.

22 We just need to adjust the volume in the room a
23 little bit.

24 MR. LANDRY: Are you having a hard time hearing
25 us, Mr. Chair, just to --

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Questioned by Ms. Sabo

1 THE CHAIR: We can hear you better. We were
2 just trying to find the sweet spot so we didn't have
3 too much volume coming out of the speakers that would
4 then feed into the microphones. So let's try that.

5 MR. LANDRY: Given I have to say one more
6 thing, let's see how it works in terms of the volume.

7 THE CHAIR: Okay. You're our guinea pig.

8 MR. LANDRY: Yeah, I'll be the guinea pig and
9 try to be efficient at the same time.

10 Mr. Chair, just because I know they're -- the
11 issue of undertakings, so from our perspective -- which
12 would be good, given, you know, that Ms. Sabo will
13 continue. From our perspective, all of the
14 undertakings to this point in time have now been
15 answered.

16 MS. SABO: Okay. Thank you, Mr. Landry.
17 Thank you, Mr. Chair.

18 **MS. SABO QUESTIONS THE PANEL:**

19 Q. I have a few areas of follow-up from yesterday. I'll
20 start with dependable capacity and dependable capacity
21 payments. Is everybody hearing me okay on your end?
22 Not too loud, not too soft?

23 A. MR. HALL: It's a bit -- a little bit --

24 UNIDENTIFIED SPEAKER: -- move your microphone.

25 A. MR. HALL: Speak up, yeah.

10:26

10:26

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. MS. SABO: Okay. How about now?

2 A. MR. HALL: Yeah, that's better.

3 Q. Okay. Thank you. I'm going to refer you to the
4 transcript, pdf page 58, and starting at line 3. I'm
5 looking at line 3 to 22.

6 Mr. Hall in that exchange, you were asked, should
7 annual payments be based in actual performance.

8 And you responded stating, starting on line 7:
9 (as read)

10 "Well, as we outlined in that IR
11 response, you know, this is a little bit
12 to do with, you know, the dynamics of
13 dealing with an independent entity that
14 has a project it needs to finance, and
15 they -- their financial modelling -- or
16 financial -- and their economics relied
17 on them having a degree of certainty
18 around those dependable capacity
19 payments."

20 Do you see that?

21 A. MR. HALL: Yes.

22 Q. So what we're wondering is, is because we've got a
23 capacity-payment element and an energy-payment element
24 under this agreement, does that response also apply to
25 the energy payments?

11:10

10:28

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. HALL: Well, the way the terms are
2 constructed, there's certainty around the energy price.
3 Obviously, we pay, based on the actual amount of energy
4 delivered each year. So, in a sense, there is a bit of
5 a difference there.

6 A. MR. OSLER: It's Cam Osler. I think we
7 discussed it a bit yesterday, but let's try it again.

8 In dealing with energy, we pay for what is
9 actually delivered. That's Mr. Hall's first point.
10 The actual volume. But the price is based on an
11 estimate of how much thermal we're displacing on
12 average over the long term by purchasing 34 gigawatt
13 hours a year.

10:29

14 That estimate is locked in for the term, but it
15 varies between 2024 and 2035 because of the assumptions
16 we made about changing the load. It's also locked in
17 for the term because we assume 19 cents per kilowatt
18 hour for the blended fuel cost so that if we were
19 displacing, say, 20 percent -- 70 percent, let's say,
20 of the 34 gigawatt hours was displacing thermal, we
21 were valuing that thermal at the 19 cents in 2024
22 dollars.

10:30

23 And so to the extent that the actual thermal price
24 was to change, it would be something that's not
25 reflected in the actual amounts they're paying.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 And then I went through at some point yesterday
2 the degree to which those numbers are sensitive to
3 whether the price is higher or lower or the volume of
4 load is higher or lower.

5 So unlike the dependable capacity, we are paying
6 for what we actually get. We're not paying for
7 something that's committed but not necessarily
8 delivered. But the actual price that we're paying
9 will, of course, probably not correspond to actually
10 what the fuel price is at any one moment in time or the
11 loads on the system, if that helps.

10:30

12 Q. It does, Mr. Osler, and it leads me perfectly into my
13 next question. From the sellers' perspective, from
14 THELP's perspective, since displaced thermal is not
15 known until after the fact, does that present a risk to
16 their cash flows?

17 A. MR. HALL: Well, the only risk to their cash
18 flows is water variability from year to year.

19 A. MR. OSLER: Right, or --

20 A. MR. HALL: Or their ability to maintain
21 up-time or reliability.

10:31

22 A. MR. OSLER: Yeah, in the original EPA, they
23 negotiated what we called a "fixed price" for the
24 minimum volume and then a lower price for the --
25 everything else, and I think they had their mind

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 focused on cash flow, that they wanted to make sure
2 they had a minimum cash flow that they could describe
3 to their bankers or anybody else. But in the final EPA
4 as amended, we were quite happy to get back to an
5 average price overall, and they didn't object to that
6 at all.

7 So I don't think they were worried about the cash
8 flow variability based on how much they deliver each
9 year. I think they were very worried about the
10 dependable capacity issue, perhaps because of just
11 trying to explain it to other people, et cetera. I
12 don't know. But they certainly were quite different
13 dealing with the two issues in the context of what they
14 could deal with and couldn't deal with. That's all I
15 can tell you.

16 Q. Thank you, sir. Maybe a more simple question to take a
17 break from that immersed conversation. Does the EPA
18 use Statistics Canada CPI as its CPI measure,
19 Mr. Osler?

20 A. MR. OSLER: I believe the answer is yes, but
21 there's a definition in the EPA.

22 Q. Okay. If you believe so, do you know what index
23 Stats Can index it uses? We just didn't see it in the
24 agreement, but maybe we missed it.

25 A. MR. OSLER: All right. The definition of

10:32

10:32

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 "CPI" means consumer price index for Canada. It's in
2 Definition 1.43 on page A1-48 of the application, just
3 so that that's on the record.

4 Q. Great.

5 A. MR. OSLER: And it goes through -- it gives
6 you the information as to what it comes from.

7 Sorry, Ms. Sabo, did you ask me another question,
8 because I didn't quite get it.

9 Q. No, that's fine.

10 A. MR. OSLER: Okay.

11 Q. I'm going to go back to the transcript, pdf page 121,
12 starting at line 13. And on page 121, Mr. Osler, I
13 asked you a question which starts at line 13 or
14 continues at line 13, which was: (as read)

15 "...Mr. Osler, I guess the key question
16 we're trying to get to is, assuming that
17 YEC could obtain the same government
18 funding as THELP did, so let's go get
19 into the level of grant funding that
20 would be available for a project, could
21 you build -- could YEC build and operate
22 a hydro plant to provide the same
23 capacity and energy deliverables as
24 what's done with the Atlin project at a
25 less price..."

10:33

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Just to follow up on that, because we're still
2 struggling with this a bit, you have -- basically there
3 could be two options for maintaining energy and
4 maintaining capacity: One is to enter into the EPA, and
5 the other is to own and operate a plant to provide
6 energy and capacity. Are you with me?

7 A. MR. OSLER: I'm with you in principle, but in
8 practice, the point that YEC keeps trying to make is,
9 in practice, we don't have the option to own the Atlin
10 plant.

10:34

11 Q. Right.

12 A. MR. HALL: And if I would comment and to add
13 on that, there were no other options on the table that
14 were nearly as far advanced -- as advanced. There were
15 some options, other hydro projects identified in the
16 ten-year renewable plan, but they would be starting
17 from scratch, having done little or no work on them,
18 with First Nations where we had -- we would have had no
19 feeling for whether there was support for hydro in
20 their traditional territory.

10:35

21 Q. Yeah.

22 A. MR. HALL: So it's a hypothetical question,
23 but that's all it is. There was no real option to
24 pursue another hydro project.

25 Q. Yeah, I guess what I'm --

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. HALL: We're a bit confused about where
2 the thought exercise leads, because there was no real
3 option other than that.

4 Q. Yeah, I was just trying to get to, Mr. Hall, kind of
5 what -- did you do any comparative analysis on that
6 basis; right? If you had a plant that you would own
7 and operate versus what's under the EPA, what would
8 that look like from a net present value basis? Did you
9 do anything like that?

10 A. MR. HALL: Well, I'll comment on that, and
11 then perhaps Mr. Osler can add. But -- and the
12 comparative analysis is really -- underlies the
13 principle that we applied in coming up with the price
14 to pay for energy and capacity, namely thermal.

10:36

15 I mean, that really is the benchmark that was
16 used. But we -- I mean, there is some information
17 on -- in the ten-year plan on what LTOE and LTOC might
18 look like for other -- those other hydro projects.

19 But, again, I mean, thermal -- and, you know, the
20 YUB has been quite consistent over time in using
21 thermal pricing as the benchmark for a comparison of
22 projects or -- so I think you can take some comfort
23 that because the pricing is based on those thermal
24 comparators, that it's, in a sense, the lowest-cost
25 option relative to thermal.

10:36

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay.

2 A. MR. OSLER: So let me try and -- in JM-1-7
3 that you asked us about was a question that told us to
4 assume the same parameters and costs of the Atlin
5 project and what would it -- what difference would it
6 make if YEC somehow magically managed to own it all.
7 And we answered that question.

8 And the answer, in a nutshell, shows you that at
9 the -- cost of capital that YEC would probably have,
10 the project wouldn't be as economic as letting THELP do
11 it, because they have a different -- they have
12 80 percent debt, at least, if not more. We only -- we
13 have 60 percent debt, et cetera.

10:37

14 So it's not very informative, but it is what it
15 is. It's an answer to a question as asked.

16 Now, was YEC at all interested in confirming that
17 the cost picture that THELP is developing makes sense?
18 That might be another version of the same question.
19 Mr. Hall has made the point to you and certainly made
20 it to me that we didn't have any other options that
21 were hydro. So, hypothetically, you can talk all you
22 like, but there wasn't another hydro option for YEC to
23 look at owning.

10:38

24 And THELP -- just for the record, THELP was not
25 remotely interested in having YEC ownership in whole or

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 in part in the project. That was an early matter
2 resolved very quickly at the outset of discussion.
3 Because we raised it, and sometimes with First Nations,
4 they might want you to do that. But they'd already
5 done a hydro project; they thought they could do this
6 hydro project: "Thank you very much, let's do an EPA,"
7 period.

8 So from the point of view of policing what they're
9 doing, due diligence, the general attitude of YEC was
10 they've got the CIB, they've got the federal funders,
11 they've got lots of people checking whether or not the
12 costs that they're quoting makes sense. We won't get
13 into that game. We will focus on what we can afford to
14 pay based on what the ratepayers will end up having to
15 pay.

16 So we never got into trying to double-check or
17 cross-check what their cost structure was or anything
18 else. We do from time to time try and understand some
19 of the things so we can help solve a problem, but --
20 but it's not our ball game. It's not our problem to
21 solve, and we don't have the time and the energy and
22 the resources to do it, and they wouldn't pay us for
23 doing it either.

24 So all those things in mind, if that helps, that's
25 about as far as we can go in terms of trying to help

10:39

10:39

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 understand what would happen with a YEC-owned plant.

2 Q. Okay. Thank you, Mr. Osler.

3 Another thing we would like to help our
4 understanding is if one of the YEC panel could
5 undertake to provide the levelized cost of capacity of
6 a single 20-megawatt thermal plant in 2019 dollars.
7 And you can use the forecast applied for in the YEC
8 2017/2018 GRA, if you like.

9 I'll give the reference to that if the panel would
10 like that as well.

10:40

11 A. MR. OSLER: So the question is, rather than a
12 12-and-a-half megawatt plant, you'd like to know the
13 levelized cost of a 20-megawatt plant?

14 Q. Yes. And the 2017-2018 GRA reference is
15 in paragraph 470 of Board Order 2018-10, which I don't
16 think you need to pull up, but those numbers were
17 provided there.

18 A. MR. OSLER: Essentially, what we will do is go
19 back and check the Midgard information base that they
20 had provided YEC in 2019 with a range of different
21 costs, and we will make sure that whatever we're
22 looking at is sort of consistent with that range and
23 those assumptions at that time period.

10:41

24 Q. Great.

25 A. MR. OSLER: But the other point that's been

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 made, recent discussions, is that all of those costs
2 were 2019 before the inflation games that have happened
3 since then and the higher interest rates and everything
4 else that have happened since then.

5 So, for the record, I've been asked to make sure
6 everybody understands that. These are -- these are old
7 costs nowadays compared to what people are paying for
8 doing things today.

9 Q. Certainly. And, Mr. Osler, put in whatever assumptions
10 or context that makes that helpful for the Board. It's
11 much appreciated.

10:41

12 So I just want to confirm that you're going to
13 going to provide the levelized cost of capacity of a
14 single 20-megawatt thermal plant 2019 dollars using the
15 forecast applied for in the '17-'18 GRA with all
16 assumptions?

17 A. MR. OSLER: We will do that, and we will
18 probably, as for the 12-and-a-half megawatt, probably
19 show the two examples, one without property taxes and
20 one with.

10:42

21 Q. Thank you. That would be helpful, sir.

22 **UNDERTAKING - TO PROVIDE THE LEVELIZED**
23 **COST OF CAPACITY OF A SINGLE**
24 **20-MEGAWATT THERMAL PLANT 2019 DOLLARS**
25 **USING THE FORECAST APPLIED FOR IN THE**

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 **'17-'18 GRA WITH ALL ASSUMPTIONS**

2 Q. MS. SABO: I now want to go back to our
3 discussion on Table A3, Mr. Osler, because that
4 happened late in the day, and I want to go through that
5 table again just to ensure that our understanding is
6 correct.

