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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*

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P R O C E E D I N G S

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Volume 1  
July 19, 2022  
Held via videoconference  
Whitehorse, Yukon

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

3

4 Volume 1

5 July 19, 2022

6

7 Richard Buchan

Chair

7

Bonnie King

Vice Chair

8 Anne Middler

Commission Member

8

Lesley McCullough

Commission Member

9

Alison Sabo

Commission Counsel

10

Deana Lemke

Commission Staff

11 Dwayne Ward

Commission Staff

11

12 P. John Landry, QC

For Yukon Energy Corporation

12

13 Christopher Cullingham

For ATCO Electric Yukon

13

14 Nathaniel Yee

In his Own Stead

14

15 Joshua Dyck

InterGroup Consultants

15

16 John Maissan

In his Own stead

16

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

18

19 (PROCEEDINGS COMMENCED AT 9:07 A.M.)

20

THE CHAIR: Good morning, everyone. My name

21

is Richard Buchan, and I am the Chair of the

22

Yukon Utilities Board.

23

I'd like to call this meeting to order and begin

24

with -- by acknowledging that this hearing is taking

25

place on the shared traditional territories of the

09:07

1 Kwanlin Dün First Nation and the Ta'an Kwäch'än  
2 Council. In the spirit of reconciliation, may we  
3 honour and respect the stewardship of these lands by  
4 the people of these First Nations and their ancestors  
5 over hundreds of generations. May we reaffirm and  
6 honour our relationship with one another.

7 And this might be an opportune point just to note  
8 that in a number of the documents that have been  
9 produced through the course of this proceeding, the  
10 spelling of the name Tlingit has been variable, but the  
11 First Nation itself in terms of Anglicized spelling  
12 spells it T-L-I-N-G-I-T, not E-T. So perhaps anyone  
13 responsible for vetting documents going forward in this  
14 can keep an eye open for that correction.

15 The Utilities Board is comprised of a total of  
16 five members, each of whom is appointed for a  
17 three-year term. In addition to the Chair, the other  
18 Board members comprising today's hearing Panel are, to  
19 my left, the Vice Chair of the board, Bonnie King; to  
20 my right, Anne Middler; and with us by Zoom connection  
21 is Lesley McCullough. Unfortunately, our other member  
22 of the board Andre Fortin is unavailable to participate  
23 in today's hearing.

24 I'd also like to introduce the Board's support  
25 team assisting with this hearing. And perhaps when I

09:08

09:09

1 mention your name, you could just raise a hand and --  
2 so people can identify you.

3 So I'd like to begin with our executive secretary  
4 of many years, Deana Lemke, without whom this Board  
5 absolutely could not function. If you have any  
6 particular logistical questions or anything relating to  
7 the hearing that are not answered following your  
8 careful reading of the Board's website, Deana is the  
9 person to go to with those questions.

10 And, Deana, your contact coordinates, what are  
11 your preferred contact coordinates?

12 MS. LEMKE: Just for my cellphone, so  
13 867-334-3400 or the Board email.

14 THE CHAIR: Okay. In addition, assisting the  
15 Board throughout this hearing are members of our  
16 support team: Legal counsel for the board,  
17 Alison Sabo, and our technical expert, Dwayne Ward,  
18 both of whom are present with us, as you have seen.  
19 All other participants in the hearing, parties,  
20 interveners and so on, are connected by -- via Zoom  
21 video platform.

22 In addition, in terms of our support team, we've  
23 got our court reporters representing  
24 Amicus Reporting Group, Lorelee Vespa and -- sorry,  
25 I --

09:10

09:11

1 MS. LEMKE: Danielle Harmata.

2 THE CHAIR: -- Danielle Harmata. Apologize  
3 for that.

4 So the purpose of this proceeding is to begin the  
5 public hearing component in respect of Yukon Energy  
6 Corporation's application for the review of an  
7 Electricity Purchase Agreement, which throughout the  
8 proceeding will be typically referred to as the "EPA."  
9 This was submitted to the Board for review under  
10 subsection 18.1 of the *Public Utilities Act*.

09:12

11 Yukon Energy Corporation, YEC, and Tlingit Homeland  
12 Energy Limited Partnership by its general partner  
13 Tlingit Homeland Energy Limited, and the acronym for  
14 that is THELP or THELP, depending how you want to  
15 pronounce it.

16 And they have entered into an Electricity Purchase  
17 Agreement for the sale by THELP to YEC of electricity  
18 generated from a proposed expansion of the Atlin hydro  
19 project, which is on the traditional territories of the  
20 Taku River Tlingit First Nation.

09:13

21 The letter initiating the proceeding came from the  
22 Yukon Minister of Justice and the Attorney General  
23 Tracy-Anne McPhee. It was dated May 18, 2021. And  
24 under the Minister's authority, she directed the Board  
25 to conduct a public review according to specific terms

1 of reference, and those documents are contained on the  
2 Board's website under the -- under this particular  
3 proceeding, but I'll go ahead and summarize some of the  
4 aspects of the terms of reference.

5 The -- its proposed term of the EPA will continue  
6 for a period of 40 years from the first date for  
7 delivery of electricity to YEC from the Atlin project,  
8 which is expected to be December 1, 2024, though --

9 Has that been amended? Okay. All right. I'm --  
10 I wasn't sure if there was a recent update to that.

09:14

11 MS. SABO: (Indiscernible.)

12 THE CHAIR: October 2025. Yes, okay.

13 This Atlin project was identified in YEC's  
14 December 2020 ten-year renewable electricity plan  
15 technical report as a key near-term project to secure  
16 additional renewable capacity and energy to meet  
17 Yukon's growing needs while displacing thermal  
18 generation from YEC's LNG, liquid natural -- liquified  
19 natural gas generation plant, and from a number of  
20 rental -- rental diesel generators in Whitehorse and  
21 other Yukon communities.

09:15

22 In particular, the technical report stated that  
23 the Atlin project is expected to delivery annual energy  
24 and dependable capacity during the winter months to  
25 address YEC's existing capacity shortfall under

1 emergency conditions beginning in 2024-2025.

2 The EPA outlines the key commercial and operations  
3 terms under which YEC would purchase electricity from  
4 the Atlin project.

5 YEC and THELP are collaborating on securing  
6 government grant funding necessary for the project to  
7 go ahead. To date, \$150 million have been committed, I  
8 believe it was initially the -- the Federal Government  
9 was involved, but is that -- and the Yukon, yes. Is  
10 Federal still in and the Yukon? All right, yeah.

09:16

11 Things have been in flux somewhat, so I'm not sure  
12 if these notes are totally up to date.

13 On December 31, 2020, THELP submitted to the Yukon  
14 Environmental and Socio-economic Assessment Board,  
15 YESAB, a proposal for construction and operation of a  
16 42-kilometre three-strand 69-kilovolt  
17 transmission line from Jakes Corner in Yukon to the  
18 British Columbia border under the *Yukon Environmental  
19 and Socio-economic Assessment Act*, which is a piece of  
20 Canadian legislation.

09:17

21 This application, which is still in processing, is  
22 expected to lead to a recommendation by the designated  
23 office and a response by the Government of Yukon and  
24 any other decision bodies in the form of a decision  
25 document. Any government authorizations issued in

1 support of the project or the EPA will have to conform  
2 to this decision document.

3 In addition, during 2020, THELP submitted to the  
4 British Columbia assessment authorities' proposal for  
5 construction and operation of the Atlin project  
6 hydrogeneration and transmission facilities located in  
7 British Columbia.

8 Minister McPhee, in the terms of reference  
9 accompanying her direction, stated that the general  
10 purpose of the review and hearing is to obtain the  
11 report and recommendations of this Board on the  
12 potential benefits, costs, risks, and customer impacts  
13 and influence -- that influence whether the agreement  
14 should proceed as proposed by YEC.

09:18

15 Just to make a note that this Board will not be  
16 responsible for making any decision in that respect.  
17 Our task is to review the project and report to the  
18 Minister and make recommendations and, ultimately, it's  
19 the Minister and the Government of Yukon that make any  
20 final decisions in this respect.

09:18

21 So, more particularly, the terms of reference  
22 speak to the following points: The public need for the  
23 agreement under various reasonable electric load  
24 forecasts; the effect of the proposed commitments on  
25 the rates of customers and the reliability of

1 electricity service provided to customers; the  
2 capability of existing and currently committed and  
3 expected generation and transmission facilities,  
4 including thermal generation facilities, to provide  
5 reliable electric power generation to meet the forecast  
6 load requirements mentioned above; and the effect of  
7 the agreement on this capability; the risks associated  
8 with the agreement, including its potential impacts on  
9 YEC and based for customers and on the reliability of  
10 electricity service provided to customers; evidence  
11 that all reasonable alternative options have been  
12 considered, and that proposed spending commitments have  
13 been selected on reasonable grounds; finally, whether  
14 it is prudent to enter into the agreement as proposed  
15 at this time.

09:20

16 The Minister also indicated that the Board may  
17 make any other recommendations or provide any other  
18 information that it considers advisable in the  
19 circumstances.

20 I'll briefly outline some of the key process steps  
21 in this proceeding.

09:20

22 In Board Order 2022-01 dated February 1st of this  
23 year, the Board provided notice of the current  
24 application. In that order, the Board directed YEC to  
25 publish in display ad format the notice of application,

1 workshop and hearing by February 8th, 2022, and to make  
2 the application and support materials available on  
3 YEC's website. YEC was directed to hold a public  
4 workshop on the application on Friday, February 11, and  
5 the order asks persons intending to intervene to  
6 register with the Board no later than February 14,  
7 2022.

8 The order also set out a proceeding schedule that  
9 included an initial round of information requests to  
10 YEC intervener evidence, IRs on intervener evidence, 09:21  
11 rebuttal evidence from YEC, a public hearing and final  
12 written argument and written reply argument.

13 In Board Order 2022-02 dated February 17, the  
14 Board granted intervener status to the following  
15 entities: ATCO Electric Yukon; the City of Whitehorse,  
16 the Utility Consumers' Group; John Maissan and  
17 Nathaniel Yee. None of the interveners submitted any  
18 evidence nor has YEC rebuttal evidence been submitted  
19 in response.

20 On April 8th, 2022, the YEC sent correspondence to 09:22  
21 the Board requesting to postpone the initially  
22 scheduled oral hearing due to a project redesign and  
23 amendments to the EPA.

24 In a memorandum the Board issued on April 14th,  
25 the Board accepted the YEC request and put the

1 proceeding in abeyance until YEC provided the revised  
2 EPA. This the Board received on April 21st, 2022, and  
3 it is that revised EPA that forms the basis of today's  
4 proceeding.

5 In Board Order 2022-05 issued on April 28th, a  
6 hearing schedule for the remainder of the proceeding  
7 was established, which included a second round of  
8 information requests addressed to YEC and information  
9 responses from YEC leading to today's virtual oral  
10 hearing, subsequent to which there will be final  
11 written argument and reply argument.

09:24

12 And then, finally, on July 13th, the Board issued  
13 a letter outlining the procedures for this hearing.

14 As to a few preliminary matters relating to the  
15 hearing. Parties wishing to access live copies of the  
16 transcripts for this hearing should contact one of the  
17 court reporters. Again, Ms. Lemke can provide that  
18 contact information. Any questions regarding the  
19 proceeding protocol that come up can be also discussed  
20 with Ms. Lemke.