7 So Table A3 was at Exhibit B-6 of the blackline
8 version at pdf page 55. And 56 is where the table is.

9 A. MR. OSLER: I believe, just to make sure that
10 we're all on the record together, page A3 was the table
11 that you were referencing. It was really a version of
12 Table A1 from the amended application that had been
13 struck through and gotten rid of. Is that the one
14 we're talking about?

15 Q. No, actually, I'm on the one on hard copy A10.

16 A. MR. OSLER: Hard copy which?

17 A. MR. MOLLARD: A10.

18 MR. LANDRY: Ms. Sabo, I wonder if I could just
19 take a moment to -- so I find this? Because I'm on the
20 clean copy, not the blackline, so I'm trying to figure
21 out what page we're on, so --

22 MS. SABO: No problem, Mr. Landry.

23 MR. LANDRY: If you could just give me a second
24 while I try to track it down too.

25 A. MR. OSLER: I'm now catching up with you

10:42

10:43

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 myself. So we didn't -- this is Table A3 in the
2 amended application, and you're in the blackline
3 versions, which it appears there at page A10?

4 Q. MS. SABO: Correct.

5 A. MR. OSLER: Okay.

6 Q. And that's the one that has the 2024 load forecast --

7 A. MR. OSLER: Right.

8 Q. -- and the 2035 load forecast with the original and the
9 amended EPA columns on it.

10 A. MR. OSLER: Yeah.

10:44

11 Q. Okay.

12 A. MR. OSLER: And I'm -- for my own sanity, I'm
13 also looking at page A3 of the amended application,
14 clean version, Exhibit B-5, just because I can relate
15 easier to that. So, okay.

16 Q. Great. Thank you, sir. I appreciate that.

17 So to confirm, in the table, line 2, which is at
18 the middle of the table, the bolded title that says
19 "Atlin Winter Energy Purchases Net of AEY Losses
20 in Gigawatt Hours," can you explain the purpose of
21 that line of the table? We talked about line 1, but we
22 didn't talk about line 2 yesterday.

10:45

23 A. MR. OSLER: Right. Line 2 brings into play
24 the average losses that are assumed to occur after
25 Jakes Corner are for the energy that gets transmitted

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 all the way to Whitehorse, the Substation S150, which
2 are explained in Footnote 3 to the table to be
3 4.5 losses.

4 So the 34.0 long-term average deliveries at
5 Jakes Corner are reduced by 4.5 percent for losses to
6 get the number that you see in the line 2 you
7 referenced of 32.4.

8 So, first of all, that's what it is. Secondly,
9 why. And, essentially, the model that was run by YEC,
10 the XM (phonetic) model, used the 32.4 number rather
11 than the 34 number because it was -- it was being
12 conservative, in my opinion, because it's taking the
13 energy that actually got all the way to Whitehorse and
14 adjusting it.

15 And as I've made the point from time to time, if
16 YEC had actually built a plant at Jakes Corner, it
17 probably wouldn't do that. It would probably just say,
18 "It's 34 gigs, and here's what the effect of it is in
19 displacing thermal." But I don't criticize it because
20 it's one more conservative element of an analysis.

21 The 4.5 percent, as explained in an IR somewhere,
22 explains why they reduced it from the earlier number,
23 which I think was about 6 and a quarter percent.
24 Because a lot of this energy is going to be used before
25 it gets to Whitehorse. It's going to be used in the

10:46

10:46

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 ATCO part of the load, where there's a whole bunch of
2 customers.

3 So, you know, it's not like it has to go all the
4 way to Whitehorse before it has some useful value;
5 right? It's actually -- a lot of it is used in the
6 southern Yukon below Whitehorse.

7 So that's why it's there. That's the best
8 explanation I can give you.

9 Q. Thank you, sir. Now, to clarify in line 9, which is
10 non-summer rate revenue, 2024 blended thermal price
11 forecast, that provides the full energy costs for Atlin
12 purchases; is that correct?

13 A. MR. OSLER: That's the price for displaced
14 energy, 19 cents?

15 Q. Correct.

16 A. MR. OSLER: So that's note the
17 purchase -- you're not paying 19 cents for
18 every kilowatt hour you buy at Jakes Corner. You're
19 assuming that every kilowatt hour that gets displaced
20 by what you purchase which, in the second column in the
21 table, is 24 -- at line 5 -- 24.181 million kilowatt
22 hours of displaced thermal. That's being assumed to
23 cost 19 cents. That you've saved 19 cents of fuel for
24 each one of those kilowatt hours that you displaced.

25 And then you go to line 9, and you apply that

10:47

10:48

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 19 cents to the 24, et cetera, million kilowatt hours,
2 and you end up with, okay, that's how much money we
3 saved: \$4,594,000.

4 And the final line, which has a typo, it says 10
5 equals 9 divided by 2, but it should be 9 divided by 1.
6 I apologize for that.

7 Q. Great.

8 A. MR. OSLER: That shows the 4,594,000 divided
9 by the 34 gigawatt hours that is actually delivered,
10 assumed to be delivered, at Jakes Corner. So we
11 pay -- we pay the 13 and a half cents in order to make
12 sure that what we're paying is what we're saving.

13 Q. I'm just going to pass this off to Mr. Ward, who has
14 one follow-up for you, Mr. Osler. He's probably better
15 to ask it than I.

16 MR. WARD QUESTIONS THE PANEL:

17 Q. Thank you, Mr. Osler. Really I'm just -- it's a
18 mathematical check that I'm trying to figure out. So
19 yesterday Mr. Hall said, at transcript, page -- sorry,
20 at transcript page 62: (as read)

21 "And, you know, only for the amount of
22 thermal that we can avoid generating."

23 Okay?

24 A. MR. OSLER: All right. Just say that again,
25 slowly.

10:48

10:49

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 Q. All right. Mr. Hall yesterday said:

2 "You know, we'll pay for only the amount

3 of thermal we can avoid generating."

4 A. MR. OSLER: Right. Correct.

5 Q. And that's --

6 A. MR. HALL: So that's --

7 Q. Sorry, and that's --

8 A. MR. HALL: (Cross-talk occurs).

9 A. MR. OSLER: Sorry. Sorry, go ahead with your
10 question. Yeah.

10:50

11 Q. All right. And that amount is equal to line 9 on
12 Table A3; is that correct?

13 A. MR. OSLER: That is the amount in dollars that
14 we're saving. Given all the assumptions in the table.

15 Q. So my first question, is that the same thing -- the
16 amount of thermal that you're avoiding or the cost of
17 thermal you're avoiding, that's the amount you would
18 pay?

19 A. MR. OSLER: Yes.

20 A. MR. HALL: Well, okay, I'll answer since I
21 made the statement. When I talked about an amount, it
22 would have been line 5. That's the amount in gigawatt
23 hours.

10:50

24 Q. Right. But the price -- and then you would multiply it
25 by the price of 19 cents?

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 A. MR. HALL: Exactly. To get to --

2 Q. That's --

3 A. MR. HALL: -- line 9. Yeah.

4 Q. And that's all you would pay?

5 A. MR. HALL: For energy, yes.

6 Q. Yes, okay. So --

7 A. MR. HALL: Well, hold on. I mean, that's in
8 the context of calculating the price; right?

9 Q. It's the -- no, we're talking two different things
10 here, and that's where I'm trying to --

10:50

11 A. MR. HALL: Okay.

12 Q. -- understand better, okay?

13 The -- sorry -- line 9 represents the benefit --
14 the thermal displacement benefits, and, again, I'm
15 going back to your comment --

16 A. MR. HALL: Fair.

17 Q. That is the amount that you're going to pay for all the
18 energy you get?

19 A. MR. HALL: Yeah.

20 Q. Okay. We agree on that?

10:51

21 A. MR. HALL: So --

22 A. MR. MOLLARD: No. It's -- it's not -- you will
23 get more energy. You're going to get 34 gigawatt
24 hours; you're only paying for 24.

25 Q. Right.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 A. MR. MOLLARD: So you pay 24 at 19 cents, but you
2 get --

3 Q. Right.

4 A. MR. MOLLARD: -- 34.

5 A. MR. HALL: Yeah.

6 Q. Correct.

7 A. MR. MOLLARD: Yes.

8 Q. So mathematically -- mathematically, it's the same
9 as -- you're saying you're paying 13.5 cents for
10 34 gigawatt hours on average or you're paying 19 cents
11 for 24.18, and anything --

10:51

12 A. MR. HALL: Yes.

13 Q. -- over that, you're not paying for?

14 Mathematically, it's the same thing.

15 A. MR. OSLER: Yes, mathematically, it's the same
16 thing, although history and discussions of this nature
17 have shown that everybody seems to walk away from the
18 table with different understandings. Okay? So -- and
19 we had this discussion from time to time with THELP.
20 It's not the first time.

10:52

21 So we are paying, we have to pay for the
22 34 gigawatt hours on average, and we actually have to
23 pay for whatever they deliver each year in the
24 wintertime, which may be less or it may be more. So
25 everybody in the room has to make sure they understand

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 that point, obviously.

2 What we're going to pay is 13 and a half cents for
3 every kilowatt hour that they deliver, whether it's 34
4 or 32 or 36 or whatever the heck it is. We're going to
5 pay 13 and a half cents. That's what the table is
6 showing.

7 Q. Okay. That's the point of disconnection.

8 A. MR. OSLER: Sorry?

9 Q. That's where we're disconnecting, okay?

10 A. MR. OSLER: Okay.

10:52

11 Q. Like, I'm seeing the 4.594 million divided by the
12 34 gigawatt hours to get the price, all right, the
13 13.5.

14 A. MR. OSLER: Yeah.

15 Q. And the question behind it is, is if it -- instead of
16 being 34, it was 48, would it be 4.594 divided by
17 48 gigawatt hours?

18 A. MR. OSLER: No. No, because --

19 Q. To arrive at the price?

20 A. MR. OSLER: Essentially -- essentially, the
21 practical problem -- and I can recall a conversation a
22 year or so ago very similar. Like, "Why can't we
23 just -- why can't you -- we just pay for and deliver
24 what you're actually going to use to displace thermal?"
25 And we said, "Well, frankly, we can't run a utility

10:53

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 that way. We're not going to be -- and you wouldn't
2 necessarily like it, because you'd have to take the
3 risk of when we had thermal requirements and everything
4 else."

5 So if you look at the long-term average
6 calculation of displaced energy, which I think, in this
7 particular amended version was Figure 4 -- Figure 2.2-7
8 at page 7 of the Exhibit B-5. It shows you that during
9 low water years we get a much higher level of thermal
10 displacement, and in high water years, we hardly
11 displace anything. And on long-term average, it's
12 closer to the top than it is the bottom.

10:54

13 In other words, it depends -- it varies from year
14 to year depending on what the conditions are on the
15 Yukon Energy's YIS.

16 Sorry, am I stopping somebody from asking a
17 question?

18 Q. Yeah.

19 MS. SABO: I was just going to say, give us a
20 moment to pull that reference up, Mr. Osler, just in
21 case we need to --

10:54

22 A. MR. OSLER: Okay.

23 MS. SABO: -- anything.

24 Q. MR. WARD: One quick question for you,
25 Mr. Osler. The thermal displacement that you calculate

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 or the thermal displacement benefits you calculate,
2 that is based on long-term average, is it not?

3 A. MR. OSLER: Exactly, but it means that over
4 38 years of YIS water data, the same as we'd use for a
5 GRA, long-term average, okay, same process, if you
6 break it down to try and understand what's going on,
7 the five lowest water years or the five highest water
8 years shows you how much difference there is within
9 that time period in terms of displacing thermal from
10 the 34 gigawatt hours that are -- you're on average
11 getting.

10:55

12 So it all depends on how the YIS operates in terms
13 of where we are with the load, where we are with the
14 water on that system, et cetera. And the long-term
15 average is an average. It doesn't really tell me how
16 I'm going to do the calculation each year. And if I
17 had to go and do the calculation each year and only pay
18 you -- only buy your energy when I can be -- use it to
19 displace thermal, YEC would love that; but I don't
20 think the other people would be able to get it
21 bankrolled, because they wouldn't have any certainty as
22 to cash flow.

10:56

23 Q. But having said that, Mr. Hall said -- again, I'm
24 quoting the transcript -- that: (as read)

25 "You know, we'll pay for only the amount

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 of energy -- of thermal energy we can
2 avoid generating."

3 A. MR. HALL: And that -- right. And I think
4 that statement is true over the long term. If you look
5 at the long-term average numbers, the statement's true.

6 A. MR. OSLER: And we've answered that question a
7 few times in the IRs, because the application had a
8 statement of principles on a couple of pages, and then
9 it got into numbers. And we've noticed that people
10 keep asking questions about the principles, and then 10:56
11 asking why the numbers, for example, to take your
12 question right now, "Well, you're going to pay for some
13 energy that isn't being valuable. Yes or no?"

14 And the answer is of course we're going to pay for
15 some energy that isn't valuable. Because we cannot do
16 a deal based on only buying the energy when we need it.
17 We have to purchase -- have a purchase arrangement that
18 picks up what they are going to supply us during the
19 winter.

20 So our only solution to that problem, to honour 10:57
21 the principle, is to get a lower price per kilowatt
22 hour that we're prepared to pay based on long-term
23 averages. We're not paying 19 cents for every kilowatt
24 hour we get. We're only paying 13 and a half during
25 the first decade and about 9 cents or whatever --

A. HALL, E. MOLLARD, C. OSLER

Questioned by Mr. Ward

1 9.7 cents after that. Because that's all we can afford
2 to pay based on the information we have on average.

3 And the only other alternative we'd have to meet
4 the principles would not be acceptable to THELP;
5 namely, we will only pay you when we can (phonetic).
6 That wouldn't provide them a basis to finance a
7 capital-intensive hydro project.