09:24

21 The schedule for -- the sitting schedule for the  
22 hearing will be that we will -- as we're scheduled for  
23 today and Wednesday and Thursday, the 20th and 21st,  
24 start time will be 9 a.m. on each day, and we will be  
25 ending at approximately 4:30 p.m. each day. We plan a

1 midmorning break of 20 minutes at around 10:30, a lunch  
2 break from noon until 1:30 p.m., and another 20-minute  
3 afternoon break at approximately 3:15 each day. The  
4 timing of these breaks may vary depending on the flow  
5 of the hearing and witness testimony.

6 So we have with us a panel -- a witness panel from  
7 Yukon Electric -- or Yukon Energy, rather, YEC, and  
8 they will be subject to cross-examination by  
9 interveners and Board counsel, and that YEC panel will  
10 be the only witness panel sitting during the hearing.

09:26

11 Following cross-examination, YEC will have an  
12 opportunity -- Mr. Landry, counsel, will have an  
13 opportunity to redirect if necessary to clarify or  
14 complete answers that were given during the direct  
15 examination.

16 It's also noted in the Board's protocol letter  
17 that individual undertakings from YEC witnesses that  
18 arise through the proceeding will be due to be answered  
19 by no later than Monday, July 25th.

20 Just a brief note on use of aids to  
21 cross-examination. The purpose of an aid to cross is  
22 to assist the parties questioning the witness about the  
23 evidence of that witness. The party proposing to  
24 question the witness should submit a copy of the aid to  
25 the witness counsel and Board counsel at least

09:27

1           24 hours -- excuse me -- before using the aid to cross  
2           in the proceeding. The party, after questioning the  
3           witnesses will ask the Board to give the aid to  
4           cross-examination an exhibit number. The Board will  
5           then decide whether the aid to cross will be filed and,  
6           if so, it will be given an exhibit number in order to  
7           keep track of -- identify the document.

8           To facilitate efficient marking of exhibits,  
9           Ms. Lemke has circulated a list of exhibits received so  
10          far to date. I think the latest was produced this  
11          morning, but subsequent iterations will be issued as  
12          the -- as we accumulate additional exhibits.

09:28

13          As I mentioned earlier, the hearing is being  
14          transcribed, and so in order to make the task of the  
15          court reporters easier, please speak slowly and  
16          clearly.

17          Also, it would be advisable for witnesses to  
18          identify themselves at the beginning of their testimony  
19          as the court reporter may not be able to readily  
20          identify or distinguish voices without that  
21          self-identification.

09:29

22          It's preferable that the hardware that you're  
23          using for your video conference connection be connected  
24          to your computer with a headset and microphone and a  
25          web camera that are all attached directly to your

1 computer, and please ensure that the volume settings on  
2 your microphone are properly adjusted. When not active  
3 as a witness or asking questions of witnesses, please  
4 mute your microphone and turn off your camera. That  
5 will help us preserve bandwidth and any inadvertent  
6 sound distractions.

7 From a health standpoint, unfortunately, we are  
8 still in a time where COVID infection is a risk, and so  
9 even though we are conducting the hearing by way of  
10 videoconference, some participants may still be  
11 congregating in common physical locations. We urge  
12 everyone to be respectful and courteous towards one  
13 another and observe the appropriate COVID mitigation  
14 measures such as physical distancing, hand sanitizing  
15 and face masks as the circumstances may warrant.

16 Just as a matter of courtesies in this type of  
17 hearing and other hearings, please ensure that all  
18 sound notifications of your computer or other devices,  
19 such as cell phones, are turned off during the hearing.  
20 And also to reduce distracting background noise, again  
21 please ensure that when you are not speaking, that your  
22 microphone is turned off.

23 We also remind participants that Board hearings  
24 typically involve a lot of people, some of whose time  
25 can be quite expensive and may ultimately be claimed

09:30

09:31

1           against the utility's rate base which, in turn, may  
2           affect the utility's ratepayers.

3           So, accordingly, the Board expects all presenters  
4           to help minimize the risk of delays by observing the  
5           usual courtesies such as being prepared, including  
6           being technologically prepared, being on time, and  
7           ensure presentations are relevant to the issues that  
8           are subject to the hearing and that they are  
9           efficiently presented.

10           A helpful reference to relevance can be found in  
11           the Minister's terms of reference attached to her  
12           letter to the Board of May 18, 2021, which again can be  
13           found on the Board's website under the heading of this  
14           proceeding.

09:32

15           Finally, please ensure that all submissions are  
16           supported by relevant and up-to-date evidence on the  
17           record.

18           I'll now ask Ms. Sabo to proceed to register the  
19           parties.

20           MS. SABO:                            Thank you, Chair Buchan. Can I  
21           call on ATCO Electric Yukon? I think, Mr. Cullingham,  
22           you're here on their behalf today?

09:33

23           MR. CULLINGHAM:                    Yeah.

24           MS. SABO:                            Thank you, sir. By email we got  
25           confirmation that the City of Whitehorse will not be

1 attending.

2 Mr. Maissan, can you confirm you're here today to  
3 register?

4 MR. MAISSAN: Yes. My name is John Maissan, and  
5 I'm here for the proceeding.

6 MS. SABO: Thank you, Mr. Maissan.

7 UCG? I don't see Mr. Rondeau. Anyone else from  
8 UCG? Thank you.

9 Mr. Yee, good morning.

10 MR. YEE: Good morning. Yes, this is  
11 Nathaniel Yee. I am present.

09:34

12 MS. SABO: Thank you, sir. Any other parties  
13 wishing to register?

14 Mr. Dyck, I see you're online as well so maybe you  
15 could identify for us if you intend to register.

16 MR. DYCK: Hi. I'm Mr. Dyck. I'm with  
17 InterGroup Consultants.

18 MS. SABO: Okay. That's all the parties we  
19 have on our virtual feed. Mr. Chairman, back to you.

20 THE CHAIR: Okay. Now, I understand that  
21 ATCO Electric Yukon and City of Whitehorse don't intend  
22 to conduct any cross-examination; is that correct?

09:34

23 MS. SABO: That's correct, Mr. Chair.

24 THE CHAIR: Then in that case, then, the order  
25 of presentation, we'll begin with John Maissan.

1 Mr. Maissan, would you like to proceed?

2 MS. LEMKE: Mr. Chairman, I think Mr. Landry  
3 probably has to introduce his panel.

4 THE CHAIR: Oh, yes. Pardon me. It wasn't on  
5 my script, sorry.

6 Mr. Landry.

7 MR. LANDRY: Thank you, Mr. Chair.

8 Just for the record for the transcript, my name is  
9 John Landry, and I am counsel for Yukon Energy  
10 Corporation.

09:35

11 Just a couple of quick things as we recall from  
12 virtual hearings. Is my sound okay from your  
13 perspective, Mr. Chair?

14 THE CHAIR: Yes, I can hear it loud and clear.

15 MR. LANDRY: And video feed is fine too?

16 THE CHAIR: Yes.

17 MR. LANDRY: Mr. Chair, just a couple of  
18 preliminary things before we affirm. You mentioned  
19 that Mr. Fortin is not going to be at the hearing  
20 today. Will he be taking part in the actual  
21 deliberations?

09:36

22 THE CHAIR: No, he will not. Only those  
23 hearing the evidence get to participate in the  
24 decision.

25 MR. LANDRY: Not a problem. I just wanted to

1 confirm that to your comment in that regard.

2 THE CHAIR: Sure, yes.

3 MR. LANDRY: Okay. So as you've indicated,  
4 Mr. Chair, we have one panel, and I'm going to allow  
5 Mr. Hall to introduce the panel once the panel is  
6 affirmed if that's okay with you, and he will have --  
7 although we have filed, as you know, an opening  
8 statement, it's Exhibit B-15, it will -- they'll just  
9 be some summary comments that he would like to begin  
10 with in introduction of the hearing.

09:36

11 The only thing I would ask, Mr. Chair, and I'm  
12 sure you can appreciate this, is that as  
13 witnesses -- sorry, as interveners are dealing with  
14 documents, there is a bit of confusion on -- not caused  
15 by the Board -- a bit of confusion with the exhibits in  
16 terms of which references, one is going to a clean  
17 version or a black line version, if they could be  
18 specific in that regard. And given that we're not  
19 going to have the documents displayed on the screen,  
20 which is fine, just to be courteous enough to allow the  
21 witnesses to get to the document that is being referred  
22 to before the questioning.

09:37

23 Now it's not always perfect, I understand that,  
24 but I think it's a good rule of thumb so we are all at  
25 the right document at the right time. It's a bit

1 different than an oral hearing, although, in some ways,  
2 it's exactly the same as an oral hearing, but in any  
3 event. So if we could do that.

4 And with that, Mr. Chair, I'll hand it over to you  
5 and the Board. The witnesses should be affirmed and  
6 then we're ready for cross-examination.

7 THE CHAIR: Certainly. So to your final  
8 point, Mr. Landry, we do have an updated exhibit list  
9 and so we'll try to ensure that all document references  
10 are as indicated on the exhibit list and not other  
11 variants of those documents. 09:38

12 MR. LANDRY: And we'll try to help in that  
13 regard, Mr. Chair, in the sense we have some support  
14 people that can maybe help. But I think for the  
15 purposes of the transcript and just for efficiency,  
16 given how we're doing it, it's good to get to the  
17 document that is being referred to efficiently before  
18 we begin the questioning.

19 THE CHAIR: So I may proceed to introduce the  
20 panel? 09:38

21 MR. LANDRY: Sorry, I think they have to be  
22 affirmed first.

23 THE CHAIR: Oh, yeah, yeah, yeah, sorry.  
24 Madam Reporter.

25

**A. HALL, E. MOLLARD, C. OSLER**

1 **A. HALL, E. MOLLARD, C. OSLER** (For Yukon Energy  
2 Corporation), affirmed

3 MR. LANDRY: Mr. Chair, just as again a  
4 technical issue on virtual. Can the Board hear the  
5 witnesses fine?

6 THE CHAIR: Yes, yeah. Yeah, it -- yeah, we  
7 can hear them. They're -- the three of them are rather  
8 small on the screen, but it's the -- it's what they say  
9 that counts, so --

10 MR. LANDRY: I think, if I understand it  
11 correctly, we have an IT person here who will try to  
12 zoom in to somebody who is speaking on the panel, so  
13 we'll see how that works.

14 THE CHAIR: Okay.

15 MR. LANDRY: Is -- with that constraint, and I  
16 totally understand that, is the video feed fine?

17 THE CHAIR: Yeah, no, the video feed itself is  
18 clear.

19 MR. LANDRY: Okay.

20 THE CHAIR: We're good in that regard.

21 MR. LANDRY: With that, Mr. Chair, the panel is  
22 available for cross-examination.

23 THE CHAIR: Yes. Mr. Hall, I understand you  
24 want to lead off with a statement?

25 A. MR. HALL: Yes. Thank you, Mr. Chair, and

09:40

09:41

## A. HALL, E. MOLLARD, C. OSLER

1 good morning, Board members, staff, and interveners.  
2 My colleagues and I are pleased to appear before the  
3 Utilities Board to answer questions related to the EPA  
4 for the Atlin hydro expansion project.

5 We filed, obviously, an opening statement formally  
6 with the Board, but I'll just take a few minutes to  
7 cover some of the highlights of the statement from my  
8 perspective.

9 Mr. Chair, as you pointed out in your opening  
10 remarks, in 2020, Yukon Energy released its ten-year  
11 renewable electricity plan, which maps out how we  
12 intend to respond to ongoing growth in the electricity  
13 demand in the Yukon as well as responding to the  
14 ambitious climate change policies being enacted at both  
15 the federal and territorial levels.

16 The ten-year plan outlines a series of projects  
17 that we intend to either develop or otherwise benefit  
18 from to meet, firstly, our existing and forecast  
19 shortfall in dependable capacity, but also to reduce  
20 thermal energy generation in order to meet the  
21 93 percent renewable portfolio standard, which is  
22 articulated in the Yukon government's "Our Clean  
23 Future" and is anticipated to be passed into law in the  
24 Yukon *Clean Energy Act*.

25 Today we appear before the Board to support your

09:41

09:42

A. HALL, E. MOLLARD, C. OSLER

1 review of an EPA for the first of the major projects  
2 documented in the ten-year plan, namely the Atlin hydro  
3 expansion project. This EPA will deliver a number of  
4 benefits to Yukon and to Yukon ratepayers.

5 Firstly, the project will deliver 34 gigawatt  
6 hours of winter energy on average to the Yukon system  
7 allowing us to displace up to 24.2 gigawatt hours of  
8 thermal generation on average. Securing additional  
9 supplies of renewable winter energy is critical for us  
10 to meet the 93 percent renewable portfolio standard  
11 that I mentioned earlier.

09:43

12 Secondly, the EPA provides 8.75 megawatts of  
13 dependable capacity which, together with projects as  
14 the Whitehorse battery project, will be critical for us  
15 to address our existing capacity shortfall under  
16 N minus 1 conditions. And from a practical  
17 perspective, the 8.75 megawatts of dependable capacity  
18 purchased each winter will allow us to avoid the rental  
19 of four diesel rental engines.

20 Thirdly, as we outlined in our application, the  
21 project developer, Tlingit Homeland Energy, has  
22 successfully attracted \$150 million of committed  
23 federal and territorial grant funding to the project.  
24 This grant funding allows YEC to purchase energy and  
25 capacity from the project at prices that meet or

09:44

## A. HALL, E. MOLLARD, C. OSLER

1 improve on the economics of thermal alternatives while  
2 delivering an acceptable equity return to the project  
3 developer.

4 And finally, the project execution model, which  
5 involves an independent project owned and operated by  
6 an Indigenous-owned corporation, represents one of the  
7 key project development models that we see being used  
8 going forward to achieve reconciliation, meaningful  
9 participation of First Nations in Yukon's energy  
10 future, and the economic and social advancement of  
11 Indigenous peoples in Canada, British Columbia, and  
12 Yukon.

13 That concludes my opening remarks, and we look  
14 forward to fielding questions from interveners and the  
15 Board.

16 MR. MAISSAN: Good morning, Mr. Chair. My name  
17 is John Maissan. I understand I'm first on the list  
18 for cross-examination.

19 Preliminary question, do you want me to turn on my  
20 video for the cross-examination?

21 THE CHAIR: Yes, it would be nice,  
22 Mr. Maissan, if you would do so.

23 MR. MAISSAN: All right.

24 THE CHAIR: Very good.

25

09:44

09:45

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 **MR. MAISSAN CROSS-EXAMINES THE PANEL:**

2 Q. My first question relates to the opening statement,  
3 which I believe is Exhibit B-15. On page 3 of that  
4 opening statement and in the oral references earlier,  
5 we heard that the completion date was extended by one  
6 winter to October 2025.

7 I was wondering how this completion delay will  
8 affect the anticipated 2035 and beyond pricing? Is it  
9 now that the contract period extends from 2025 to 2035  
10 and then from 2036 to 2065? Or is it just nine years  
11 of the first portion of the EPA and then 30 years of  
12 the following portion?

13 A. MR. OSLER: Cam Osler, Mr. Chairman. It does  
14 not change the date for the price change. It's still  
15 2035. So you would have -- the first part of the term  
16 would have the initial price until the end of 2034, and  
17 then the rest of the 40 years would be the second price  
18 starting in 2035.

19 Q. So to clarify, then the rest of the 40 years, does that  
20 mean 40 years of operation that the end date is  
21 extended by one year?

22 A. MR. OSLER: Yes, Mr. Chair.

23 Q. Thank you. Is there any documentation on this change  
24 of -- let's call it an arrangement -- periods that is  
25 available for the record?

09:46

09:47

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 A. MR. HALL: Mr. Chair, Andrew Hall. The --  
2 the term starts upon achievement of commercial  
3 operation dates, and it's 40 -- 40 years after that.  
4 So I think that's pretty clear how long the term is.  
5 And as Mr. Osler outlined the dates in which pricing  
6 remain the same. So they are already documented as  
7 such.

8 A. MR. OSLER: And Cam Osler, Mr. Chairman. For  
9 Mr. Maissan's benefit, there is no documentation in  
10 terms of any EPA documentation that deals with the  
11 change to October 2025. That is not a matter that has  
12 gotten into any documentation. The date has just been  
13 a discussion the developers had with Yukon Energy.

09:48

14 Q. Thank you. My next question refers to the amended  
15 submission to the Board dated April 2022, which I  
16 believe is Exhibit B-5. And I'm looking at page 15 of  
17 the document which, on the pdf, is page 19 out of 140.  
18 And, in particular, Table 3.3-1 on that page 15. Do  
19 you have --

20 MS. SABO: Table 3-1?

09:49

21 MR. MAISSAN: Table 3-1, yes.

22 MS. SABO: Thank you.

23 Q. MR. MAISSAN: Do you have that reference?

24 A. MR. HALL: Yes.

25 Q. Thank you. Under the first pricing column, the years

**A. HALL, E. MOLLARD, C. OSLER**

**Cross-examined by Mr. Maissan**

1           2024 to 2034, there is no entry under "Additional  
2           Payment" on winter energy. Am I correct, then, in  
3           believing that if the grid load exceeds the  
4           388 gigawatt hours specified, that there will be no  
5           additional payment due to THELP?

6           **A. MR. OSLER:**                   **Cam Osler. Yes, that's correct.**  
7           **There will be no additional payments through the end of**  
8           **2034.**

9           **Q.** Thank you. My next question references a response to  
10          an interrogatory. I'll refer to it by name and then  
11          give you the exhibit and page number. It's  
12          JM-YEC-1-3(b). And that is found in Exhibit B-8, which  
13          is a consolidated response to the first round of IRs,  
14          and page number is page 21 out of 926 on the pdf.

15                 I take it you have that reference now?

16          **A. MR. MOLLARD:**                   **Yes, we're there.**

17          **Q.** Thank you. In 4 of the 31 years, there were mean daily  
18          temperatures below minus 30 degrees centigrade recorded  
19          as early as November the 24th, which was for the year  
20          2006. Were the -- during that period, were -- these  
21          cold periods, were there any winter  
22          Whitehorse-Aishihik-Faro or Yukon Integrated System new  
23          peak loads set during these cold events?

24          **A. MR. HALL:**                   **Mr. Chair, Andrew Hall. We don't**  
25          **have that information at this time. Would have -- need**

09:50

09:52

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 to take an undertaking to look into that.

2 Q. Thank you.

3 UNDERTAKING - TO ADVISE IF THERE WERE  
4 ANY WINTER WHITEHORSE-AISHIHIK-FARO OR  
5 YUKON INTEGRATED SYSTEM NEW PEAK LOADS  
6 SET DURING THE COLD EVENTS REFERENCED

7 Q. MR. MAISSAN: Related to that, does YEC  
8 typically have more hydro available before  
9 mid-December than later in the winter?

10 A. MR. HALL: Andrew Hall. Typically, yes.

09:53

11 Q. Thank you. I have noted, living here, that wind speeds  
12 in addition to temperature are a factor in building  
13 heating requirements, and I was wondering whether YEC  
14 has looked at any winter wind electrical load  
15 correlations and, if so, what the results were.

16 A. MR. HALL: Andrew Hall. Mr. Chair, subject  
17 to check, I don't think our current regression model  
18 that we used to forecast peak demand includes wind  
19 speeds.

20 Q. Thank you. My next question refers to the response to  
21 an IR, JM-YEC-1-6 Revised Amended. So that would be  
22 the clean response to -- let's see. It's Exhibit B-9.  
23 So the consolidated Round 1 -- the amended consolidated  
24 Round 1 IR responses dated April 20th, 2022, and it's  
25 on pdf page 23 out of 109.

09:53

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 A. MR. MOLLARD: Sorry, Mr. Maissan, what exhibit  
2 are you looking at?

3 Q. Exhibit B-9, page 23 of 109, is where the response to  
4 the IR starts.

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

6 Q. Thank you. And on that response, I'm looking at page 5  
7 of 6, and it's Table 1 titled "2017 to 2021 YEC Actual  
8 Generation."

9 And in that Table 1 for the year 2020, in the  
10 month of December, the secondary sales figure is listed  
11 as negative 0.46 gigawatt hours. And I was wondering  
12 if someone could explain that, please?

13 A. MR. MOLLARD: Ed Mollard, Mr. Chair. We'll have  
14 to undertake to figure that out. I don't know off the  
15 top of my head what caused that.

16 Q. Thank you.

17 UNDERTAKING - TO EXPLAIN THE SECONDARY  
18 SALES FIGURE THAT IS LISTED AS NEGATIVE  
19 0.46 GIGAWATT HOURS REFERENCED IN  
20 TABLE 1 TITLED "2017 TO 2021 YEC ACTUAL  
21 GENERATION," PAGE 5 OF 6

22 Q. MR. MAISSAN: In that same table for the years  
23 2017 to '21, the generatable -- or let's call it the  
24 estimate of the generatable summer surplus energy,  
25 which is the last column on the right, all of these

09:55

09:56

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 figures are more than 10 gigawatt hours per year in  
2 excess of the actual secondary sales, which is in the  
3 third-last column. And in three of these years, it  
4 ranges from 27 to 33 gigawatt hours.

5 On the following page in Table 2, the 2024 and  
6 2035 long-term average summer surplus renewable  
7 generation is estimated at 38 gigawatt hours per year  
8 and 71 gigawatt hours per year respectively.

9 And so, related to that, my question is, do the  
10 figures in Table 2, the forecast for 2024 and 2035,  
11 take into account the operation of the battery energy  
12 storage system, which is now in construction; and, in  
13 particular, the use of surplus hydro, when available,  
14 to charge the battery and displace thermal generation  
15 otherwise required at different times -- different  
16 times of day?

09:57

17 **A. MR. HALL:** Mr. Chair, Andrew Hall. I'd point  
18 out, Mr. Maissan, firstly, that if you're referring to  
19 the summer surplus, the battery was not intended or,  
20 indeed, designed to be able to store summer surplus for  
21 use during the winter. So that's a first general  
22 comment.

09:58

23 And, more specifically, the -- you know, battery  
24 is designed to be used on a daily basis to charge with  
25 available resources at night and help meet peak demand

1 during the day.

2 Specifically, if you look at the winter months and  
3 the data around those, and I don't believe that the  
4 battery would have been included in the model we used  
5 to generate these numbers.

6 Q. So, okay. So to make sure I understand, then, the  
7 figures in Table 2, the summer surplus renewable  
8 generation -- well, any surplus renewable generation it  
9 modelled would not include the effect of the battery  
10 moving surplus from nighttime to daytime any time of  
11 year. Is that correct?