8 Q. Thank you, Mr. Osler. We're not trying -- I'm not
9 trying to be argumentative. I'm just trying to
10 understand and reconcile, like, to the statement
11 from --

10:58

12 A. MR. OSLER: Yeah.

13 Q. -- from Mr. Hall and that, so... I'm still not quite
14 comfortable with that, but I can check --

15 A. MR. OSLER: Okay.

16 Q. -- I can check the transcripts for your answer on that,
17 so that's fine. Thank you.

18 A. MR. OSLER: Yeah. And -- and to the extent
19 that we thought way back, in dealing with board of
20 directors, other people that lay out the principles and
21 then the mechanics, would perhaps help people to
22 understand what -- how we'd approached it; but I can
23 see that it also leads to some confusions, and we
24 didn't intend that. I'll make that point clearly.

10:58

25 And the only other thing I'd say for the record is

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 that JM asked us a question about, "Well, what would
2 happen if we'd had all this in place in 2022 when the
3 load on the system was a bit different and we didn't
4 have very many IPPs?" And the answer was a much higher
5 price than you see here, because the IPPs are reducing
6 the value of Atlin, effectively.

7 So to me that shows that the amount you can afford
8 to pay is based on the assumptions that you see in
9 Table 3-1, the one that you asked. And if we changed
10 those assumptions, the price we can afford to pay
11 changes.

12 So if those assumptions are wrong, that's a risk
13 that the Minister is interested in understanding.
14 Okay? And we tried to explain it that way.

15 MS. SABO QUESTIONS THE PANEL:

16 Q. MS. SABO: Thank you, sir. Mr. Hall,
17 anything more on that area?

18 A. MR. HALL: No.

19 Q. Okay. Thank you.

20 MS. SABO: Mr. Chair, I have a few more
21 questions, but I'm wondering if we can just take a
22 quick break so everybody --

23 THE CHAIR: Yes, sure.

24 MS. SABO: -- can have some time and come
25 back in a few minutes?

10:59

10:59

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 THE CHAIR: 15 or --

2 MS. SABO: That's great.

3 THE CHAIR: All right. Let's adjourn for
4 15 minutes, and we'll be back at 11:15.

5 (ADJOURNMENT)

6 THE CHAIR: Okay. Thank you, everyone.

7 Ms. Sabo, has a few more -- a couple of more
8 questions, I think, and then I think we'll break for
9 lunch at that point and --

10 MS. SABO: Thank you, Mr. Chair. 11:19

11 MR. LANDRY: Mr. Chair, if I may -- excuse me,
12 Ms. Sabo -- the exhibit that we talked about earlier
13 has now been sent by email. So once Ms. Sabo or
14 Ms. Lemke gets it, we can then formally mark it as an
15 exhibit.

16 THE CHAIR: Yes, okay. And that would be
17 B-17?

18 MS. SABO: And we have that exhibit now,
19 Mr. Landry, so we can mark that now.

20 THE CHAIR: All right. So it's B-17? 11:20

21 MS. SABO: 16.

22 MR. LANDRY: I think it's 16.

23 THE CHAIR: Sorry, that's the Excel
24 spreadsheet?

25 MR. LANDRY: Yeah, Excel spreadsheet.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 THE CHAIR: Yes, yes. B --

2 MR. LANDRY: B-16.

3 THE CHAIR: Yeah, sorry, B-16. Great.

4 MR. LANDRY: Okay. Thank you.

5 **EXHIBIT B-16 - EXCEL SPREADSHEET**

6 **PROVIDED IN RESPONSE TO UNDERTAKINGS**

7 THE CHAIR: Okay. Proceed, Ms. Sabo.

8 MS. SABO: Thank you.

9 Q. Just one more question on that last line we were
10 talking about before the break.

11:20

11 Given that YEC is receiving energy above thermal
12 displaced energy under the EPA and -- as shown in
13 Table 3, and if it does not require energy above
14 thermal displacement, can you again help us out where
15 the savings are to YEC's customers?

16 A. MR. OSLER: Let's try it this way: The record
17 shows that in answers to IRs, that YEC has said that it
18 displaces thermal energy through two different ways,
19 direct displacement or through storage savings
20 benefits. And when it does that, it saves 19 cents for
21 every kilowatt hour that it purchased that managed to
22 do that.

11:21

23 The rest of the water that it's buying is going
24 towards spillage and hydro on the YIS, and it has
25 absolutely no value to YEC in terms of savings. The

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 record clearly shows those statements.

2 The third thing that it shows is that YEC is
3 required to buy all of the energy that THELP provides
4 at Jakes Corner, and the only way we can make sure that
5 there is value for customers equal to what we're
6 willing to pay is to calculate a lower number based on
7 the estimates that you see in Table 3, A3. And,
8 therefore, some of the energy we're buying is
9 contributing more than 13 cents because it's actually
10 displacing thermal and some of the energy we're buying 11:22
11 is not contributing anything, doing zero, and the
12 average comes out to be a fair and reasonable price for
13 ratepayers to pay.

14 I think that's the only way to understand Table A3
15 and the statements of principle that have been made.

16 And Table A3 shows you that we've made an effort
17 to adjust that price when it made sense to adjust it
18 for load on the system. And we've explained that, and
19 we've made it very clear that we're aware of the risk.
20 We'd like to make sure the Minister is aware of the 11:23
21 risks and what we're talking about. It's not --
22 there's no attempt here to not get at that.

23 But if we're going to buy thermal -- going to buy
24 energy from a hydro facility through an IPP, we're not
25 aware of any other approach we could take that would be

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Questioned by Ms. Sabo

1 **acceptable to the IPP people.**

2 Q. Okay. Thank you, Mr. Osler.

3 I just had one housekeeping matter on your
4 response this morning on Undertaking 2, the second
5 undertaking you responded to this morning, that
6 referred us, in part, to YUB-IR-29?

7 **A. MR. OSLER: Right.**

8 Q. Yeah, I think it's a fairly general question. If you
9 want to turn that up, you can. What we're wondering
10 is, is the climate data actual data for more than four
11 years for Surprise Lake?

11:23

12 **A. MR. OSLER: The climate data that they used,**
13 **yes, is more -- it's for the time period of the full**
14 **1964 to 2020 that they quote in the answer. And it's**
15 **for Surprise Lake per se, but it's also for the area**
16 **around Surprise Lake, if you got into the detail. They**
17 **look at both land and water. So --**

18 Q. Great. Thank you, sir.

19 Subject to undertakings, YEC panel, thank you all
20 individually for your time and for answering our
21 questions today.

11:24

22 **MS. SABO: Mr. Chairman, I'm assuming -- we**
23 usually take an hour and a half break for lunch, so
24 that would take us to 1:00?

25 **THE CHAIR: Yes, I think that would be**

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 reasonable. It still allows us an hour and a half, and
2 we just resume half an hour earlier than otherwise
3 scheduled. So let's be back at 1:00.

4 MR. LANDRY: Mr. Chair, if I may, just before
5 we break. I assume what is left, then, is the
6 questions from the Panel, the Board, and then any
7 redirect I might have?

8 THE CHAIR: That's correct.

9 MR. LANDRY: Thank you.

10 (PROCEEDINGS ADJOURNED AT 11:25 A.M.)

11:25

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12 PROCEEDINGS ADJOURNED TO 1:00 P.M.

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Questioned by Ms. Sabo

1 Volume 2

2 July 20, 2022

3 P.M. Session

4

5 (PROCEEDINGS RECOMMENCED AT 1:00 P.M.)

6

7 A. HALL, E. MOLLARD, C. OSLER (For Yukon Energy

8 Corporation), previously affirmed

9 THE CHAIR: We are on. Okay. Welcome back,
10 everyone.

13:00

11 At this point, we will move to questioning by
12 members of the Board. Cross-examination. So we'll
13 begin with --

14 THE COURT REPORTER: Excuse me, Mr. Chair. We're
15 missing a couple of the witnesses.

16 THE CHAIR: Oh, in the panel, the YEC panel?

17 THE COURT REPORTER: Yes.

18 MR. LANDRY: Sorry, let me -- let me -- if I
19 could just -- give a minute.

20 THE CHAIR: Round them up, Mr. Landry.

13:00

21 MR. LANDRY: I apologize for that, Mr. Chair.

22 THE CHAIR: We occasionally show a little
23 indulgence for lateness, so not to worry.

24 All right. So we'll begin with the Board's
25 questions, with Vice Chair Bonnie King.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. King

1 **MS. KING QUESTIONS THE PANEL:**

2 Q. Good afternoon. I have a high-level question. So if
3 you go to B-5, we're going back to Table A3 again.
4 It's on 41, sorry, of 140 on the pdf, hard copy A3.
5 Everybody is there?

6 A. MR. HALL: Yeah.

7 Q. Can you please provide the cost -- sorry -- the cost of
8 energy, the 34 gigawatts in the capacity payment? I
9 think it's 4.5 million plus 1.75 million, subject to
10 check.

13:01

11 This is -- so the high-level question that I'm
12 asking you to provide to us is: Using an average rate,
13 including riders or a weighted average based on
14 consumption by rate class, provide the approximate
15 revenues that would be collected from the 34 gigawatt
16 hours of consumed energy.

17 And I imagine that's an undertaking.

18 Using the numbers in that second amended EPA 2024
19 load forecast.

20 A. MR. MOLLARD: Mr. Chair, we're just kind of
21 noodling around different approaches here.

13:02

22 So you want to see how much revenue we would get
23 from that 34 gigawatt hours?

24 Q. Yes. An average rate, including riders or the weighted
25 average based on consumption.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. King

1 **A. MR. MOLLARD:** But we -- the challenge we have
2 with that is we don't know where those electrons go, so
3 whether they're used by a commercial customer or a
4 residential customer or whether it gets wholesaled, I'm
5 not sure how we'd start that.

6 **Q.** So in general. You can provide -- you can put whatever
7 assumptions you're using in it.

8 **A. MR. MOLLARD:** But I don't even know what to
9 assume.

10 **Q.** You can't calculate the revenue, an assumption? High
11 level. We're asking for a high level, not a
12 specific --

13 **A. MR. OSLER:** Let's go --

14 **Q.** -- range.

15 **A. MR. OSLER:** -- step -- if we could go step by
16 step -- it's Cam Osler.

17 **Q.** Mm-hm.

18 **A. MR. OSLER:** On page 27 of B-5, Exhibit B-5,
19 there is a --

20 **Q.** Page 27. Just a minute.

21 **A. MR. OSLER:** Page 27.

22 **Q.** Okay.

23 **A. MR. OSLER:** There's a paragraph in the middle
24 and a footnote, and it's talking about the first part
25 of I think what you asked, which is how much would this

13:03

13:04

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. King

1 cost a year for 34 million kilowatt hours and the
2 dependable capacity.

3 And the number that is shown would be 6.4 million
4 in 2024 dollars to the end of 2034, and then it drops
5 down to \$5 million in 2024 dollars after that.

6 So that's the first step.

7 Q. Yes.

8 A. MR. OSLER: And you're asking to know how much
9 that boils down to as an average cost per kilowatt hour
10 for ratepayers. Is that what you're asking?

13:05

11 Q. That's right. So you can compare the numbers of what
12 the revenue coming in would be to the expense.

13 A. MR. OSLER: Right.

14 Q. In general, high level.

15 A. MR. OSLER: Well, if the Board was doing a
16 review, the Board would be given these costs; and if
17 they had no reason to dispute them, they would go into
18 the revenue requirement.

19 I would make a point right here that the idea is
20 that if we didn't have Atlin, you would also be putting
21 into the revenue requirement similar costs for thermal
22 because we're a long-term average, we're displacing
23 this much thermal, the same amount, and you'd be
24 putting in something to handle the capacity.

13:05

25 So the net effect on rates in terms of cents

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. King

1 per kilowatt hour, if every -- if all the assumptions
2 are correct, the net effect is zero. It has no effect
3 on the rates, unless something else happens to change
4 it.

5 The actual amount, 6.4 million, the best we can
6 do -- we could look at after the break -- would be to
7 say the total revenue requirement for -- just approved
8 for 2021 was such and such an amount. How much does
9 6.4 million represent in that total package, you know,
10 divided by the number of kilowatt hours that are sold.

13:06

11 We could do that for you if it would help as a
12 method of sort of assessing how big this is relative to
13 everything else.

14 Q. Okay. If that's --

15 THE CHAIR: Yeah.

16 Q. MS. KING: -- if that's the best you can do
17 to kind of pinpoint it, then that's --

18 THE CHAIR: Yeah, if you can treat it as an
19 undertaking and, you know, put in whatever assumptions
20 or qualifiers --

13:06

21 A. MR. OSLER: All right.

22 THE CHAIR: -- you think would be appropriate
23 to give a fair answer, that would be helpful.

24 A. MR. OSLER: And, Mr. Chairman, given your --
25 the direction about not going beyond the question, I

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. King

1 assume that in looking at it, it's useful for us to
2 point out the net effect as well as the gross effect
3 that -- you know, if we didn't have Atlin, we'd have to
4 have something else. Is that useful to the Board?

5 Q. MS. KING: If you wanted to provide that
6 additional information, that's fine, as long as it's
7 clear.

8 A. MR. OSLER: Okay.

9 Q. So that we can still compare what we're looking for,
10 and you can compare it to the alternative.

13:07

11 A. MR. OSLER: Okay. Thank you. We'll -- I
12 presume we'll undertake that.

13 Q. Thank you.

14 **UNDERTAKING - TO PROVIDE, USING AN**
15 **AVERAGE RATE, INCLUDING RIDERS OR A**
16 **WEIGHTED AVERAGE BASED ON CONSUMPTION**
17 **BY RATE CLASS, PROVIDE THE APPROXIMATE**
18 **REVENUES THAT WOULD BE COLLECTED FROM**
19 **THE 34 GIGAWATT HOURS OF CONSUMED**
20 **ENERGY (SEE TRANSCRIPT)**

13:07

21 A. MR. HALL: That's good. Thank you.

22 THE CHAIR: Do you have anything further?

23 MS. KING: No.

24 THE CHAIR: Okay. Ms. Middler, have you got
25 some questions?

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 MS. MIDDLEL: Sure.