09:58

12 A. MR. HALL: Andrew Hall here. Correct.  
13 Though, there again, it sounds like you're focusing on  
14 the summer surplus, which the battery would not impact  
15 at all.

16 Q. Well, the numbers in Table 2 include mostly summer, but  
17 it also includes some surplus hydro starting in  
18 September, October, and November, which would be the  
19 winter period in the THELP contract -- in THELP EPA.  
20 So there is some overlap between winter and -- and the  
21 surpluses?

09:59

22 A. MR. HALL: Andrew Hall. Correct. I mean,  
23 there is -- there is some overlap, yeah.

24 Q. All right. So just to finish the point, then, I  
25 understand that the operation of the battery energy

**A. HALL, E. MOLLARD, C. OSLER**

**Cross-examined by Mr. Maissan**

1 system would not have been in the model that generated  
2 these numbers in this Table 2, the surplus numbers?

3 **A. MR. HALL:** Andrew Hall. Correct.

4 **Q.** Thank you. Do the figures in the 2035 forecast take  
5 into account the effect of the proposed Moon Lake pump  
6 hydro storage project?

7 **A. MR. OSLER:** Our understanding is no, Mr. --  
8 this is Cam Osler. No, the model not take into account  
9 Moon because Moon is not being modelled in the  
10 analysis.

10:01

11 **Q.** Thank you. A related question, which is focused on a  
12 different IR response, and this is response to  
13 JM-YEC-1-12, which is Exhibit B-8, which is the  
14 consolidated IR responses for the first round. And  
15 this IR starts -- response starts in the pdf on page 49  
16 out of 926?

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

18 **Q.** Thank you. In Part D of that response, which is on  
19 page 3 of 3, YEC states that it does not promote adding  
20 more secondary energy sales customers to the system due  
21 to forecasted reduction in availability to existing and  
22 potential new customers. And I was wondering, given  
23 that we appear to have surpluses, some of which occurs  
24 in the non-summer period, and given the substantial  
25 increase in fuel prices that we have seen during the

10:01

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 past year, is this something that Yukon Energy is  
2 reconsidering, the potential addition of secondary  
3 sales customers?

4 A. MR. HALL: Mr. Chair, it's Andrew Hall. I've  
5 got a couple of comments on this. I mean, obviously  
6 something like secondary sales is -- is a matter that  
7 we would consider, you know, fairly frequently going  
8 forward.

9 I would comment that our -- our observation in the  
10 recent history, so over the last couple of years, or  
11 maybe three or four years, has been that some customers  
12 have to incur a fairly significant upfront cost to  
13 maintain both fossil fuel boiler infrastructure and  
14 parallel electrical infrastructure in order to really  
15 benefit or qualify for a secondary sales program.

16 And so it -- you know, it's been quite hard  
17 to make -- you know, ensure that customers such as the  
18 hospital corporation, for example, actually stay on the  
19 program, because they have to essentially maintain two  
20 sets of infrastructure at a time.

21 So I think that -- that's partly, you know, one of  
22 the considerations when we made the statement, is just  
23 the practical considerations seem to be a little bit  
24 more tricky than you would think and challenging.

25 But I think, you know, going forward, this is the

10:02

10:03

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 kind of thing that we will revisit from time to time  
2 based on, you know, the state of the market, the -- any  
3 interest that we may receive from interested parties,  
4 and also, you know, the availability of surplus.

5 Q. Thank you. My next question is related to an IR as  
6 well. It's the YUB-YEC-1-1 Amended, and it's in  
7 Exhibit B-9, which is the amended consolidated Round 1  
8 IR responses. And it's found in the pdf on page 62 out  
9 of 109 -- or it starts at page 62 out of 109.

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

10:04

11 Q. Thank you. At the -- and I'm looking at the top of  
12 page 3 of that IR, which is pdf page 64.

13 And near the top of the page in that first bullet,  
14 there's a statement, the last statement in that first  
15 bullet, that: (as read)

16 "The EPA effect on customer rates is  
17 materially lower than the option of  
18 equivalent renewable Standing Offer  
19 Program IPP renewable supplies."

20 And I was wondering if someone could explain that in a  
21 bit more detail?

10:05

22 A. MR. OSLER: Mr. Chairman, yes. That is  
23 actually addressed in the submission that was filed in  
24 April. Exhibit B-5, I believe. And it was addressed  
25 in the section on the effect of the EPA on customer

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 cost rates at page 27 of Exhibit B-5.

2 The second paragraph on that page addresses the  
3 statement with some numbers. I'll go through and  
4 summarize them, but they're on the record for people  
5 that want to go back over it.

6 The EPA pricing in 2024 ends up with a long-term  
7 average cost, in 2024 dollars, of 7.9 million for YEC  
8 for energy only -- sorry, let me go back. 6.4 million  
9 a year till the end of 2034 and 5 million a year  
10 thereafter, would be what YEC would be paying in 2024  
11 dollars, given the pricing and long-term average  
12 deliveries.

13 Under the Standing Offer Program, IPP deliveries,  
14 the same energy amount would include purchasing energy  
15 in the summertime as well as the wintertime, as defined  
16 in the EPA; and at a fuel price of same price we used  
17 for the EPA pricing of 19 cents in 2024 dollars  
18 per kilowatt hour, would cost \$7.9 million for the  
19 energy. And there would also be a requirement to pay  
20 for the capacity, which is not coming from the IPPs and  
21 the Standing Offer Program because they don't provide  
22 dependable capacity at the moment. And that would add  
23 a further \$1.75 million if you took the pricing  
24 structure that we used in the EPA. In actual fact, it  
25 might require more, because if you build a capital

10:07

10:07

1 plant up front, the costs would be higher at the  
2 beginning.

3 So, Mr. Maissan, that's the reference that is  
4 summarized in YUB-YEC-1-1 that you had. It's  
5 referencing that type of analysis in the submission.

6 Q. Thank you. This redesigned THELP project of just over  
7 9 megawatts, I think it's 9.2 installed capacity, could  
8 that have been built under the Standing Offer Program  
9 of the IPP policy?

10 A. MR. HALL: Mr. Chair, Andrew Hall. No. 10:08

11 Q. And why is that? Is that because of the 2-megawatt cap  
12 in the Standing Offer Program?

13 A. MR. HALL: Andrew Hall. Correct, yes.

14 Q. Okay. Besides the Standing Offer Program, are there  
15 other possibilities for projects under the IPP policy?

16 A. MR. HALL: Andrew Hall. The IPP policy  
17 allows for what's called "unsolicited proposals," which  
18 would be essentially developers coming forward and  
19 approaching Yukon Energy directly with project ideas.

20 Q. And does it also provide for Yukon Energy issuing a  
21 request for proposals? 10:09

22 A. MR. HALL: Yes, it does. Andrew Hall.

23 Q. And has Yukon Energy issued any request for proposals  
24 under the IPP policy?

25 A. MR. HALL: Andrew Hall. No, we have not.

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 Q. Right. Was this project then an unsolicited proposal?

2 A. MR. HALL: Andrew Hall. Yes, in effect, it  
3 was.

4 Q. Thank you. My last area of questioning is also related  
5 to a Board IR. It's YUB-YEC-1-57 As Amended. And that  
6 is found in Exhibit B-9, the amended consolidated  
7 Round 1 IR responses. And the response starts on pdf  
8 page 104 out of 109. And I'm looking at page 5 of 6 of  
9 that IR response.

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

10:11

11 Q. Thank you. Towards the bottom of the page there is a  
12 repeat of the statement that I reference in response to  
13 the previous discussion which compares the project  
14 compared to the IPP Standing Offer Program.

15 Now, I was wondering, could you, for the record,  
16 state what the annual energy limit is for all projects  
17 approved under the Standing Offer Program?

18 A. MR. HALL: Andrew Hall. Under Atlin future,  
19 that limit or the cap was increased from 20 to  
20 40 gigawatt hours for the Standing Offer Program.

10:12

21 Q. And has this limit of 40 gigawatt hours, this new limit  
22 of 40 gigawatt hours, been reached in, completed, or  
23 committed projects? Committed -- let me be clear, in  
24 Standing Offer Program projects?

25 A. MR. HALL: Mr. Chair, it's Andrew Hall. Thus

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 far, we've signed three EPAs. We have visibility on an  
2 additional three this year, but they are not yet  
3 signed. But if I look at our pipeline of projects that  
4 are active, I would say, we do have visibility on, over  
5 time, filling the 40-gigawatt-hour cap.

6 Q. Okay.

7 A. MR. HALL: But it has -- the cap has not been  
8 filled with committed projects if committed --

9 Q. Yes.

10 A. MR. HALL: -- is defined through signed EPAs. 10:12

11 Q. Thank you. Would YEC support an increase to this -- to  
12 this energy cap or, in fact, the capacity cap for  
13 projects under the Standing Offer Program? And could  
14 you explain your answer, please.

15 A. MR. HALL: Mr. Chair, Andrew Hall. A couple  
16 of pieces to that -- that question. I'll deal with the  
17 capacity one first.

18 So as discussed earlier, there -- there's  
19 currently a 2-megawatt cap on projects under the  
20 Standing Offer Program. What that does is result in 10:13  
21 fairly small projects which lack an economy of scale.  
22 So an argument can be made that that cap should be  
23 lifted.

24 In other words, allow for larger projects that can  
25 benefit from economies of scale in their -- in their

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Cross-examined by Mr. Maissan

1 development. Because what we have observed is that the  
2 Standing Offer Programs are challenged economically and  
3 in -- on occasion have to rely on government grant  
4 funding in order to proceed.

5 So, you know, I won't comment on what Yukon Energy  
6 would support or otherwise, but I think there could be  
7 an argument made to increase the cap.

8 But, ultimately, that's a policy decision that  
9 will be made by government. Yukon Energy has -- has no  
10 role in setting policy around the Standing Offer  
11 Program.

12 Mr. Maissan, your first question related to would  
13 we support an increase to the Standing Offer Program of  
14 above 40 hours. It's a complex question. I think the  
15 reality right now is that the Standing Offer Program is  
16 set up to anticipate renewable projects which tend, in  
17 reality, to be either mostly solar; and we have  
18 a -- you know, a wind project, a prospective wind  
19 project, and there's a couple of micro hydros but  
20 mostly dominated by solar. And as everyone knows,  
21 solar tends to produce the majority of its energy  
22 during the summer months when we have surplus energy.

23 So the question becomes what to do with that  
24 summer -- that energy that's supplied in the summer  
25 months, and that's where a project like Moon Lake

10:14

10:15

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 becomes really important; and that's why, one of the  
2 reasons why, it's a key feature of our renewable  
3 electricity plan, was to give us a tool to utilize  
4 summer surplus to meet demand for winter energy.

5 So I think, you know, I mean, broad strokes,  
6 expanding the program beyond 40 gigawatt hours would --  
7 would be really having visibility on Moon Lake moving  
8 forward and being available to complement additional  
9 supply of summer energy.

10 But, again, we're -- we're just one player in  
11 this, and ultimately government policy will determine  
12 if that Standing Offer Program gets expanded.

13 Q. And can you tell me what price incentives are in place  
14 in the policy at present and in the Order in Council --  
15 I've forgotten the number -- 2019-25 that enables it to  
16 encourage winter energy production by IPP proponents?

17 A. MR. HALL: Andrew Hall. It's an interesting  
18 question. We currently pay the avoided costs of  
19 thermal generation to the -- to the standing offer  
20 project proponents. So in the absence of a carbon  
21 price -- and what I mean by that is Yukon Energy is not  
22 subject to a carbon tax on fuel used in generation.

23 We are -- we are already paying the maximum that  
24 we would logically pay for energy from the Standing  
25 Offer Program. So it's very hard to see how our price

10:16

10:16

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 incentive could be put in place to incent the  
2 production of winter energy without being punitive to  
3 ratepayers versus the thermal alternative.

4 I could see a price disincentive, where we might  
5 not pay at all for summer energy supplied from an IPP  
6 under the Standing Offer Program, but I think that  
7 would materially impact the overall project economics.  
8 So it's hard to see how seasonal pricing, Mr. Maissan,  
9 actually would -- would provide the kinds of incentives  
10 that you're thinking of.

10:17

11 Q. The THELP EPA includes a capacity price for the  
12 winter -- for winter capacity provided. So there is no  
13 equivalent in the -- in the IPP policy at present to  
14 allow that kind of capacity incentive?

15 A. MR. HALL: Andrew Hall. Yes, that's correct,  
16 and it's partly explained by the fact that the  
17 intermittent renewables that are being developed under  
18 the Standing Offer Program don't provide dependable  
19 capacity.

20 Q. Right. So it seems to me that the IPP policy is not  
21 really very well aligned to the energy and capacity  
22 requirements of the Yukon Integrated System, the grid.  
23 And I was wondering, then, given that situation, if  
24 there were policy changes that would change that to  
25 encourage winter generation and discourage summer

10:18

A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1 generation and -- and to encourage firm dependable  
2 capacity in the wintertime, then these would probably  
3 be supported by -- by Yukon Energy.

4 A. MR. HALL: Mr. Chair, Andrew Hall. I think  
5 the -- it's clear that in designing any expanded  
6 program beyond the 40 gigawatt hour cap on the Standing  
7 Offer Program provides an opportunity to revise the  
8 pricing structure, no doubt. We've had some  
9 conversation with government about what that might look  
10 like, but it's not -- it's not abundantly clear that 10:19  
11 there's any decision forthcoming about whether the  
12 program would be extended beyond 40 gigawatt hours.

13 But I would agree that it provides an opportunity  
14 to provide pricing that results in energy and capacity  
15 which is more suitable for our demands and curbs right  
16 now, but I don't have much visibility on whether that's  
17 going to actually happen or not.

18 MR. MAISSAN: Thank you.

19 Mr. Chair, that concludes my questions. I see the  
20 time is 10:20. Perhaps now is a good time for the 10:20  
21 approximately 10:30 break that you were referring to  
22 earlier.

23 THE CHAIR: Yes. Thank you, Mr. Maissan. You  
24 were very accurate in anticipating my -- my intention  
25 to take a break at this point.

## A. HALL, E. MOLLARD, C. OSLER

Cross-examined by Mr. Maissan

1           So let's break for 20 minutes. And I'm not sure  
2           what the precise --

3           MS. SABO:                   Mr. Yee (indiscernible).

4           THE CHAIR:                Yes, Mr. Yee. Well, let's just  
5           check with Mr. Yee first in terms of, Mr. Yee, are you  
6           anticipating any questions or -- and if so --

7           MR. YEE:                    I have no -- I'm sorry, I have no  
8           questions at this point. So yeah, no, no questions.

9           THE CHAIR:                All right. Fine, then.

10           All right. Well, let's take a break, then. It is  
11           10:21, so let's resume at 10:41.

10:21

12           MR. LANDRY:                Before we do that, Mr. Chair, may  
13           I just ask a question. Since Mr. Yee is not -- doesn't  
14           have any questions, who would be the next party asking  
15           questions? Would it be the Board?

16           THE CHAIR:                Yeah. That would be counsel for  
17           the Board and the Board.

18           MR. LANDRY:                Okay. Thank you.

19           MR. MAISSAN:                One more comment, Mr. Chair. I  
20           had sent an email last week saying that I had family  
21           arriving from overseas and that they are arriving  
22           around noon today. So I had planned to just read the  
23           transcript for anything else that -- that was of  
24           interest to me in preparing my argument.

10:21

25           I would say, given this fairly early time in the

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 day, I will stay online until probably our lunch break,  
2 and then I will leave the proceeding.

3 THE CHAIR: That's fine, Mr. Maissan. You're  
4 welcome to stay on, and subject to your scheduling  
5 around your visitors, you're welcome to disengage at  
6 any time.

7 MR. MAISSAN: Thank you.

8 THE CHAIR: Okay. Back in 20 minutes.

9 (ADJOURNMENT)

10 THE CHAIR: We're back on the record.

10:42

11 So, Ms. Sabo, are you ready to proceed?

12 MS. SABO: Thank you, Mr. Chair, I am ready.

13 Mr. Landry and YEC panel, can you both hear me clearly?

14 MR. LANDRY: I can, Ms. Sabo.

15 A. MR. HALL: It's clear.

16 MS. SABO: Thank you.

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

18 Q. Good morning, panel. Welcome, Mr. Hall, Mr. Mollard,  
19 Came Osler. Mr. Osler, I don't think you and I have  
20 had an opportunity to have had exchanges before, so  
21 very nice to meet you. Thank you in advance for your  
22 answers to our questions today. I will be referring to  
23 the EPA as the "Atlin EPA" or "EPA," and we understand  
24 that means the electricity -- the purchase agreement  
25 before us today. I will use those terms

10:48

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 interchangeably.

2 So you understand that when I refer to "EPA,"  
3 we're referring to this application?

4 A. MR. HALL: Yeah. Yes, we do.

5 Q. Thank you. And I just wanted to talk a little bit  
6 about areas of responsibility of the witness panel.  
7 Mr. Osler, I assume it's within your area of  
8 responsibility to address the specific mechanisms of  
9 the EPA and EPA pricing?

10 A. MR. OSLER: Yes.

10:48

11 Q. Okay. Other than those components, what are the other  
12 areas of the application that are within your most  
13 direct knowledge?

14 A. MR. OSLER: Overall, I've been involved in the  
15 document all the way through. So if I can help the  
16 Panel or the Board on other matters, I will; but  
17 it's -- you're correct, the focus is on the pricing,  
18 the commercial terms.

19 Q. Thank you, sir.

20 And, Mr. Mollard, can you explain, is your level  
21 of involvement similar to Mr. Osler's, or is it more on  
22 the mechanic -- like, operational and mechanics level?

10:49

23 A. MR. MOLLARD: Yeah, Mr. Osler supported the  
24 whole negotiation process. I was not at the table for  
25 negotiations, so I'm more at the higher level of the

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 corporate strategy and how it affects our ratepayers.  
2 As well as I had a particular involvement in the  
3 capital lease accounting questions that were raised by  
4 the Board.

5 Q. Thank you, sir.

6 And, Mr. Hall, as CEO, I'm sure you're my  
7 strategic management and other high-level general  
8 management point man?

9 A. MR. HALL: Yes. Correct.

10 Q. Okay. Thank you. And just as a guide, I will be  
11 primarily referring to four proceeding documents, and  
12 I'll just list those out to you so you're aware which  
13 documents I'm working from for Board questioning.

10:50

14 The first is the April 22nd blackline version of  
15 the EPA application, and that's Exhibit B-6. The  
16 second is YEC's consolidated IR responses of March 9th,  
17 which is the 926-page document, which is Exhibit B-9.  
18 The third document is Exhibit B-10, which is YEC's  
19 amended Round 1 IR responses with track changes dated  
20 April 20th, 2022. And the last one is YEC's  
21 consolidated Round 2 IR responses dated June 27th,  
22 2022, which is the 96-page document at Exhibit B-12.

10:51

23 And I'm just going to move to give you an overall  
24 roadmap of what I'm going to be asking about over the  
25 next day or two.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 I'm going to start with some general questions  
2 which are probably going to be good discussion points  
3 for exchange between me and this witness panel, and  
4 then I will cover the following areas:

5 First of all, I'd like to talk about the  
6 conditions precedent of the EPA. Second, I'd like to  
7 talk about dependable capacity energy and levelized  
8 cost capacity. Three, I'd like to move to dependable  
9 capacity and inflation. Four, the EPA, its impacts in  
10 comparison to an SOP for an IPP. The fifth area is  
11 hydrological modelling. The sixth area is spilling  
12 water, energy price, and water storage savings. And  
13 the seventh area is hydrogeneration and thermal  
14 alternatives.

15 Okay, gentlemen. Mr. Hall, now that we have an  
16 expected completion date for the project that you've  
17 identified in your opening statement of October 2025,  
18 can you tell me what level of oversight YEC has  
19 undertaken to evaluate the risks with the delays in the  
20 completion of the project date that is subject to the  
21 EPA agreement?

22 A. MR. HALL: Andrew Hall. It's an interesting  
23 question, Ms. Sabo, and it has -- you know, it surfaces  
24 various considerations, I would say. The first one is  
25 that, you know, this project is different from -- from

10:52

10:52

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 projects that the Board has seen in prior years in that  
2 it's a project that's being developed by an independent  
3 entity. And obviously, you know, our -- the way we  
4 participate or benefit from that is through a  
5 commercial arrangement, namely this EPA.

6 So in terms of, you know, the project execution  
7 and risks around that, there's only a certain amount  
8 that YEC can -- (a), has exposure to and; (b), can  
9 influence, because at the end of the day, the  
10 responsibility for the construction schedule and  
11 execution rests with the proponent.

10:54

12 And so that's fundamentally different from  
13 a -- from a project that Yukon Energy might undertake  
14 itself. And so it requires a bit of a shift in  
15 mindset. But clearly, everyone has an interest in this  
16 project being executed on time so that we can, you  
17 know, successfully receive the -- the energy and  
18 capacity that we want to buy.

19 In terms of, you know, our visibility on the  
20 construction schedule, you know, we don't sit on any  
21 kind of oversight board or management board of the  
22 project. We will receive updates from -- from the  
23 proponent and, you know, have discussions, but there's  
24 no sort of managerial role that we play during project  
25 execution.

10:54

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           In terms of, you know, the current schedule of two  
2 years, namely through to 2025, I would just remind  
3 folks that that -- the key driver -- and this was  
4 some -- some disclosure on this was provided in our IR  
5 responses -- was driven by -- and it's -- you know, a  
6 need for THELP to really manage the project budget.  
7 And so what they were -- had initially found is they  
8 looked at a compressed project schedule that delivered  
9 an inservice date of December of 2024, but there were  
10 actually costs involved in compressing the schedule. 10:55  
11 And they could, you know remove a material amount of  
12 costs by actually extending the schedule out to 2025.

13           So I wouldn't say -- I think it was a very  
14 deliberate decision they made and kind of evidence that  
15 they have a fairly good handle on the drivers of  
16 schedule and cost.

17           My only other comment around schedule delays is if  
18 you look at it economically, because we're paying the  
19 equivalent of -- particularly around capacity. If  
20 we're paying the equivalent of the thermal alternative, 10:56  
21 you know, there's no real material economic cost to a  
22 delay to us.

23           Obviously, we'd like to receive this renewable  
24 energy and capacity as soon as possible, but I think,  
25 financially, the costs of delay are not material. And

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 I believe we've answered, you know, IR responses that  
2 address that issue specifically.