2 MS. MIDDLEL QUESTIONS THE PANEL:

3 Q. Can you hear me?

4 A. MR. OSLER: Yes.

5 Q. Okay. So Exhibit B-5 is the clean amended EPA
6 submission. So on page 12, it's talking about some key
7 principles and load forecasting and forecast risk.

8 So under Number 6 on page 12, it says --

9 A. MR. MOLLARD: Sorry, Ms. Middler, are you in
10 Exhibit B-5?

13:08

11 A. MR. OSLER: Yes, she's on page 12.

12 A. MR. MOLLARD: Pdf page 12.

13 Q. MS. MIDDLEL: No, the paper copy.

14 A. MR. MOLLARD: Okay. All right. Got confused,
15 my apologies.

16 Q. I'm sorry, I don't have the pdf page.

17 A. MR. MOLLARD: Okay. We're there.

18 Q. Okay. So it says: (as read)

19 "Both parties are exposed to forecast
20 risk. If actual grid load is higher
21 than forecast, example, grid-connected
22 mines remain longer in operation than
23 forecast, then YEC benefits from the
24 opportunity to procure Atlin energy at
25 prices lower than would otherwise have

13:08

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 been determined. Conversely, if actual
2 grid load is lower than forecast,
3 example, grid-connected mines close
4 earlier than expected, then payments by
5 YEC to THELP will be higher than would
6 otherwise have been the case."

7 And then under that, in Number 7, it's titled "Sharing
8 the Benefit of Upside Opportunities," and it says that:
9 (as read)

10 "The amended EPA allows THELP to share
11 benefits with YEC under certain
12 scenarios, which would be if the grid
13 load were higher than forecast, THELP
14 can get paid approximately two-thirds of
15 Yukon Energy's added thermal
16 displacement cost savings."

13:09

17 And (b): (as read)

18 "If a future carbon charge is approved
19 through customer rates, THELP can get
20 paid up to 50 percent of YEC's added
21 cost saving from thermal displacement;
22 and if YEC requests delivery of energy
23 during the summer the months, YEC pays a
24 discounted price equal to 50 percent of
25 the last approved YUB blended fuel

13:10

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 price."

2 So I'm wondering if there are any sharing of upside
3 opportunities to Yukon ratepayers such as what if for
4 some reason the grid loads are lower than forecast,
5 which, as you mentioned, would result in higher payments
6 to THELP, was there a way negotiated to balance that to
7 manage ratepayer risk?

8 A. MR. OSLER: Okay. So the one risk that
9 ratepayers have flagged in your quote is if the load is
10 lower than was assumed in the forecast for setting the
11 energy price. 13:11

12 Q. Yes.

13 A. MR. OSLER: That's the risk for ratepayers.
14 Everything else is a positive.

15 So the short answer is no, THELP would not accept
16 a downside risk of that nature. When they were
17 negotiating the energy price and the capacity price
18 that would be paid for the basic deliveries, the focus
19 of their attention was on a firm price that would not
20 run a risk of being reduced except in the case of the
21 test. Okay? 13:11

22 So given that that framework we adopted the 2035
23 price that you see, which was very conservative with no
24 industrial load, YEC did not consider there was any
25 real risk of a downside load by 2035 for the

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 non-industrial side. I mean -- in fact, people have
2 asked us questions about why we kept the load in 2035
3 flat rather than acknowledging the non-industrial load
4 would grow a bit. Mr. Maissan asked us some questions
5 about that.

6 So the real risk that you're talking about exists
7 between 2024 or 2025 now and the end of 2034, could
8 there be a downside risk.

9 And my advice would be that it would boil down to,
10 is there a real possibility that the mine loads could
11 vanish during that time period, which is Alexco and
12 Victoria Gold, and we don't think that there is a real
13 risk sort of thing. Everything we know at the moment,
14 if anything, more likely the mine loads would continue
15 rather than go down.

16 But, you know, for those who have been in Yukon a
17 long time, risks for industrial load are what they are,
18 and they could change, so that's a real risk, but it's
19 not a risk that we perceive from -- based on the
20 information that we have to be something of a concern
21 to Yukon Energy or to ratepayers. And, if anything, we
22 think the assumptions we've made were very, very
23 conservative relative to other options that could have
24 been considered reasonably.

25 So, aside from that, all of the other risks that

13:12

13:13

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 you listed are upside risks. They don't expose the
2 ratepayer to an extra cost. And we only negotiated
3 those upsides later on in the deal when we everybody
4 was trying to close this, that, the next thing. So
5 it -- they weren't sort of on the table to start with,
6 but people became aware that Yukon Energy might
7 benefit, particularly given the 2035 price structure
8 that we'd adopted. So they asked for opportunities to
9 share if the opportunity went up. But that doesn't
10 cost ratepayers anything in terms of what would have
11 been the alternative --

13:14

12 A. MR. MOLLARD: And just --

13 A. MR. OSLER: -- (indiscernible).

14 A. MR. MOLLARD: -- Ms. Middler, as far as the
15 mechanics go of that, the actual ratepayers would get
16 the benefit or share the pain of those impacts at the
17 next GRA after we became aware of it.

18 So when we forecast out our test year for our GRA,
19 we would have to forecast at that point what that --
20 for instance, what that load is; and depending on
21 whether it was up or down, that would impact our
22 revenue requirement, which then we would ask the Board
23 to approve that impact to ratepayers, just from a
24 process perspective.

13:14

25 A. MR. OSLER: And another way of saying that is

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 until we have a GRA approved, the actual risk is borne
2 by YEC. You know, it only becomes a ratepayer risk
3 when the Board has had a chance to review it and revise
4 rates or change rates accordingly.

5 MS. MIDDLEL: Can we get the audio boosted up in
6 the room at all? It's my elderly ears. Thank you.

7 Q. Okay. Great. Moving on, then, to just getting a
8 better understanding around the capacity payment and
9 the capacity test and the excess payment. So as we've
10 learned throughout the proceeding, that rather than
11 paying for actual capacity, YEC's paying for committed
12 capacity, so that means paying for the capacity that
13 THELP states it can provide during the peak winter
14 period; that's correct?

13:15

15 A. MR. HALL: No, it's based on the outcome of
16 the test.

17 Q. Right. Okay. And that's determined --

18 A. MR. HALL: It's not what they claim, it's
19 what they have demonstrated.

20 Q. Right. So they've determined that by the dependable
21 capacity test. So I'm curious about what --

13:15

22 A. MR. HALL: Right.

23 Q. -- that looks like. So it's like they -- they turn it
24 wide open, maximum output for a 24-hour period; is that
25 how --

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 A. MR. HALL: Yeah, and then -- I think
2 Mr. Osler went through that yesterday in terms of
3 the -- the detail of how that 24-hour test is
4 performed, but yes.

5 Q. Maximum output for 24 hours. And can --

6 A. MR. HALL: It's --

7 Q. -- you sustain it?

8 A. MR. HALL: -- the average.

9 A. MR. OSLER: It is -- I went through the
10 definition on page A1-49 of Exhibit B-5, and it is the
11 average over 24 hours, continuous 24 hours, of what
12 they've -- what they've produced divided by 24, you
13 know. So it isn't spontaneous; it isn't just the
14 maximum. They have to show that it's sustained
15 continuously on average over 24 hours in the month of
16 December.

13:16

17 Q. Okay. So, at that point, the energy electrons and the
18 capacity electrons are looking like the same thing at
19 the point of interconnection?

20 A. MR. HALL: Well, the energy electrons are
21 electrons. Capacity is just the amount of megawatts.

13:17

22 Q. Okay.

23 A. MR. HALL: Yeah.

24 Q. So -- but how will you know whether the capacity
25 committed is delivered or not?

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 A. MR. HALL: So there's a calculation we would
2 do after the fact, which Mr. Osler can review again.

3 A. MR. OSLER: So, again, on the same page,
4 there's a definition called "Dependable Capacity
5 Provided." It's Definition 1.50 on that page.

6 So you can look at it after, but it's essentially
7 the same methodology extended over the peak winter
8 period. How much energy did they deliver during the
9 time periods when we required them to deliver peak
10 capacity. They're not asked to deliver peak capacity
11 all the time, but we have -- under the operating rules,
12 we have the ability to tell them each week whether we
13 -- what hours we want the peak capacity at.

13:17

14 So having told them that, we have a record of when
15 they were supposed to deliver peak capacity. We
16 measure how much they actually delivered during all of
17 those hours when they were required, and we divide it
18 by the total number of hours, and that is the average
19 that they actually provided.

20 And there's an example attached to both the EPA
21 and the exhibit that shows some of this stuff if you
22 want to go there, but that's basically the method. How
23 much did they actually deliver when it was required
24 divided by the number of hours that they were required
25 to deliver the maximum.

13:18

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 Q. So yesterday you said it would be rare, but what
2 would -- what could be the potential causes for an
3 under-delivery of committed capacity?

4 A. MR. HALL: It would be something that, after
5 the test, somehow derated the plant. I mean, in the
6 worst case, it's a complete failure. So if something
7 failed in the plant, you know, after the December test
8 was complete.

9 So, you know, a failure of some piece of equipment
10 would -- would certainly put them offside, or converse,
11 you know, something that allows a situation where they
12 can still operate, but only at a sort of derated -- a
13 derated manner. Hard to think what that would be.

13:19

14 Some kind of ice -- you know, ice problem perhaps.
15 But, I mean, we're a lot more confident about ice
16 because there's no longer a power canal.

17 A. MR. OSLER: So I think -- I think at one level
18 anybody's imagination is as good as the next person's
19 about what could go wrong with a plant. The
20 bottom line is something could always go wrong and
21 there could be a problem.

13:20

22 Aside from that, which is very rare for -- based
23 on Yukon Energy experience with hydro plants and stuff
24 like that. That's not something anybody really expects
25 to be a problem during the peak winter period.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 Before we had the penstock when these rules were
2 originally written, we had a material concern about ice
3 formations and log -- and jams in the power canal that
4 could have disrupted the ability to deliver when we
5 wanted it during the peak winter period. So there were
6 a whole bunch of risks that we talked about that were
7 related to the power canal. The penstock, we believe,
8 has removed all of that risk. So these rules were
9 developed earlier in the context of something that had
10 a lot more risk associated with it.

13:21

11 I'm not aware of any other types of risk that -- I
12 mean, we're not worried about the risk of not having
13 enough water. That was assessed separately.

14 Could something go wrong with the control
15 structure that puts the water into the penstock? Could
16 something jam that or hurt it? I mean, those are
17 theoretical opportunities for something to go wrong.
18 Could there be a climate or severe event, earthquake or
19 whatever, that disrupted something? Anything you --
20 your imagination can add would lead to them not being
21 able to deliver what they were -- committed to deliver
22 during a peak winter period.

13:21

23 Q. What about water availability? You say that's
24 considered elsewhere?

25 A. MR. OSLER: Yes. Effectively, put -- Table A1

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 in Appendix A is the sort of summary of the information
2 we were provided by THELP of water availability over
3 the simulated period of their modelling, 51 years. And
4 then Table A2 discussed how Yukon Energy would probably
5 control the dispatching of that.

6 There's also a clause in the EPA, clause 7.2, that
7 says they will -- that under this EPA, they won't make
8 any changes if it was to reduce the amount of delivered
9 energy we'd get during the peak winter period below
10 certain numbers.

13:22

11 Our -- our biggest concern with respect to making
12 sure they provide the energy that we want, that they
13 have enough water, was related to the peak winter
14 period and the dependable capacity. So their modelling
15 was showing that they could -- they could provide us
16 with 14 million kilowatt hours during that time period
17 of energy, and that was under a very, very wide range
18 of circumstances and conditions, including not even
19 having the reservoir full at the beginning of the peak
20 winter -- at the beginning of the winter period. And
21 also under certain conditions of even some load growth
22 higher than what we'd assumed at Atlin.

13:23

23 With 14 million kilowatt hours of delivered
24 energy, that's when we had the 85 percent of all the
25 peak winter period days that we could actually

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 deliver -- have enough water to deliver peak
2 winter -- peak capacity, and that was far more than the
3 20 days we needed out of that time period.

4 So that was our test, that was our concern, and
5 those were the answers that we got. So when we had the
6 penstock, we really started to relax completely about
7 the issue of dependable capacity, having enough water.

8 Before we had the penstock, we had material
9 concerns that did we have enough water to deal with
10 freezes in the canal or other disruptions that might
11 occur. And we were satisfied we did, but it was a lot
12 different assessment process than once we had the
13 penstock. We were very relaxed once we had the
14 penstock on that issue.

15 On energy, I think I've testified that if we don't
16 get the energy per se, leaving aside dependable
17 capacity, if we don't get the energy, we will be
18 replacing thermal. We're not worried about security of
19 supply, and we're not really worried about the impact
20 on rates because the two are supposed to be reasonably
21 similar.

22 Our concern was focused on dependable capacity,
23 making sure there was more than enough water available
24 to deliver dependable capacity during the peak winter
25 period for the days below minus 30.

13:24

13:24

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 Q. Thank you. So back to the potential under-delivery of
2 committed capacity, how, then, would you calculate the
3 overpayment or the excess payment?

4 A. MR. HALL: How would we calculate --

5 A. MR. OSLER: Section 8.3 of the EPA itself is
6 the section that addresses it if you want to look at it
7 later.

8 Q. Okay, and --

9 A. MR. OSLER: But --

10 Q. -- that talks about how -- is that about the recoup
11 mechanism, or that is how it's calculated or both?

12 A. MR. OSLER: It's a combination. But,
13 effectively, at the end of each peak winter period, you
14 calculate what capacity you paid for. In other words,
15 how much did you pay divided by the price per kilowatt
16 for that year, and that was how much you paid for it,
17 how many megawatts.