3 Q. Mr. Hall, I guess kind of what I'm thinking from a YEC  
4 perspective is if this gets delayed again, say to 2026  
5 or 2027, you know, are you going to have to reevaluate  
6 your planning and kind of whether you continue with  
7 this EPA track, or do you have to come up with another  
8 alternative?

9 A. MR. HALL: Andrew Hall. I think as long as  
10 we have confidence that the project will be completed  
11 overall, in other words, it's just taking longer, but  
12 they're making progress with the completion of key  
13 deliverables and construction of infrastructure, there  
14 would be no need to reevaluate our plan.

10:57

15 I mean, obviously at a certain point, and I'm  
16 speculating completely here, but at a certain point, if  
17 there's indication that the project is materially  
18 compromised, at a certain point, we would have to, you  
19 know, reevaluate our plan. But I don't think we're  
20 anything anywhere remotely close to that kind of  
21 outcome.

10:57

22 And as I pointed out, I mean, the delay thus far  
23 was a very deliberate decision on the part of THELP to  
24 manage costs. It wasn't because they were  
25 slow in -- or their contract contractor was slow in

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           executing any kind of construction activity.

2           Q.   Okay. And getting back to the ten-year renewable plan,  
3           this is one component of that plan; correct?

4           A.   Correct.

5           Q.   Yeah, and can you give me the status of where the BESS  
6           is at? I understand it's being built, but can you give  
7           me some more details around that.

8           A.   MR. HALL:                Yes, the BESS is the battery  
9           project. What we refer to as "the BESS" is currently  
10          in the construction phase. We've completed site works.   10:58  
11          The site is being cleared and the preliminary civil  
12          work has been completed. And the battery, various  
13          long-lead items have been procured including  
14          transformers, breakers, et cetera. So I would say  
15          we're very much in the, you know, project construction  
16          and delivery phase.

17                 I mean, we have seen some interesting developments  
18          in the battery market around lead times for delivery,  
19          but I think right now, you know, nothing material in  
20          terms of risk has transpired in that project.               10:59

21          Q.   Thank you, sir. And, similarly, can you give me an  
22          update on the status of Moon Lake? I know that's a  
23          little bit further out in trajectory in 2028 and 2029,  
24          but where is that in terms of planning?

25          A.   MR. HALL:                Yeah, the Moon Lake project has

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 taken some time to get some momentum. I think we're  
2 still in the stage of really engaging with the two  
3 First Nations, so that would be the Carcross Tagish and  
4 the Taku River Tlingit, on -- on Moon Lake. And, you  
5 know, I think what we're finding is Carcross Tagish  
6 right now is very focused on our actual -- our  
7 re-licensing project for the Whitehorse hydro facility.  
8 And, you know, I think what we're experiencing is  
9 just -- you know, a limitation in terms of bandwidth of  
10 the -- that First Nation to look at multiple projects  
11 at once. So I think that's one of the reasons why  
12 the -- I think Moon Lake is probably going slower than  
13 we had anticipated.

11:00

14 The other think that we're still waiting for is  
15 there was a specific fund of the Federal Government  
16 approved in the last federal budget that has not yet  
17 been launched, and so I think our efforts to secure  
18 federal funding to -- to fund the initial phases of  
19 Moon Lake are still waiting for the official launch of  
20 that federal program.

11:00

21 Q. As I said, the date is 2028-2029, projected to be for  
22 that, and has there been any amendment to that date, to  
23 your knowledge?

24 A. MR. HALL: At this time, as I said, we're  
25 probably a little bit behind schedule. In terms of a

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 completion date, I just don't have visible idea on the  
2 overall project, what the overall project delivery  
3 schedule might look like to comment on what that end  
4 date might look like.

5 Q. Thank you, Mr. Hall. Moving back to the EPA and the  
6 Atlin project, do you see any other risks, given that  
7 the EPA design itself has highly technical components,  
8 this capacity payment and we've got an energy component  
9 and also it has involved multiple parties to reach an  
10 agreement, any risks there given that this is a pretty  
11 complex structure?

11:01

12 A. MR. HALL: Yeah, I mean, there are -- there  
13 are risks involved. You know, I think we outlined some  
14 of those risks in the application. You know, that  
15 there's risks -- I mean, I think you may well get to  
16 these on your questions on condition precedent. I  
17 mean, there are a number of things that still have to  
18 happen for the EPA to come into effect.

19 And then, you know, from an operational  
20 perspective, I think that the main -- main  
21 uncertainty -- I mean, we had to make certain forecasts  
22 around load, in particular. And what's material there  
23 is the assumptions one makes around mine -- how long  
24 mine load is going to be on the system, because that's  
25 a key -- load is a key driver of the calculation of the

11:02

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 thermal offset, which really drives price; and so  
2 there's forecast risk in -- in the way the EPA is  
3 structured as there would be if it was a Yukon Energy  
4 project, so I don't think it's unique in that respect.

5 Definitely forecast risk. Those would be the main  
6 ones from my perspective. I mean, I'm looking at the  
7 application here, and there's -- it's quite a  
8 comprehensive discussion on risks towards the back end  
9 of the application document.

10 Q. Thank you for that overview, Mr. Hall. I'm sure we'll  
11 get more into those details later.

11:03

12 The other thing that occurred to me as someone who  
13 is less familiar with the Yukon and with BC, I wondered  
14 why it was opted to embed the funding of YEC in the AEY  
15 system upgrades into the EPA rather than having  
16 separate transparency over those costs given we've got  
17 two very sophisticated public utilities here in the  
18 Yukon?

19 A. MR. HALL: Andrew Hall. I mean, the  
20 conditions of the EPA are clear in terms of the  
21 requirement of the proponent, so THELP, to cover the  
22 costs of the system upgrades, both to the ATCO system  
23 and to the Yukon Energy system. So that requirement or  
24 obligation for THELP to cover the costs is a relevant  
25 term that needs to be clear.

11:03

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           The documentation of what those costs are and the  
2           way that the money flows and the payment terms,  
3           et cetera, that those are contained within a side  
4           agreement, namely the interconnection agreement, which  
5           is a three-way agreement between ourselves, THELP, and  
6           ATCO. And those document both the nature of those  
7           system improvements and what they cost and the  
8           technical studies that support that analysis and then  
9           also the commercial terms around how those costs are  
10          paid for. And so that interconnection agreement, the  
11          completion of that is a condition precedent to the  
12          agreement.

11:04

13        Q.    So would it be fair to say, sir, that given that you  
14            have that three-way interconnection agreement that's  
15            currently being negotiated, that gives, at least in  
16            your view, some comfort or certainty that -- over those  
17            costs and what those terms will be? Like I say, I'm  
18            just --

19        A.    MR. HALL:                    Yes.

20        Q.    -- kind of curious why wouldn't you want to keep that  
21            control? Why would you give that control away to THELP  
22            to have to cover those costs and manage those costs?

11:05

23        A.    MR. HALL:                    Andrew Hall. Well, it -- at a  
24            high level, it's a pretty fundamental principle  
25            that -- that proponents such as this have to pay their

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 costs to connect, and -- and so that's the overriding  
2 principle, in the same way, really, that if we had a  
3 mining customer that wanted to connect to the grid,  
4 they have to pay their costs to connect.

5 So at a very high level, that principle is well  
6 established and needs to be reflected in the agreement.

7 The comfort by which that happens, yeah, I mean, I  
8 think we get that through the three-party  
9 interconnection agreement, because obviously there's --  
10 there's some complexity there. The funds flow through  
11 us to ATCO. It was not appropriate, we felt, for ATCO  
12 to transact directly with the proponent because they  
13 don't have any legal relationship with THELP, and so  
14 the funds flow through -- through us. And therefore, a  
15 three-way agreement, namely the interconnection  
16 agreement, was required.

11:06

17 I think maybe back to the other part of the  
18 question. Obviously, from a ratepayer perspective,  
19 it's important that the proponent pay for those  
20 interconnection costs because if we were to burden  
21 those costs on ratepayers directly, that that would be  
22 a burden that would be a rate driver. And so I put --  
23 by including them in the project costs, you get the  
24 benefit, for example, of the federal funding and the  
25 territorial funding covering a portion of those

11:06

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           interconnection costs via THELP.

2           Q. I'm going to take you to Exhibit B-12, which is the  
3           second round IR responses and pdf page 55, and that  
4           response is YUB-YEC-2-12. And in explaining why actual  
5           dependable capacity was not used, YEC states, starting  
6           at line 28: (as read)

7                        "After extensive discussion, the parties  
8                        were not able to agree on an approach  
9                        where capacity payments made each peak  
10                      winter period would be based on actual  
11                      dependable capacity provided to YEC  
12                      during that period. THELP required a  
13                      firm capacity revenue amount for each  
14                      year to assist in securing its financing  
15                      and was not prepared to proceed with  
16                      these annual payments being subject to  
17                      variants based on actual performance.  
18                      THELP did agree, however, to the  
19                      December capacity test for each year to  
20                      confirm dependable plant capacity  
21                      committed for each peak winter period  
22                      based on this test and for annual  
23                      capacity payments to be dependable on  
24                      this test. This measure addressed basic  
25                      risks related to seller plant conditions

11:07

11:08

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           over time, confirming actual dependable  
2           capacity available for each peak winter  
3           period."

4           So, Mr. Hall, I've got a series questions related to  
5           that quote. First of all, in your view, what is the  
6           risk to YEC in terms of the excess capacity payments?

7           A.   MR. HALL:                   Andrew Hall. I'd start by saying  
8           that we take, you know, a large amount of comfort from  
9           the fact that there is a test performed. So, you know,  
10          our experience is that hydro units are reliable, and,                   11:09  
11          you know, once an amount of available capacity is  
12          established in a test at the beginning of the winter  
13          period, that it's pretty low probability that you get a  
14          subsequent failure or an inability to maintain that  
15          kind of -- that production. Particularly with the  
16          current plant configuration, which includes a penstock,  
17          which is basically a pipe that brings the water from  
18          Surprise Lake down to the power house. That's a much  
19          more reliable configuration than what they had  
20          previously, which was a power canal.                                   11:09

21                 So, you know, I think our feeling is that, you  
22                 know, the test is important; and once they establish  
23                 that, yeah, there's 8.7 -- 8.75 megawatts available at  
24                 Jakes Corner, that the probability of them then  
25                 subsequently failing to deliver that through the peak

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 winter period is low, and that's based on our  
2 experience running our own hydro units.

3 Q. Thank you, sir. You know, one of the themes through  
4 IRs are whether actual performance and actual measures  
5 are preferred. So why should annual payments not be  
6 subject to variants based on actual performance?

7 A. MR. HALL: Well, as we outlined in that IR  
8 response, you know, this is a little bit to do with,  
9 you know, the dynamics of dealing with an independent  
10 entity that -- that has a project it needs to finance,  
11 and they -- their financial model and their economics  
12 relied on them having a degree of certainty around  
13 the -- those -- those dependable capacity payments.

11:10

14 And so the -- the -- you know, as we outlined  
15 there, you know, from a negotiation perspective, we  
16 just weren't able to negotiate a deal that was  
17 completely variable. Namely, we planned on -- only  
18 on -- only on actual capacity delivered.

19 But as I outlined, I mean, we evaluated the risk  
20 to be low of -- of a subsequent failure to deliver that  
21 capacity, and then also there's the mechanism to recoup  
22 potential overpayment as described in the application.