18 You then do the test that I read out the
19 definition of: How much did you actually provide when
20 it was needed divided by the number of hours? What was
21 the average megawatt that you actually provided? And
22 if there was less megawatts provided than was paid for,
23 you take the ratio of what the shortage is compared to
24 how much you paid, and that's how much goes into the
25 account to be recovered.

13:25

13:26

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 In other words, if you paid a \$100,000, just as an
2 example, and you only delivered 90 percent of what you
3 paid for. 10 percent of that \$100,000 would go into
4 the account to be recovered in due course.

5 Q. Okay. And about that recovery, it says that any such
6 shortfall would be recovered from potential future
7 payments to THELP --

8 A. MR. OSLER: Right.

9 Q. -- which would begin at 2035, and -- or, before that,
10 from summer energy requested?

11 A. MR. OSLER: Yeah, there are three ways it can
12 be recovered. If there is any --

13 Q. Those are the future opportunities that we discussed --

14 A. MR. OSLER: Right.

15 Q. -- earlier?

16 A. MR. OSLER: Yeah. If YEC had a requirement to
17 get summer energy any time, and that would only occur
18 if they were otherwise going to be burning some
19 thermal, then the price YEC would pay for it is
20 50 percent of the then YUB price.

21 But half of what YEC would otherwise pay to them
22 would be used to offset any dependable capacity, a
23 shortfall amount that was existing at that time. So
24 THELP would only get 25 percent of the peak winter --
25 of the Yukon Energy approved blend fuel price for

13:27

13:27

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 summer delivery.

2 I don't think summer deliveries are very likely,
3 so I'm not suggesting that you want to rely on that for
4 recovery, but that's a mechanism that's there.

5 If the government's put in a carbon tax again,
6 then all of the carbon tax saving that THELP could get,
7 all of it would be ascribed first to pay down the
8 dependable capacity shortfall, and THELP wouldn't get
9 paid anything until the shortfall was fully paid off.
10 That could occur before 2034 or '35, but it -- there's
11 nothing locked down right now for utilities in the
12 north to be paying carbon tax.

13 Then you get to 2035, and if they're -- if mine
14 loads are still around, there will be additional load.
15 There will be a calculation of how much we would
16 otherwise pay them for the added payment, additional
17 payment. And all of that would be used, first, to come
18 down, reduce the excess -- the dependable capacity that
19 we'd overpaid.

20 That one has a reasonably strong possibility of
21 being a pretty reasonable way to recover if there still
22 are shortfalls by that time, because it's quite likely
23 there will be industrial load rather than no industrial
24 load. We just don't have certainty.

25 And going back, we put this in place conceptually

13:28

13:29

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 when we were much more concerned about reliability of
2 the power canal. Really, for all the time and thought
3 we keep putting into it today, we do not think there's
4 a very big possibility or probability, I guess is a
5 better way to put it, of a big dependable capacity
6 problem surfacing unless somebody had some type of a
7 disaster or some other type of situation that nobody
8 really likes.

9 So it's not like we're losing a lot of sleep about
10 it's going to happen with the penstock. The penstock
11 made a big difference.

13:30

12 Q. And a technical question around that: Like, the air is
13 still as cold. What is -- is it the minimum flows that
14 change the icing issues --

15 A. MR. OSLER: Right.

16 Q. -- on a penstock via -- versus a power canal?

17 A. MR. OSLER: At as simple a level as I can deal
18 with it, yes. It's -- it's, first of all, that it's
19 completely controllable. It isn't sort of going along
20 a canal where it could leak out or it could do this or
21 could do that.

13:30

22 Secondly, you'll notice that we have a minimum
23 requirement to -- we don't want the power to at least
24 have 1 megawatt roughly being useable of water going
25 down the penstock. So that means during the coldest

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 part of the winter you don't want the water just
2 sitting in the penstock, you do want it moving a bit.
3 But you can control that water completely compared to
4 when we had the power canal when they said, no, we'd
5 have to take three days before we changed the flow in
6 the power canal. So you'd lose several days of water
7 every time you wanted to change something.

8 So -- and the other thing they're going to do is
9 they're going to take a tap off that penstock three
10 quarters of the way down and use the water for their 13:31
11 existing plant. So even if we don't want any water,
12 they're going to be moving water through that penstock
13 to keep their own plant going.

14 So all of those things give you comfort, from my
15 point of view, that, no, we're not worrying anymore
16 about issues within that passageway between
17 Surprise Lake and the power plants in terms of ice
18 formation, frazil ice, ice block jams that occur that
19 suddenly stop everything. All of those things are no
20 longer -- we're told by the engineers and people who 13:32
21 advise us that they're not issues that we should be
22 concerned about.

23 Q. Okay. That's good to know, and it's reassuring because
24 the way that the mechanism is set up, it looks like a
25 potential overpayment for capacity. I mean, it could

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 potentially not be recouped if these potential upside
2 benefits --

3 **A. MR. OSLER: Right.**

4 **Q.** -- in the future don't materialize or something like
5 that. And initially you had said that the energy and
6 the capacity are kind of two separate accounts, so I
7 was confused about why an under-delivery of something
8 on the capacity side wasn't just taken away from the
9 capacity side, but I understand that you've repeatedly
10 said that THELP needed some security and no sort of
11 removals from that certain revenue that it's going to
12 earn from this project to get it financed.

13:32

13 **A. MR. OSLER: Yes. And I think I've also made**
14 **the point that it wasn't -- it wasn't something that**
15 **was resolved in a five-minute meeting. It went on for**
16 **months in terms of a discussion -- before we had a**
17 **penstock, when we had concerns about under-delivery --**
18 **and obviously they did too, otherwise they wouldn't**
19 **have argued about it for so long. But later on when we**
20 **amended the EPA, we already had all these things in**
21 **place, and we weren't going to get rid of them at all,**
22 **but our level of concern had changed dramatically.**

13:33

23 **Q.** Okay. In Exhibit B-5, B14, I don't know what that is
24 in the pdf, it's talking about the excess payment, and
25 it said: (as read)

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 "A positive balance in this account
2 means that the buyer is paid for less
3 dependable capacity committed than the
4 seller has delivered."

5 So how would that happen, and how is that positive
6 balance reimbursed to the seller?

7 A. MR. OSLER: Where is that?

8 Q. Appendix --

9 UNIDENTIFIED SPEAKER: Pdf 62.

10 A. MR. OSLER: Oh, Appendix B. Did you say
11 Appendix B?

13:34

12 Q. It is in Appendix B, B14.

13 A. MR. OSLER: Yeah. Okay, sorry. And you're in
14 the second-last paragraph on that page?

15 Q. Yeah, that starts with: (as read)

16 "The dependable capacity excess payment
17 account. See Section 8.3. The amended
18 EPA will record the amount of dependable
19 plant capacity seller has provided."

20 The last sentence talks about what the negative balance
21 means and what the positive balance means, and I'm just
22 wondering how there could be a positive balance, meaning
23 the buyer has paid less than what the dependable
24 capacity committed.

13:34

25 A. MR. OSLER: Okay. Well, it's a good question,

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 and they wanted to make sure that if we were going to
2 get the -- get the benefit of -- one way around, that
3 they wanted to make sure that somehow or other they
4 managed to get this situation that it would be taken
5 into account.

6 The only way I could imagine it could occur is a
7 dependable capacity test result that was less than
8 their full capability, and then later on, during the
9 peak winter period, they managed to deliver more than
10 the dependable capacity test had shown. They wouldn't
11 get paid any more then, but it would go as a credit
12 against other things that they hadn't met to date, if
13 you follow me.

14 In other words, let's say the dependable capacity
15 test for some reason or other, they could only get
16 8 megawatts during December.

17 Q. Okay.

18 A. MR. OSLER: So they only got paid for
19 8 megawatts for that year's peak winter period. But
20 let's say they fixed whatever the problem was in
21 January and they were able to deliver 8.75 during
22 January when we wanted it. We would take that into
23 account when we did the -- how much did they actually
24 provide us. We would not pay them the extra, but we
25 would put it against their account for their deficits

13:35

13:35

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 when they weren't recovering -- when they weren't --
2 they weren't delivering what we had -- what they had
3 promised or what they had committed to.

4 That's the only example I could think of of the
5 way in which that could occur, that event.

6 Q. Okay.

7 THE CHAIR: We're just going to pause for a
8 moment. Jeff, could you mute us, please?

9 (DISCUSSION OFF THE RECORD)

10 Q. MS. MIDDLEL: We talked a little bit about the
11 change in the project configuration, which was partly
12 the reason why there was an amended EPA, the penstock
13 replacing the idea of -- the concept of power canal.
14 So it seems like that has also changed the operating
15 rules and no longer requires the steady state operation
16 of the project.

13:43

17 And it looks like -- I'm wondering, does this mean
18 that these sort of added communications between the
19 utility and THELP's utility to -- can allow for the
20 project to be a little bit more load following?

13:43

21 A. MR. HALL: Yeah, that's correct. It's much
22 more flexible than it was with a power canal. So we
23 can dispatch basically -- we have commitments to buy
24 the full quantity of water over the season, and there's
25 a mechanism by which that's tracked; but we can -- if

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Middler

1 we see cold weather coming, we have the ability
2 to -- to, essentially, dispatch, yeah. There's a
3 limitation on how many increases and decreases you can
4 ask for in a day, so we're not phoning them up every
5 hour, for example; right?

6 A. MR. OSLER: But the big -- the big shift as to
7 why we couldn't do that before was the concern about
8 problems in the power canal led to the conclusion that
9 they have to keep the water moving through the canal
10 at -- at least at 65 percent of capacity. That was the 13:44
11 lowest they could go. If they went much lower than
12 that, they were worried about creating icing conditions
13 that would cause trouble, especially when they ramped
14 back up. And that's not uncommon in terms of a
15 procedural issue. So we could only operate between 65
16 and 100 percent, and we had to give three days' notice
17 for any change.

18 So when we say it got a lot more flexible and
19 adaptable, it's sort of hard to imagine the degree of
20 change that took place, where you could make a -- for 13:45
21 the next day, you could make a change. You could book
22 it by week; you could change it up and down a couple of
23 times during the day as part of the plan. And you
24 could go as low as 1 megawatt or, you know, about
25 11 percent of the capacity if you were not needing the

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Questioned by Ms. Middler

1 power. You didn't have to shut it -- you couldn't shut
2 it down, but you didn't have to run 65 percent of the
3 water down the canal. You could just -- could lower it
4 to as low as 1, 1 percent -- 11 percent, 1 megawatt.

5 So I'm trying to summarize, but there was a lot of
6 change in the flexibility of operation because of the
7 penstock.

8 Q. Okay. I want to move to something that was briefly
9 discussed yesterday on the transcript, page 129,
10 starting on line 9.

13:46

11 A. MR. MOLLARD: Sorry, Ms. Middler, what
12 page number, please?

13 A. MR. OSLER: 129.

14 Q. Yeah, 129, starting on line 9. Mr. Osler says:
15 (as read)

16 "The Pine Creek document..."

17 And he is referring to the Pine Creek EPA:

18 "The Pine Creek document I think THELP
19 understood was confidential. And
20 certainly we've never really studied it
21 carefully, but it became available to us
22 because it was filed with the BCUC. It
23 was on the record.

14:33

24 So in all fairness, it wasn't a
25 document in front of the parties and it

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Questioned by Ms. Middler

1 wasn't -- I've never read it, for
2 example. I've never looked at it."

3 So I'm wondering if you could provide some details on
4 when you became aware that this agreement was in the
5 public realm.

6 **A. MR. OSLER:** **I can't from recollection. We**
7 **could go back and try and figure out when we got it.**
8 **Yeah.**

9 **Q.** So it was -- it was an IR response YUB-YEC-1-8.

10 **A. MR. OSLER:** **Yeah.**

13:47

11 **Q.** On March 9. And I'm curious as to whether you were
12 curious of what it contained?

13 **A. MR. OSLER:** **Well, I think our lawyer read it.**
14 **They were the ones that uncovered it before we had the**
15 **IR. And they never raised anything coming out of it**
16 **for us to pay attention to, but it -- it wasn't -- what**
17 **I was trying to transmit is that it was a document that**
18 **I think our lawyer was prompted out of curiosity,**
19 **because we weren't being offered the document.**

20 **Nobody was suggesting that they were going to give**
21 **it to us. He works in Vancouver, and he just, out of**
22 **curiosity, went on the BCUC website because he thought**
23 **maybe it would be there, and it was. And he told us**
24 **about it and we got a copy of it, but it wasn't a focus**
25 **of our discussions. I think he probably read it, but I**

13:48

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Questioned by Ms. Middler

1 **could ask him.**

2 Q. I think that -- I mean, I would have thought -- it's a
3 seller. They already are involved in this kind of
4 arrangement with another utility. I would have thought
5 that might have been an interesting starting point.

6 But there is one marked difference in the two
7 EPAs, is the CPI rate. In the Atlin EPA we're looking
8 at, 50 percent CPI applied to both energy and capacity,
9 whereas in the Pine Creek EPA, which granted only --
10 covers energy, it used a 12.5 percent of CPI rate.

13:49

11 So I'm just wondering if there was a missed
12 opportunity in not having that as a starting point in
13 negotiations?

14 A. MR. HALL: I mean, it's an interesting
15 question, and I think we went through yesterday that
16 the benchmarking to 50 percent of CPI was consistent
17 with the Standing Offer Program inflation model on
18 energy. I mean, I think, you know -- and I --
19 Ms. Middler, I haven't read the Pine Creek EPA. I
20 mean, I think you -- it's a different system, right.
21 You're talking about displacing thermal on a thermal
22 micro grid, right, in Atlin, which is quite different
23 to our EPA, where you're displacing thermal on a
24 hydro -- predominantly a hydro grid.