11:11

23 Q. In that respect, is YEC financially taking a risk  
24 with -- with how this is set up?

25 A. MR. OSLER: Cam Osler. Yes. The risk is that

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           it would not recover the excess payment. And the  
2           second risk is that you'll lose the time value of money  
3           because the recovery will probably be later than you'd  
4           like. And we can assess both of those risks.

5           But on the overall picture, the big thing was,  
6           after a lot of discussion, the capability of linking in  
7           actual performance to actual payments for capacity  
8           after a test was simply not something that THELP was  
9           prepared to do. So we either have an agreement or we  
10          don't.

11:12

11          And the discussion process agreed fairly quickly  
12          on the need for the capacity test, which, from our  
13          point of view, we thought that would lead them to be  
14          not be uncomfortable with having the performance paid.  
15          But we were wrong. Effectively -- and I raised that  
16          point, you can imagine, several times. But in the end,  
17          you can imagine talking to financial people, and they  
18          just don't want to get into the detail. They'd like to  
19          know for sure how much money we're going to get. So  
20          they're willing to accept the capacity payment, but  
21          that was it in terms of certainty. But then we could  
22          negotiate, well, we could recover these through excess  
23          payments, because they liked excess payments.

11:13

24          And we said, effectively -- because they weren't  
25          necessarily the first thing that was on the table,

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           having excess payments for carbon or additional load or  
2           all those types of things. But we effectively said,  
3           "well, fine, but we're going to recover what we have  
4           lost before you get any extra payments." And they  
5           said, "fine, that will let us get this thing done, and  
6           we can keep moving forward."

7           So it was a fairly important conversation is my  
8           point. It wasn't trivial; it wasn't easy. And the  
9           idea of trying to do it -- I think there was a question  
10          once: "Wouldn't it be simpler to just do it based on  
11          actual payments?" And my firm answer to you is no. I  
12          was there for many months, and it wasn't simple, and we  
13          didn't get anywhere.

11:14

14          So this is the result that allowed the project to  
15          keep moving.

16          Q. So just to maybe oversimplify, Mr. Osler, you know,  
17          obviously there had to be some modelling going in there  
18          because -- because of the nature of those discussions.  
19          So, again, it probably would be simpler to set a price  
20          for each unit of energy at a level that was agreeable  
21          both to THELP and YEC, conceptually, if you could do  
22          that without modelling outcomes and risks. Would you  
23          agree with that?

11:14

24          A. MR. OSLER:                    I'm sorry, Ms. Sabo, I'm not sure  
25          I got the question clear in my head --

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay. Would it be simpler to set a price for each unit  
2 of energy at a level that's acceptable to both THELP  
3 and YEC without modelled outcomes and related risks?

4 A. MR. OSLER: So, Ms. Sabo, you're talking about  
5 energy now and not capacity, if I got that part  
6 correct.

7 Q. Correct.

8 A. MR. OSLER: Okay. Again, the party wants to  
9 know what the price is going in. For a  
10 capital-insensitive IPP project, they want to know the  
11 price. So the simplest thing is, as you see in all the  
12 IPP programs that come out of British Columbia or  
13 Yukon, parties agree on a price to start with, and then  
14 they have a very fixed formula for changing that price  
15 going forward.

16 And as far as I understand that history, it's all  
17 to do with, again, people wanting certainty and not  
18 wanting to get caught up in the complexities of how we  
19 might adjust that price from year to year depending on  
20 various circumstances such as, perhaps, the cost of  
21 fuel changing or things like that.

22 I'm aware of some policy situations in northern  
23 Canada where there still is an attempt to have IPPs  
24 based on actual prices of fuel, and the price could  
25 vary over the life. But I'm also aware of people's

11:15

11:16

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 reaction to that. Unless they get almost 100 percent  
2 federal funding to cover all their costs, they don't  
3 like the idea of being subject to what could be --  
4 we've seen historically oil prices can drop. Right now  
5 they're not, but there isn't anybody I've talked to who  
6 doesn't quickly become aware of the fact that they can  
7 go up or they can go down, and both parties don't  
8 really want to get caught up in that if you're in  
9 British Columbia or you're in Yukon.

10 So the answer is the simplest way seems to be, in  
11 this jurisdiction, to lock in a price and have it  
12 escalated at a certain percentage related to inflation,  
13 and this IP -- this EPA reflected that basic approach.

14 Q. Thank you, sir.

15 A. MR. HALL: And, sorry, Ms. Sabo, I think the  
16 other part of your question related to why result on  
17 modelled outcomes, and I think what's really important  
18 there is we were -- the value that we pay and the way  
19 price was calculated needed to calculate how much  
20 thermal generation we offset by buying this power,  
21 because that's an important principle. You know, we'll  
22 pay for only the amount of thermal we can avoid  
23 generating.

24 And so you need to -- if that's a principle, which  
25 is in the -- to the benefit of ratepayers, I would

11:17

11:17

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           argue -- then you need to have modelling, because the  
2           only -- you can only model that number. And so  
3           applying that principle implicitly then calls for the  
4           need for a model, the solution to calculate price.

5           A. MR. OSLER:                    Sorry, I missed that, Ms. Sabo.  
6           Cam Osler again. But if you took everything I said and  
7           said, "okay, that's explain why somebody locks in a  
8           price and then escalates it." The big difference in  
9           this EPA compared to other experiences is we do one  
10          more thing before we lock in that price: We do the  
11          modelling. And we even change the price during the  
12          term. 2035, a different price than 2024.

11:18

13                    I don't -- I'm not aware of any experience  
14           elsewhere where that's been done, but it was done in  
15           this case for the reasons Mr. Hall gave. That in  
16           principle, in order to justify this from the Yukon side  
17           of the coin with the ratepayers, we had to have a lot  
18           more understanding of how we were actually likely to be  
19           displacing thermal and not just pay the same price of  
20           thermal for every kilowatt hour we bought. And that --  
21           this EPA gave us the opportunity to do that, where we  
22           don't have that opportunity with other IPPs.

11:19

23          Q. Thank you to you both. One of the things we were  
24          discussing yesterday here at the Board is why not base  
25          the price on actuals and use a floor to act as a

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 minimum payable under the agreement?

2 So to your point, Mr. Osler, I mean, you want it  
3 to be somewhat responsive, but was, like, a floor price  
4 considered? Can you give me some context on that?

5 A. The reason why you would take a price rather than bury  
6 it based on the actual fuel prices that are occurring  
7 is for the reasons I gave. It gives a floor. If you  
8 want to look -- use it that way. The price -- to give  
9 an example right now, the price is 19 cents in this EPA  
10 that was used to start the fuel calculation for 2024. 11:20  
11 And there's an answer to an IR, Mr. Maissan, that says  
12 the first four or five months of 2022, the actual  
13 blended fuel price is more like 22 cents.

14 So, right now, it looks like ratepayers are making  
15 out like gangbusters. But we have all lived through  
16 the last few years where the price went down quite a  
17 lot, and we were worried when we were negotiating this  
18 that the 19 cents, you know, might -- by the time we  
19 got to discuss this with the Board, might be looking a  
20 bit high. You never know. But we justified it based 11:21  
21 on the best information we had at that time.

22 If you go forward over 40 years, for sure the  
23 price is going to vary a lot compared to whatever  
24 number you started off assuming. So for the EPA winter  
25 price, we locked it in; but if you look carefully at

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Questioned by Ms. Sabo

1 the EPA, when we give added payments for additional  
2 payments or we give carbon or anything -- we tend to  
3 price it based on the last YUB price or the summer  
4 energy, same thing. And that was deliberate. Wherever  
5 we could, where the pricing wasn't yielding a firm  
6 revenue through the THELP but was giving them  
7 opportunities for additional revenue, we based that off  
8 the last approved YUB price to deal with the very thing  
9 you're talking about. Because they did not need  
10 financial certainty for that, and we wanted to have the  
11 certainty for ratepayers that it wasn't taking the risk  
12 of where the heck the price was at that time.

11:22

13 So it's a level of complexity to try and deal with  
14 all the things you're talking about: Need for  
15 certainty; need for reflecting what actually happens;  
16 when do we do one versus the other. I've just  
17 summarized how we dealt with them.

18 Q. Thank you. Can you tell me more on why does the energy  
19 price need to be based on thermal displacement and why  
20 that's the best benchmark, so two-part question?

11:22

21 A. MR. HALL: Andrew Hall. I'll answer at a  
22 high level, and then Mr. Osler can illuminate if I miss  
23 anything.

24 I think at a very high level, if you look at  
25 Yukon Energy's business going into the future, we have

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Questioned by Ms. Sabo

1 existing hydro assets that generate a certain amount of  
2 energy, and we make up the difference with thermal  
3 generation, which is a lot more expensive.

4 And so bringing a new renewable such as this  
5 project into our grid, the value that it brings is that  
6 ability to offset that expensive thermal. That's the  
7 only value it has in terms of dollars.

8 What it also does, which is hard to value, is  
9 it -- it ensures we can meet this renewable portfolio  
10 standard that I mentioned of the 93 percent generation. 11:23  
11 But right now to assign an economic value to -- that  
12 ability to meet that threshold is hard. We don't know  
13 what the consequences would be if we missed that  
14 93 percent, for example.

15 But it -- to come back to the central point, the  
16 value that this energy from THELP brings is our ability  
17 to offset thermal, and so that explains why the thermal  
18 price is then used as the benchmark price.

19 A. MR. OSLER: It's Cam Osler. At an even -- I  
20 can go higher level. I think in dealing with a grid 11:24  
21 that has this much hydro on it already, it's not like a  
22 hundred percent thermal community or something, we've  
23 already got a lot of hydrogeneration, so why are we  
24 focusing on the thermal? Because that's what  
25 everybody's -- you want to get money out of Ottawa or

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Questioned by Ms. Sabo

1           you want to justify that you're doing something, the  
2           thing you've got to show is that you're displacing  
3           fossil fuel with thermal energy, otherwise you're not  
4           going to get the funding for the First Nation or for  
5           anybody else. And I think that's going to be the case  
6           for a while longer.

7           At some point everybody may have to pivot  
8           professionally if there's some opportunity that's  
9           cheaper than thermal to do the job that you're being  
10          asked to do. But at the moment, in a grid like this,  
11          thermal is the issue both in terms of politics, in  
12          terms of getting rid of carbon in the air, but it's  
13          also the bottom line for the cheapest alternative that  
14          somebody would otherwise do if they had no policy for  
15          having to worry about greenhouse gases.

11:24

16          So, bottom line, we want to go before the utility  
17          board and show that we're not costing more than thermal  
18          so that the Utility Board doesn't have a concern with  
19          rates. Then we have to show to everybody else that  
20          we're getting rid of thermal anyway for all the reasons  
21          they give.

11:25

22          So if there was a cheaper alternative to do what  
23          we were trying to do, it would be put on the table, but  
24          we're not aware of one.

25          Q. Excuse me for a moment. So, Mr. Osler, do you have an

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 ability to show thermal displacement without looking at  
2 the price?

3 A. MR. OSLER: I'm not sure I get the question.  
4 I mean, in the sense that thermal displacement, if we  
5 go to tables in the submission that deal with it,  
6 thermal displacement ends up being a dollar amount.  
7 You certainly can't calculate the dollar amount without  
8 getting into the fuel price that you're assuming for  
9 the thermal, if that's -- if that's the question.