13:49

25 And so the level of complexity, I would -- I would

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Questioned by Ms. McCullough

1 guess in our -- in terms of how price is calculated,
2 for example, in our EPA would be substantially
3 different from the Pine Creek deal, which is probably
4 way more straightforward in terms of the way price is
5 calculated.

6 Q. Fair.

7 MS. MIDDLEL: Thank you.

8 THE CHAIR: You're all done?

9 MS. MIDDLEL: Yes.

10 THE CHAIR: Okay. Ms. McCullough, do you have
11 some questions for the panel?

13:50

12 MS. MCCULLOUGH: Yes, I do. Just a few, thank you,
13 Mr. Chair.

14 MS. MCCULLOUGH QUESTIONS THE PANEL:

15 Q. So, first of all, thank you very much for some of the
16 explanation that we've just had. I can't say yet
17 whether it has clarified matters for me or not, but I
18 can say that I'll certainly be reading the transcripts
19 very carefully.

20 Okay. So the first -- I have some questions that
21 I think may be fairly easy to answer.

13:51

22 The first thing that I wanted to ask was, we
23 discussed First Nation consultation yesterday, and I
24 appreciate that amongst the buyer and seller, the
25 seller has taken on the responsibility. But I would

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Questioned by Ms. McCullough

1 like to turn to Exhibit B-10, pdf 94 of 125, and I
2 think it's YUB-1-20 in the IRs, and specifically
3 Question (e) there.

4 So just let me know when you have that?

5 A. MR. OSLER: 1-20?

6 A. MR. MOLLARD: Yes.

7 A. MR. HALL: Okay. Got it.

8 MS. SABO: 1-20, the pdf version?

9 Q. MS. MCCULLOUGH: So 1-20(e). So the question:

10 (as read)

13:52

11 "What First Nation settlement lands and
12 traditional territories would be
13 affected by the Atlin-Jakes Corner
14 infrastructure, and what is the extent
15 of consultation/accommodation to date?"

16 And so in respect of the response, (e), the
17 second paragraph -- rather, the first paragraph:

18 (as read)

19 "The THELP owned and developed project
20 facilities in Yukon between the BC-Yukon
21 border and Jakes Corner are in the
22 traditional territory of Carcross Tagish
23 First Nation but do not affect any
24 First Nation settlement lands."

13:52

25 I appreciate that answer. It doesn't speak to whether

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Questioned by Ms. McCullough

1 or not there are any other overlapping Yukon
2 First Nation claims into that area?

3 A. MR. HALL: Not as far as we're aware, no.

4 Q. Okay. And are you aware of any potential
5 trans-boundary claims into that area beyond that of the
6 Taku River Tlingit?

7 A. MR. HALL: Well, I think you've pointed out
8 that the Taku River Tlingit have a trans-boundary claim
9 into Yukon.

10 Q. Certainly.

13:53

11 A. MR. HALL: I don't know whether it extends to
12 this area.

13 Q. I --

14 A. MR. HALL: But, I mean, presumably we -- they
15 haven't -- it's the Taku River Tlingit, so it's their
16 project. So, you know, it's never come up as an issue,
17 but --

18 Q. And I do --

19 A. MR. HALL: -- CTFN have --

20 Q. -- I do -- sorry --

13:54

21 A. MR. HALL: Sorry?

22 Q. I'm sorry, I do appreciate that. Sorry for
23 interrupting you. I was actually interested in whether
24 there was any awareness of potential claims from either
25 the Tahltan, it's a little difficult to see on the

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Questioned by Ms. McCullough

1 Federal Government's maps exactly how far their claim
2 goes into the Yukon and whether there's an overlap, and
3 also, I guess, potentially, perhaps unlikely, but
4 potentially the Acho Dene Koe could have a
5 trans-boundary claim that extended that far.

6 So I just wondered if there was any kind of
7 awareness of that, understanding that TRT is
8 responsible for the consultation.

9 A. MR. HALL: We're not aware that either of
10 those First Nations have --

13:54

11 Q. Thank --

12 A. -- MR. HALL: -- come forward with an assertion
13 related to this project.

14 Q. Okay. Thank you. I'd like to turn, then, to the
15 actual EPA agreement, and I'm looking at the amended
16 EPA, but I think it's the same in both; and
17 particularly Article 11, which deals with First Nation
18 claims. And specifically 11.2 and 11.2(b), which says
19 that: (as read)

20 "The buyer receives/obtains evidence or
21 becomes aware of a First Nation claim,
22 it may direct seller, at seller's cost,
23 to, '(b), take any measures seller deems
24 necessary to address, prevent, mitigate,
25 compensate, or otherwise accommodate any

13:55

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Questioned by Ms. McCullough

1 potential impacts provided the measures
2 are consented to in advance by buyer and
3 the First Nations making the
4 First Nation claim."

5 So I would just say it's any measures that the seller
6 deems necessary, but not all that they deem necessary,
7 but it's only those that they deem necessary and the
8 buyer and the First Nation agree to.

9 So I was wondering, what type of measures that were
10 being contemplated that all three parties had already
11 agreed to? Beyond further negotiation processes.

13:56

12 **A. MR. HALL:** Sorry, can you just repeat the
13 question in terms of the last part about all three
14 parties need agreement?

15 **Q.** Well, it -- I guess I see -- the clause, it's a bit
16 confusing. It says: (as read)

17 "Take any measures seller deems
18 necessary to address, prevent, mitigate,
19 compensate, or otherwise accommodate any
20 potential impacts provided the measures
21 are consented to in advance by buyer and
22 the First Nations making the
23 First Nation claim."

13:57

24 So basically, I guess, I'm reading (b) as saying
25 whatever the three parties, being the claimant

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Questioned by Ms. McCullough

1 First Nation, the buyer, and the seller, agrees to.

2 A. MR. HALL: Right.

3 Q. (b) is just saying --

4 A. MR. HALL: So everyone has to agree. Yeah.

5 Q. Yeah. (b) is just saying that -- that the seller will
6 pay for those; is that correct?

7 A. MR. HALL: Well, it's not about payment. I
8 mean, I guess the seller deems them necessary. So, I
9 mean, that puts the onus on the seller to develop a
10 deal; right? And then --

11 Q. I get that --

12 A. MS. HALL: -- and ultimately the buyer --
13 ultimately the buyer has to consent to them.

14 Q. I guess I just meant because it has to be consented to
15 in advance. So -- but it would be eventually at
16 seller's cost; correct?

17 A. MR. HALL: That's right. At seller's cost is
18 in the opening part of 11.2, yeah.

19 Q. Okay. So I guess I'm wondering what type of measures
20 you're thinking would be anticipated that you, as
21 buyer, would agree to in advance?

22 A. MR. HALL: Well, typically -- well, I mean, a
23 claim, it's a bit of speculation what the claim is, but
24 the -- sometimes these things are settled through an
25 impact-benefit agreement, for example. So the measures

13:57

13:58

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Questioned by Ms. McCullough

1 **would be whatever items are in that package.**

2 Q. So you would say -- in the case like that, if it was an
3 impact-benefit agreement, you would say -- the seller
4 would say, "Listen, outstanding claim. This is how we
5 like to approach it." You would then say, "Okay, that
6 type of approach is correct to us." The seller would
7 then take it from there?

8 A. **MR. HALL: Yeah.**

9 Q. Okay. I think I understand that.

10 I wanted to ask about 11.3, which was about seller
11 termination for First Nation claim and sort of the
12 timing.

13 So if a First Nation claim is brought but it's not
14 prior to buyer's COD, what is the remedy for any -- any
15 measures that the buyer may then -- like, if there are
16 any measures that the buyer has to -- sorry, I'm not
17 articulating that well.

18 But what I would say is, if there are -- a claim
19 is brought subsequent to buyer's COD and there are any
20 costs to the buyer as a result of that claim, are the
21 damages limited to those in respect of the system
22 upgrade costs?

23 A. **MR. OSLER: So just -- these are, I gather,**
24 **clauses that come from some other agreements. They**
25 **weren't something we spent a lot of time on. But if**

13:59

14:00

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. McCullough

1 this occurred under 11.3, it would be before the
2 buyer's COD. So the plant will not start operating
3 until both the buyer's COD and the seller's COD have
4 occurred. Okay?

5 So we're talking about a situation where
6 hypothetically the project has perhaps gotten under
7 construction --

8 Q. Mm-hm.

9 A. MR. OSLER: -- people have been incurring
10 costs, including the buyer has been incurring
11 system -- systems upgrades, and then along come
12 claimants proven in court.

13 Q. Right.

14 A. MR. OSLER: Which, reading this clause,
15 provides an opportunity that the seller might terminate
16 the whole EPA.

17 So if that occurred, we wouldn't be operating yet,
18 and the seller has decided that this is such a severe
19 thing they're going to terminate everything, so the
20 rest of the clause is then focusing on making sure that
21 the buyer is reimbursed for costs that they might have
22 incurred in good faith up to that point in time.

23 So it's a series of hypotheticals ultimately
24 protecting the buyer to get recovered costs and
25 allowing the seller the right to terminate under this

14:01

14:01

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. McCullough

1 particular situation.

2 Q. But the buyer --

3 A. MR. OSLER: If it occurs before buyer's COD.

4 This clause has no operation if the buyer's COD has
5 already occurred.

6 Q. But the buyer would only get their actual costs
7 connected with their actual costs related to the system
8 upgrades, and would not get their costs for, for
9 example, negotiation, consultation -- for consultants,
10 et cetera?

14:02

11 A. MR. OSLER: You're correct. The buyer would
12 get costs for what the agreement provides for, which is
13 only for system upgrades or other specific costs
14 related to that, including consultation by ATCO or
15 something. But it -- there's no provision in the EPA
16 for the buyer to be -- to receive funding from the
17 seller for negotiation costs or for the cost of this
18 hearing.

19 Q. Right. So I'd like, if we could, just go to page 23, I
20 think of the transcript yesterday, and -- let's see.
21 And, Mr. Hall, it's your opening statement, and your
22 final paragraphs, at line 4, it says:

14:03

23 "And finally, the project execution
24 model, which involves an independent
25 project owned and operated by an

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Questioned by Ms. McCullough

1 Indigenous-owned corporation, represents
2 one of the key project development
3 models that we see being used going
4 forward to achieve reconciliation,
5 meaningful participation of
6 First Nations in Yukon's energy future,
7 and the economic and social advancement
8 of Indigenous peoples in Canada,
9 British Columbia, and Yukon."

10 So I do understand the para -- you're talking about the
11 project execution model, but I guess I'm also interested
12 if you're also seeing the EPA in this case as a model or
13 precedent for agreements with Yukon First Nations?

14:04

14 **A. MR. HALL:** That's a good question. I think,
15 you know, these EPAs end up being, to some degree, case
16 specific. They -- they relate, particularly the
17 pricing terms, to the nature of the project, whether
18 it, for example, produces both energy and dependable
19 capacity.

20 **Q.** Mm-hm.

14:04

21 **A. MR. HALL:** So there's an element of this
22 that's fairly unique to hydro versus let's say a
23 First Nation developed a wind project or a solar
24 project.

25 **Q.** Mm-hm.

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Questioned by Ms. McCullough

1 A. MR. HALL: They would look different at that
2 level. I think there are -- there are certain terms in
3 here that we've -- I think we've been clear on this --
4 you know, borrowed from other prior templates,
5 agreements, whether they be the Standing Offer Program,
6 EPA template or, you know, templates of EPAs in
7 British Columbia. So those kinds of terms would --
8 would tend to be replicated, because there's no reason
9 to change them.

10 But I -- but I think that there's always going to
11 be a degree of customization. I think in -- we were
12 thinking more, like, sort of the business-level comment
13 rather than this EPA as a template.

14 Q. Okay. Thank you. And I just have one more question,
15 which is also from the transcript, I think
16 page 35 -- sorry, page 36, right at the top, line 1.
17 Mr. Maissan ask you then:

18 "Was this project then an unsolicited
19 proposal?"

20 And the response being:

21 "Yes, in effect, it was."

22 And I just wondered, to the extent you can tell me, if
23 you have had other unsolicited proposals from Yukon
24 First Nations?

25 A. MR. HALL: I can't recall that we have. Most

14:05

14:06

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 of the First Nation activity in energy has been in --
2 within the Standing Offer Program, so we've had
3 development corporations be -- either develop projects
4 themselves --

5 Q. Right.

6 A. MR. HALL: -- or be partners on a standing
7 offer project.

8 Q. Okay. Thank you.

9 MS. MCCULLOUGH: Those are my questions.

10 THE CHAIR: Thank you, Ms. McCullough.

14:06

11 THE CHAIR QUESTIONS THE PANEL:

12 Q. Actually, just following on that last question -- and
13 I'll begin my questions with you, Mr. Hall -- just to
14 get it fully clear, if I understand your evidence, is
15 that YEC had no prior involvement or discussions with
16 THELP or the TRT regarding the possibility of them
17 expanding their hydro facility and then selling energy
18 generated by that to YEC? In other words, if I
19 understand your evidence correctly, it was a total cold
20 call from TRT or THELP to YEC. Is that -- is that the
21 case?

14:07

22 A. MR. HALL: No, I wouldn't say it was a cold
23 call, Mr. Chair. I think Mr. Osler yesterday mentioned
24 that there had been some early conversations that went
25 back several years, but I wouldn't say that they were

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Questioned by The Chair

1 particularly serious. And -- and THELP, of their own
2 accord, completed quite a bit of work and secured
3 federal funding to support that work to do the
4 pre-feasibility studies, the environmental assessment
5 work before they -- we ever got serious about a
6 conversation.

7 And so, you know, they had a vision of developing
8 this expansion project, and they were prepared to do
9 the heavy lifting and raise the money to advance it to
10 a point where we could take it seriously.

14:08

11 And so I would say the communications between the
12 two entities really ramped up following our release of
13 the ten-year renewable plan, where we -- we started,
14 you know, identifying this as a real option that looked
15 interesting compared to others. And that related, you
16 know, in large part because THELP had done a lot of
17 work already, and so they were way ahead of, you know,
18 other hydro projects that we might look at that would
19 be starting from scratch.

20 Q. Okay. And would it be fair to say that absent YEC,
21 THELP wouldn't really have any other possible customer
22 to go to to sell the additional 8 or 8.75 megawatts
23 that their plans would give rise to?

14:09

24 A. MR. HALL: Yeah, that's fair.

25 Q. Okay. Now, bear with me. I'm just jumping from one

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 spot to another.

2 You mentioned something in your evidence
3 yesterday, and I just -- I wanted to get this sort of
4 fleshed out a bit. And I'm referring to the transcript
5 from the hearing yesterday at pdf page 50. And you
6 were speaking about the BESS project, the battery
7 storage project, being in the works and site
8 preparation and so on.

9 Then you mentioned in the -- at line 17, you
10 stated:

11 "I mean, we have seen some interesting
12 developments in the battery market
13 around lead times for delivery, but I
14 think right now, you know, nothing
15 material in terms of risk has transpired
16 in that project."

17 Could I ask you just to explain what you meant by
18 "interesting developments" in relation to lead times and
19 what the underlining meaning is?

20 **A. MR. HALL:** Certainly. I think, as everyone
21 knows, you know, we've seen strong growth in demand for
22 lithium ion batteries from electric vehicles and also
23 storage projects such as ours, but I think that the
24 market dynamics are being driven by what's going on in
25 the vehicle market. We've seen the price, you know --

14:10

14:11

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 the price of lithium increase a lot, supply
2 constraints, supply chain, you know, questions about
3 supply of lithium. You know, you've got Elon Musk
4 dreaming about actually buying up the supply chain and
5 buying lithium mines, so I think there's a lot of -- a
6 lot of things have gone on.

7 What that really boils down to is a slip-out in
8 the delivery of the battery, and so that's really the
9 material impact that we've seen. I don't think it, at
10 the end of the day, affects the project financially
11 necessarily, but it -- but, you know, I think we're
12 looking at a slip in the inservice date from what we
13 had originally envisioned.

14 Q. Have you got a rough idea --

15 A. MR. HALL: And so --

16 Q. -- rough idea how far out that service date might be
17 pushed?

18 A. MR. HALL: Yeah, I'm just getting my years
19 right. It's -- it's slipping into 2023. I think we're
20 looking at sort of mid-2023 at this time.

21 Q. Okay.

22 A. MR. HALL: Yeah, Q2, Q3.

23 Q. Okay. Provided Mr. Musk doesn't send another rocket
24 into space, a lithium-ion-powered rocket or something
25 of the sort.

14:12

14:12

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 Now, another thing you mentioned as well a little
2 further down in the transcript, I think you spoke about
3 possible delays in the Moon Lake project, possibly
4 around 2028-2029.

5 What's going on in that regard? Is that due to
6 regulatory issues or whatever in British Columbia that
7 might slow that project down?

8 **A. MR. HALL:** No, I think it's -- it's driven by
9 two things. The first being -- and then I think I
10 spoke about this yesterday -- just around the
11 engagement with Carcross Tagish First Nation. Just,
12 you know, the practical reality of them -- you know,
13 they've got a number of things on their plate right
14 now, and what we've recently put on their plate is the
15 re-licensing of the Whitehorse hydro facility. And
16 that's a major piece of work.

14:13

17 And, you know, our experience on the ground has
18 been that they just have limited capacity to deal with
19 multiple projects at once, and so they -- they very
20 much wanted to focus on other things rather than Moon.
21 And so that's just made it slow. I think we'll get
22 there eventually with them, it's just we've got a
23 couple of things to square away first.

14:14

24 And then also, I mean, related to this project,
25 there's a piece of negotiation between THELP and CTFN

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 that needs to get done related to this project. So I
2 think it's just a practical reality of Yukon
3 First Nations are small. They have a finite capacity
4 to work on complex projects. So that's the first one
5 that I spoke about.

6 And then the second one was we really would like
7 to secure federal funding to support the Moon project,
8 and the fund that wasn't -- announced in a prior
9 federal budget that -- that had been earmarked for Moon
10 hasn't actually been launched by the federal department
11 responsible, and so the application process to secure
12 that money just hasn't been completed. And so
13 we -- rather than put ratepayer funds at risk, you
14 know, I think our choice would be to wait and try and
15 get that federal funding in place.

16 Q. Okay. Thank you. Now, referring to Exhibit B-10,
17 which Ms. McCullough was referring to earlier, and I'm
18 looking, in particular, at page 95 of the pdf version
19 of B-10, at line 19 there, it says: (as read)

20 "THELP is responsible for
21 consultation/accommodation related to
22 the project."

23 Could you please explain to us where -- from where does
24 THELP's responsibility to consult arise?

25 A. MR. HALL: Well, it arises, you know, partly

14:15

14:16

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 out of the YESAB process, and the piece of the
2 transmission line that is within Yukon was subject to a
3 YESAB review at the DO level. And, as part of that,
4 there's a requirement for the proponents, the project
5 owner, which is THELP, to -- to engage with affected
6 First Nations, which would include Carcross Tagish
7 First Nation, because there's a piece of the
8 transmission line, a fairly small piece, that is within
9 their traditional -- CTFN traditional territory. So it
10 arises out of the YESAA, the obligations of a proponent
11 under YESAB. 14:17

12 Q. Okay. So that -- if I take your meaning, then, it was
13 an element of YESAB's order or direction that -- that
14 THELP consult with CTFN?

15 A. MR. HALL: It's not a -- it arises out of the
16 YESAB construct. It's not an order from YESAA, it's
17 just a requirement. Like, if Yukon Energy does
18 any -- if any proponent, you know, develops a project
19 that is assessed by YESAB, there's a requirement to do
20 this. You need -- 14:17

21 A. MR. OSLER: Consultation.

22 A. MR. HALL: Just to consult. Yeah.

23 Q. Fair enough. I guess I'm looking at it through the
24 lens of, you know, sort of the general law around
25 Indigenous consultation and arising out of the honour

A. HALL, E. MOLLARD, C. OSLER

Questioned by The Chair

1 of the Crown. So when I saw that response in the IR,
2 it struck me as a bit unusual that the honour of the
3 Crown would be delegated to -- to a First Nation to
4 consult with another First Nation.

5 A. MR. HALL: No, that -- that's a separate
6 requirement. So what happens is the proponent has to
7 consult. Then the project comes out of YESAA, and it
8 goes to the decision body, which is, in this case, the
9 Crown; right? And there is a duty -- a duty to consult
10 that the Crown has separately.

14:18

11 Q. Yes.

12 A. MR. HALL: So Yukon government comes in at
13 the end, and then has to complete its own consultation
14 directly with CTFN.

15 Q. Okay.

16 A. MR. HALL: And so that -- that happened, and
17 that reinforced the fact that THELP and CTFN still had
18 some work to do to come to a mutually agreeable
19 solution.

20 Q. Okay. And as far as YEC is concerned, YEC has no
21 responsibility to monitor that consultation process,
22 see how it's going, or is that another branch of the
23 Yukon government?

14:19

24 A. MR. HALL: Yeah, no, we do not have a legal
25 responsibility to monitor that. Obviously we have a

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Questioned by The Chair

1 kept interest in it being successful, but we don't
2 carry the duty of the Crown, for example, in that final
3 consultation step.

4 Q. Okay. And there's no -- there's no sort of explicit
5 contractual obligation between YEC and THELP other than
6 what's in 11.2 of the -- of the actual agreement? I'm
7 looking at -- I'm looking at --

8 A. MR. HALL: Yeah, it's -- yeah, I mean,
9 there's Section 11, but there's also a condition
10 precedent where THELP has to secure the relevant
11 permits required, which implies that they have to go
12 through the YESAB process and also receive a decision
13 document.

14:20

14 Q. Okay. So, ultimately, it's one minister or the other
15 or the cabinet that will make the determination that
16 consultation, you know, in this case has been adequate?

17 A. MR. HALL: Correct.

18 Q. Okay. Thank you.

19 I hope you'll forgive me if I am getting somewhat
20 overwhelmed by all of the discussion around pricing or
21 whatever, but please indulge me.

14:21

22 I had a question about, essentially, what the
23 effect on -- might be on the pricing that YEC pays to
24 THELP, you know, in sort of a net sense, I guess, if
25 other sources of renewable energy come along, come on

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Questioned by The Chair

1 stream that -- that apart from the power from -- or the
2 electricity generated from Atlin, if these other green
3 power sources, you know, on their own sort of displace
4 the thermal energy, will that be taken into account at
5 some point along the way?

6 A. MR. OSLER: It's taken into account in the
7 forecasting that's done to set the price right now. So
8 I'll come back to that.

9 But once you've set the price and the project goes
10 ahead, it can't be taken into account in the sense of
11 changing the price. The price is then locked in.
12 Okay?

14:22

13 And before I go back and explain the first part,
14 any time the utility does a new project, whether it's
15 with an IPP or whether it's with its own planning for
16 its own hydro project, the same issue that you've
17 raised comes up. You do the best you can based on the
18 forecast you have then. You make the decisions.

19 And the next guy that comes -- next project that
20 comes along has got to take into account you as a given
21 project. And they've got to now justify it. You don't
22 get to say "You just destroyed my project because you
23 came second" if you follow.

14:23

24 Q. Yeah.

25 A. MR. OSLER: And that's really -- that's

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Questioned by The Chair

1 really, really important from a utility board point of
2 view.

3 Now, we've taken into account, in Table A3 of
4 Exhibit B-5, by saying we assumed 40 million kilowatt
5 hours of IPPs under the SOP program. That -- as
6 Mr. Hall has testified, we do not have
7 40 million kilowatt hours of IPP contracts today. In
8 fact, we have very few today, about three, and they're
9 very small, if you remember the GRA.

10 So the ten-year renewable plan and YEC's
11 forecasting team said, "Well, by 2024, given the pace
12 at which SOPs are gearing up and people are putting
13 funding into it, we could have 40," so let's be
14 conservative and assume we had 40.

15 If we end up with less than 40, the ratepayers
16 benefit. If we get 40, it's okay. If somebody changes
17 the rules and it becomes 50, that wasn't something that
18 we could take responsibility for today. Okay.

19 Q. Fair enough. Yeah, yeah. No, and nobody requisitioned
20 a crystal ball for you, so I recognize you're doing the
21 best you can.

22 A. MR. OSLER: That's the essence of the
23 exercise, sir, you're correct.

24 Q. Thank you, panel. I think that's all the questions I
25 had that hadn't been asked elsewhere.

14:23

14:24

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 THE CHAIR: So, now, with the Board's
2 questions concluded, Mr. Landry, I expect you will want
3 to do some re-examination. And just to be clear and to
4 nail things down a little bit, we understand that your
5 questions of the Board will be limited to matters
6 raised in cross-examination.

7 MR. LANDRY: Thank you, Mr. Chair. I
8 appreciate that point from past issues, so -- I have
9 just a couple, so if you would indulge me for a moment,
10 I'll go through my notes to...

14:25

11 THE CHAIR: Certainly.

12 MR. LANDRY RE-EXAMINES THE PANEL:

13 Q. The first question I have arises out of some
14 questioning yesterday concerning the system upgrade
15 costs. And just as a reference point for the
16 witnesses, page 53 of the transcript. That's where the
17 issue of system upgrade costs we were speaking to, and
18 I was -- I guess it was you, Mr. Hall.

19 And I want to divide my questions into two things
20 that were discussed at that point in time. One is the
21 costs, and the other is the actual determination of
22 what system upgrade costs are required for purposes of
23 this project.

14:26

24 In terms of costs -- well, no, in fact, let me
25 start with the other one. In terms of this control

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 over what system upgrade costs are required for the
2 purposes of this project, who has control of that?

3 A. MR. HALL: Well, it's the utilities. So as
4 part of the exercise, both ATCO and ourselves studied
5 what the impact of all this power coming through the
6 system would be. We commissioned our other independent
7 work, so ATCO did their study, we did ours. And based
8 on those results, the system impact costs estimates
9 were developed.

10 I think it's also important just to remember that
11 THELP will end up paying actuals, so we have estimates
12 right now we'll incur -- we'll do the work, and then
13 whatever actual costs are in fact incurred, that those
14 are what -- be what THELP will pay.

15 Q. Thank you. Because that was sort of my follow-up
16 question. But just to go back to the previous about
17 the control over system upgrades, does THELP have any
18 control over determining what system upgrades are
19 needed by either ATCO or by YEC?

20 A. MR. HALL: No. I mean, there's certainly
21 communication. We've reviewed the outcome with them,
22 and we've had some conversations, for example, at the
23 Jakes Corner substation about how that substation might
24 be configured to reduce those costs. But, ultimately,
25 it's the utilities that make the final call.

14:27

14:27

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 Q. Thank you. Now, there have been a lot of questions on
2 and related to the aid to cross-examination that was
3 provided to the witness panel by Ms. Sabo which is, for
4 the record, A-11. And on a couple of occasions -- I
5 guess it would be Mr. Osler would be the person who was
6 asked about the possibility of Yukon Energy
7 constructing the project as opposed to an IPP such as
8 THELP.

9 And the debate about there was no other project, I
10 understand that; but I think on more than one occasion
11 the question was would it cost more, would it be -- or
12 cost less, I guess, if Yukon Energy. And I think the
13 answer to that question, Mr. Osler, if I can summarize
14 it, was that it would not cost less, it would cost
15 more.

16 And what I'm trying -- assuming that's right, my
17 question is, can you explain to the Board why it is
18 that THELP can construct a project with these costs at
19 a level that effectively would cost YEC more than it's
20 costing THELP?

21 Now, you talked a little bit about debt and equity
22 splits and that, but I wonder if you could be concise
23 on the record to explain why that is the case. Why is
24 it that the IPP can effectively build a project,
25 including all the grants and everything, and

14:29

14:29

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 effectively sell it to you at a lower cost than if you
2 had -- than if YEC had constructed it.

3 A. MR. OSLER: The short answer, referring to
4 JM-1-7 Amended, is that if you assumed all the same
5 costs were necessary if YEC built it compared to what
6 Atlin would cost if THELP built it, which was the
7 assumption for that answer, YEC's weighted average cost
8 of capital is higher than THELP's in the assumptions
9 that we have used. YEC weighted average cost of
10 capital includes 60 percent debt and 40 percent equity. 14:30
11 And when we ever -- we don't really know for sure. We
12 don't have exposure to what THELP's actual planning
13 costs are and their own internal planning, but we have
14 assumed in discussions for the sake of trying to
15 understand things that they had 80 percent debt and
16 20 percent equity.

17 And that debt is at the CIB interest rate they
18 hope, which is much lower than the interest rate that
19 YEC would have, and they've got a lot more of that low
20 interest rate in their weighted average cost of capital 14:31
21 than YEC has in its, so the result is capital costs
22 more for YEC at the moment than it does for that
23 First Nation at the moment.

24 I'm not going to try and extrapolate that into all
25 situations, but often when somebody is doing -- from my

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Re-examined by Mr. Landry

1 experience personally on some other projects, not in
2 Yukon, if a First Nation is having the opportunity with
3 a considerable amount of federal funding to put
4 together the financial plan for a renewable project, it
5 will probably end up with a capital structure that's
6 closer to what THELP is -- what we've assumed for THELP
7 than it is to what has to happen for YEC. It will tend
8 to be lower. But it's relying excessively on federal
9 grant funding and other sources of funding to make it
10 work. It's not going to the bank usually to get the
11 bank to pay for it.

14:32

12 CIB -- Canadian Infrastructure Bank is the type of
13 bank that, at the moment, if you have a large enough
14 project, can be a very good thing for that type of
15 investment; but if you went to a normal commercial
16 bank, you'd have a different set of problems.

17 So it's nothing more in this analysis,
18 Mr. Chairman, than the different assumptions about what
19 cost of capital is in the sense of how to finance it as
20 between the two entities, and I don't want to
21 extrapolate too far from this situation because things
22 can change quickly and -- for everybody.

14:32

23 And the assumption that everything costs the same
24 for the two parties is an assumption in the answer.
25 Depending on all sorts of things, that could be a good

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Re-examined by Mr. Landry

1 assumption or a bad assumption. It could be -- as
2 Mr. Hall said earlier, some people like to say that
3 Crown utilities always end up costing more than IPPs,
4 and some other people have some other opinions.

5 So I'm not touching that.

6 Q. Thank you, sir. Now, there was a question, you'll
7 recall, again I -- let me just see who -- I believe it
8 was by Ms. Sabo of you, Mr. Osler, which dealt, you'll
9 recall, with the issue of whether or not there's a
10 correlation between the water conditions in the Atlin
11 facility versus the YIS. And if you could go to
12 page 156 of the transcript.

14:33

13 A. MR. OSLER: Okay. I'm there.

14 Q. And there you'll see the question at the top of the
15 page related to a quote from the exhibit she
16 references, and it talked about this correlation of the
17 YIS lower water sequence with low water conditions at
18 Atlin. Do you recall that?

19 A. MR. OSLER: Yes.

20 Q. Now -- and you got into the issue of risk, and you said
21 there was some risk, but you did not -- and I'm
22 summarizing here, and correct me if I've summarized
23 incorrectly, but you didn't think that it was material.

14:34

24 I wonder if I could just refer you to a document
25 that you did refer to later, and it's Table A1 in

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Re-examined by Mr. Landry

1 Exhibit B-5, which is the submission, the amended
2 submission.

3 A. MR. OSLER: Yes, I'm just getting it,
4 Mr. Landry.

5 Q. Tell me when you get there.

6 A. MR. OSLER: Okay. I'm there.

7 Q. Keeping in mind the overall context of the question
8 about the materiality of the risk that -- because of
9 this lack -- or inability to correlate, if I understand
10 Table A1, this is all of the water years from 1970 to
11 2020 in the Atlin facility -- or in the Atlin
12 watershed; correct?

14:35

13 A. MR. OSLER: Correct.

14 Q. Okay. You didn't want to go to the last column on this
15 one, you were dealing with other related questions, but
16 I'd like you to go to the last column on this one,
17 because -- first of all, could you explain what is
18 meant by "peak WP, December 16 to the end of February"?
19 What is that, so that we have the context within which
20 I can ask the question.

14:36

21 A. MR. OSLER: That's referring to the period
22 defined in the EPA called the "peak winter period,"
23 from December 16th to the end of February. Each
24 winter.

25 Q. Right. And that's when you need, if I can put it --

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 I'll put it in my term. Please correct me if you think
2 it should mean something else. That's when you need
3 the -- if I can put it with -- through energy,
4 obviously, but that's when you need the capacity for
5 the purposes of your N minus 1 criteria; correct?

6 **A. MR. OSLER:** Yes, for the purposes of testing
7 whether we have enough water to meet the dependable
8 capacity commitments that we're interested in over the
9 peak winter period, this is telling us how much
10 delivered energy is being forecast in the model numbers 14:36
11 that we got from SNC-Lavalin and Knight Piésold, how
12 much energy is being forecast in their numbers between
13 approximately the middle of December and the end of
14 February.

15 **Q.** Right. And that's -- we've been -- a number of
16 occasions we've referred to that 20-day period, up to
17 20-day period, the key time frame within which we
18 needed -- that YEC needed some dependable capacity;
19 correct?

20 **A. MR. OSLER:** Right. There's 75 to 76 days in 14:37
21 the peak winter period depending on whether you have a
22 leap year, and you need, at most, according to the
23 weather information that we've cited, up to 20 days of
24 continuous cold weather capability in order to protect
25 yourself against N minus 1.

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 Q. Okay. So now looking at that table and looking at the
2 column that I referred to earlier and going through all
3 of the years, and if you go down to the bottom, there's
4 a minimum of 14.1, and I'll give you -- you can tell me
5 what that means in gigawatt hours -- and a maximum of
6 15.7. Do you see that?

7 A. MR. OSLER: Yes. And those are millions
8 of kilowatt hours or gigawatt hours, GWh.

9 Q. Right. So the question I'm wondering about, since this
10 does actually tell us for years that have been
11 experienced in the Aishihik water system, how does that
12 number that I've just indicated to you for the peak
13 winter period, how does that number help us in
14 assessing what potential risk there is in this lack of
15 correlation between the water in the Aishihik watershed
16 and the YIS watershed?

17 A. MR. OSLER: Well, it focuses our attention on
18 the time period when we have a keen interest in how
19 much delivered energy we can be relative -- we can be
20 very confident of receiving in order to meet our
21 dependable capacity requirements. So that's the first
22 point.

23 The second point is that it confirms the
24 reasonableness of Section 7.2 of the EPA, which
25 effectively says under all of the conditions that you

14:38

14:38

A. HALL, E. MOLLARD, C. OSLER

Re-examined by Mr. Landry

1 see on this page, you should be able to -- you will
2 receive 14 million kilowatt hours of delivered energy
3 during the peak winter period, even when the reservoir
4 isn't full at the beginning of that period, because
5 some of these years the reservoir, Surprise Lake, was
6 not full in the analysis that was done by SNC-Lavalin.

7 So that -- those are the -- those are the two ways
8 in which it relates directly to the agreement. And as
9 you've referenced, when we originally developed this
10 for the original EPA, we were saying -- we were looking 14:39
11 at the same type of information for what was available
12 then, and it was also 14 as a minimum; and we were
13 looking at it from the point of view of, if we had to
14 run two or three different time periods of low
15 temperatures during the peak period, would we have
16 enough water to meet all our requirements, and we came
17 to the conclusion that we did.

18 And right now we're saying you've got enough water
19 here to meet 85 percent of the days during the peak
20 winter period, which is an awful lot more days than the 14:40
21 20 minimum that we needed. So it's a test that's being
22 met very easily at the moment, looking at the situation
23 with the penstock and the information that's sitting
24 here.

25 The only other thing that I would note is that

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1 what I've just said is all based on what we got from
2 SNC-Lavalin and Knight Piésold, and it meets all the
3 tests that I just gave you; but if you turn the page to
4 Table A2, you can see that YEC's team that's
5 responsible for dealing with dispatch looked at this
6 information and, in discussion with SNC-Lavalin, made
7 itself comfortable with it and then said, "Okay, well,
8 if we were dispatching this rather than the model of
9 SNC-Lavalin, we would dispatch it according to the
10 first column in Table A2," which means they would tend
11 to dispatch it a bit more towards the peak winter
12 period.

14:41

13 Translated, that means that whatever numbers you
14 see in the final column on Table A1 are from the
15 perspective of YEC's technical team conservative,
16 because they would probably put more of that water and
17 more of that delivery in the peak winter period for
18 their own reasons. And they can do it. It's not a
19 constraint.

20 Q. So let me just take you back now to the question, sir,
21 because the question was, on page 156, relating to the
22 risk, which you indicated there was some risk, but you
23 didn't think it was material.

14:41

24 Given now that we've gone through this -- these,
25 which includes low water years in the Aishihik

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1 watershed, is that consistent with your position that
2 there's not a material risk?

3 A. MR. OSLER: It's consistent with my position
4 there's not a material risk. In fact, it's
5 summarizing, saying there's virtually -- aside from
6 breakdown of plant or something, there's virtually no
7 apparent risk, based on the available information, of
8 not having sufficient water to meet the dependable
9 capacity requirement. The answer --

10 Q. Even in -- sorry. Sorry, Mr. Osler. I apologize for
11 interrupting. Even in low water years in -- when
12 the -- sorry, in the Aishihik watershed; correct?

14:42

13 A. MR. OSLER: Right. Well, that's where I was
14 going to have a bit of a problem. This is all to do
15 with information of what Atlin can provide. And even
16 the lowest water years of what Atlin can provide, we
17 don't have an issue in terms of having enough energy
18 from them to run the dependable capacity that we're
19 looking for from them.

20 Now, the correlation question that was perhaps
21 being addressed at page 156 was asking what about the
22 situation where the low water years at Atlin are
23 correlated or happen at the same time as low water
24 years on the YIS?

14:43

25 So my answer in terms of capacity is that there is

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1 absolutely no issue with respect to challenges to
2 N minus 1 because of that correlation. It has nothing
3 to do with N minus 1 risks.

4 What I was thinking about when I was answering
5 pages 156, 157 was simply the issues around energy, not
6 capacity, and the issues of setting the price for
7 energy. And I wasn't talking about a risk of security
8 of supply, I was just talking about the displacement of
9 thermal energy might vary slightly, but I didn't think
10 materially, if you were able to run a model that could
11 correlate the two things that we were just talking
12 about.

13 But in terms of capacity, I was not talking about
14 that. There is no risk in that regard with respect to
15 security of supply for capacity.

16 Q. Thank you, sir.

17 MR. LANDRY: Mr. Chairman, those are all the
18 redirect questions I have.

19 THE CHAIR: Thank you, Mr. Landry.

20 Is there any -- before we close, are there any
21 other immediate issues?

22 MS. SABO: I don't have anything, Mr. Chair.

23 THE CHAIR: Okay. So just in terms of process
24 going forward, as you will remember from
25 Board Order 2022-05 the process order, the deadline for

14:44

14:45

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1 filing of written argument is July 28, followed by the
2 deadline for reply argument of August 4th. So once we
3 have that and -- we have -- oh, and one more
4 undertaking?

5 MS. SABO: Yes. July 25th.

6 THE CHAIR: July 25th. Right. Okay. So
7 those three deadlines apply. And once we're done with
8 closing the record, we'll -- we have our own deadline
9 by which time the Minister would like to hear from us,
10 so we will certainly aim to oblige the Minister in that
11 regard. 14:46

12 At this point, I would like to thank everyone for
13 the incredible amount of time and effort that's gone
14 into presentations to the Board. This is not an easy
15 matter to consider. There are a lot of -- you know, as
16 we've seen, there are a lot of technical issues, and we
17 thank the YEC panel for their patience in addressing
18 questions from the interveners, from the Board, and so
19 on.

20 Counsel, both Mr. Landry, Ms. Sabo, and our
21 technical -- yes, technical support from Mr. Ward. 14:47

22 And at this stage, I guess it's in order to
23 release the panel from their oath or affirmation for
24 the proceedings.

25 So again, thank you, everyone, for your

1 contributions, and we'll be issuing our report in due
2 course.

3 So thank you very much, and enjoy your day.

4 (PANEL STANDS DOWN)

5 (PROCEEDINGS ADJOURNED AT 2:50 P.M.)

6 _____

7 PROCEEDINGS CONCLUDED

8 _____

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1 Certificate of Transcript

2

3 We, the undersigned, hereby certify that the foregoing
4 pages 176 to 291 are a complete and accurate transcript of
5 the proceedings taken down by us in shorthand and
6 transcribed from our shorthand notes to the best of our
7 skill and ability.

8 Dated at the City of Calgary, Province of Alberta, on
9 July 20, 2022.

10

11

12

"Lorelee Vespa"

13

Lorelee Vespa, CSR(A) RPR CRR

14

Official Court Reporter

15

16

"Danielle Harmata"

17

Danielle Harmata, CSR(A)

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Official Court Reporter

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