10 But to actually calculate how much thermal -- to  
11 calculate how much thermal kilowatt hours or gigawatt  
12 hours or whatever that you're displacing, that's the  
13 modelling issue that Mr. Hall talked about earlier, and  
14 it varies depending on the factors that affect the  
15 system. How much load do you have and how many other  
16 renewables do you have on that system.

11:26

17 Q. Okay. Thank you. Other than the dependable capacity  
18 excess payment in the agreement, what other terms of  
19 the EPA provides safeguards in the absence of actual  
20 performance? And, Mr. Hall, I think you mentioned some  
21 earlier, but I just wanted to make sure we have them  
22 all.

11:27

23 A. MR. OSLER: It's Cam Osler. Can we confirm  
24 that safeguards with respect to price or respect to  
25 security of supply, or do you want us to deal with each

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Questioned by Ms. Sabo

1 one independently? What are you --

2 Q. I would say price and energy.

3 A. MR. OSLER: I mean, on the capacity issue by  
4 itself, the excess recovery mechanism deals with  
5 performance, and it is a price-related mechanism. It's  
6 recovering monies.

7 In terms of capacity, security of supply, the  
8 agreement includes provisions for the first year,  
9 where, if we don't know for certain that it's going  
10 ahead by the beginning of June, we have the right to go  
11 and put in diesels and not pay them for that first  
12 year.

13 So that's very clearly -- and it's very much YEC's  
14 call in that case. In other words, if you can't make  
15 me comfortable, then I'm going to go and rent the  
16 diesels, and you're not going to get paid for the first  
17 year, because I can't afford to have insecurity in that  
18 first year before I see your operations and your  
19 commissioning.

20 After the first year, there's another clause -- I  
21 think it's 6.3 in the agreement, EPA -- that if they  
22 become aware of a problem with their facility, they  
23 have an obligation as soon as practical to inform YEC  
24 so that YEC, if it can, can take alternative measures.

25 Beyond that, the risks that YEC perceives it has

11:28

11:28

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 with this equipment that's owned by THELP is the same  
2 as it has with its own equipment. If I don't know soon  
3 enough, I can't replace it with a rental diesel, and I  
4 just have to -- I have a risk. And that risk will only  
5 get material under N minus 1. If Aishihik fails, I  
6 lose the 37 megawatts of Aishihik, and we have a cold  
7 weather period where it's well below minus 30 for an  
8 extended period of time, and if I don't have the  
9 equipment operating, whether it's my equipment or  
10 THELP's equipment, and I haven't got enough notice to  
11 get rentals, I've got a problem. We acknowledge that  
12 in the answers to the questions.

11:29

13 So I think that is a summary of the capacity side  
14 of the picture. I'll go to the energy side, but if you  
15 have any questions on what I just said, perhaps it's  
16 easier to ask them now before I go to the energy side.

17 Q. No, that was comprehensive, Mr. Osler. Please go the  
18 energy side for me.

19 A. MR. OSLER: Okay. And Mr. Hall will make sure  
20 that I've got my focus here. Essentially, on the  
21 energy side, we've been through a discussion about how  
22 the price is being set. Once it's set, the world can  
23 prove you wrong or wonderfully right depending on what  
24 happens to the fuel price that I just gave an example a  
25 few minutes ago of how it's gone up compared to where

11:30

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 we -- what we work on it. It can happen depending on  
2 the load on the system. The load is very strong right  
3 now and looks optimistically strong in the future, but  
4 we have made conservative assumptions of no industrial  
5 load starting 2035. So you can't get much more  
6 conservative than that if you're in the Yukon.

7 And in terms of other independent renewables on  
8 the system, we've assumed 40 million kilowatt hours of  
9 other renewable IPPs, which is the upper end of the  
10 current range. If that was lower than that, what -- 11:31  
11 the ratepayers would do better. If the government  
12 changes the policy and makes that higher, this project  
13 would not look as good. Okay.

14 So those are the key things that affect it in  
15 terms of value, aside from additional payments, carbon  
16 prices, and other things I talked about which are going  
17 to be based on the YUB price, not the price I started  
18 with.

19 In terms of security of supply, a very simple  
20 approach that we've taken throughout the discussion is 11:31  
21 we don't have a big material risk if they don't  
22 deliver. We have lots of thermal on the system; we can  
23 deliver thermal. It's going to cost roughly the same  
24 based on all of our assumptions. So we're not going to  
25 lose a lot of sleep over whether -- we're not going to

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Questioned by Ms. Sabo

1 ask them to guarantee how much energy they're  
2 delivering for the purposes of energy. We are very  
3 concerned about how much energy we'll be delivering  
4 during the peak winter period to make sure we have  
5 enough to have capacity, but we're not concerned for  
6 the purpose of just displacing thermal fuel.

7 I think, Mr. Hall, that summarizes.

8 A. MR. HALL: Yeah, and I think the other  
9 comment would be, at a high level, again, it gets back  
10 to the fact that this is a business arrangement with an 11:32  
11 independent entity, and that entity is motivated to  
12 make money, and therefore, you know, they have an  
13 incentive to keep the plant running. And in some  
14 jurisdictions, that's why the governments like the IPP  
15 sector because they think the IPPs are better at  
16 execution and reliability than big Crown utilities.

17 So, you know, you've got a commercial imperative  
18 for this proponent to keep the plant operating, and I  
19 think that gives some assurance, you know,  
20 unless -- because they want to make money. That's what 11:33  
21 they're in business to do. And so the only way they do  
22 that is by keeping -- keep it in operation.

23 And so you get -- it's an implicit sort of  
24 assurance through just the fact that there's that  
25 commercial relationship.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Is the December capacity test based on data for the  
2 next forward calendar year, or is it a blend between  
3 what data you have available in fall and then the rest  
4 of the peak period that would be in winter, spring?

5 Mr. Osler, can you maybe help me out with that?

6 A. MR. OSLER: Okay. I'm not -- it could be the  
7 sound or it could be that I'm just very slow, but I'm  
8 not sure I got the full question.

9 Q. Okay.

10 A. MR. OSLER: You're talking about the  
11 December tests; right?

12 Q. The capacity test, yeah.

13 A. MR. OSLER: Yes. And the question is -- that  
14 test has to occur in the month of December.

15 Q. Correct. And how is that calculated? Is it actual  
16 data or for data for the next year?

17 A. MR. OSLER: It's calculated based on what they  
18 actually do during a 24-hour period of test. What do  
19 they manage to achieve for the capacity that they  
20 delivered over that hour.

21 A. MR. HALL: It's based on actual performance,  
22 actual data over that 24 hours, and they have to show  
23 how many megawatts they can put out. And that they're  
24 paid on -- on the outcome of those measured data. So  
25 if the plant only puts out 50 percent of the capacity

11:34

11:34

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Questioned by Ms. Sabo

1           that it's designed for, that's what they'll get paid  
2           for for that subsequent winter.

3       A.   MR. OSLER:                I'm looking at the definition,  
4       Ms. Sabo, on page A1-49 of Exhibit B-5. There is a  
5       definition of "dependable plant capacity test," which  
6       is Definition Number 1.53. So you may want to  
7       reference that in terms of what we're talking about.  
8       If you're -- I'm waiting to see if you've found it,  
9       but...

10      Q.   Yeah, just give us one moment. We're almost there. 11:35

11      A.   MR. OSLER:                Okay. Good.

12      Q.   Yes, we're there, sir. Go ahead.

13      A.   MR. OSLER:                Okay. So for those who want to  
14      get to this level of detail, you'd probably have to  
15      read the various dependable capacity definitions  
16      relatively together because they have a tendency to  
17      interact, and they have been great fun to actually  
18      develop. "Dependable plant capacity test" means the  
19      average kilowatt dependable plant capacity, which is  
20      just a defined term about how much capacity the plant 11:36  
21      is delivering at Jakes Corner. Okay? So it's not what  
22      they have back at Atlin, it's what they're delivering  
23      to the YIS system at Jakes Corner, first of all.

24                The seller provides to the buyer as a test over  
25      one continuous 24-hour period. So they have to take

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Questioned by Ms. Sabo

1           one 24-hour period. They can do as many as they want  
2           as long as they get it done in December, but it's got  
3           to be a continuous 24-hour period, not piecing together  
4           different parts of 24 hours. Determined by the sum of  
5           all the energy delivered over that 24 hours at the  
6           point of POI, which is Jakes Corner, the point of  
7           interaction inter -- with us. Divided by 24. So how  
8           much per hour.

9           So it's -- I think it's about as simple as that,  
10          if I can put it that way. It's -- it's a test that  
11          they have to, based on actual numbers, they have to  
12          show to our satisfaction at that time.

11:37

13          Q. That test would be used for -- or would be valid or  
14          used for the rest of the winter period after December?

15          A. MR. OSLER:           Oh, yes. And that is the test for  
16          the peak winter period that started December 16th. So  
17          if it was 2025, sometime in the winter of December 2025  
18          they have to do this test. They can't do it after, and  
19          they can't do it before. And that test will apply to  
20          the pricing payments for the peak winter period  
21          starting December 16th that goes to the end of  
22          February, 2026 -- 2025 to 2026. So it works for that  
23          peak winter period as defined.

11:37

24          Q. Thank you. I'm going to move now to the Minister's  
25          terms of reference and rates. At a high level, we want

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Questioned by Ms. Sabo

1 to make sure that there's been steps taken to evaluate  
2 the impact on customer rates and what the risk, if any,  
3 is to YEC's rate base.

4 So given that context, I'm going to take you to  
5 the amended version of the application, B-6, pdf  
6 page 38, hard copy page 34, and just let me know when  
7 you're there. And that's pdf page 38.

8 A. MR. OSLER: Are you in Exhibit B-6?

9 Q. Correct.

10 A. MR. OSLER: And what page number on the  
11 printed copy is it?

12 Q. 34, Mr. Osler. I'm glad you're working from hard  
13 copies. I am as well.

14 A. MR. OSLER: I've got a bullet here. Just the  
15 first page bullet is summer delivered energy, June to  
16 August? Is that the same page that we're looking at?

17 Q. It's -- yeah, the bullet in the middle of the page is  
18 summer delivered energy --

19 A. MR. OSLER: Okay.

20 Q. -- June to August. Yeah. Okay. In the last  
21 paragraph on that page, it states: (as read)

22 "There's some uncertainty with respect  
23 to what, if any, impact the amended EPA  
24 may have on YEC's balance sheet, i.e.,  
25 rate base. Based on preliminary

11:39

11:39

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Questioned by Ms. Sabo

1 assessments of the agreement, YEC has  
2 concluded that this transaction does not  
3 contain a capital lease, and therefore,  
4 there is no balance sheet or rate-base  
5 impact. This conclusion, however, is  
6 not final. The ultimate impact can only  
7 be known when the project is complete  
8 and YEC's auditors (the Auditor General  
9 of Canada) have reviewed the  
10 transaction."

11:40

11 So our first question, if there is a rate-base impact  
12 after that's done, how would YEC deal with that change?

13 **A. MR. MOLLARD:** Mr. Chair, Ed Mollard. I think we  
14 spelled out the response in YUB Round 2 IR, but our  
15 plan for that is if the auditors do make the assessment  
16 that there is a balance sheet impact from this  
17 transaction, that we would exclude it from any return  
18 on rate base calculation for the purposes of  
19 determining revenue requirement. This is a similar  
20 approach to what we believe BC Hydro does. They have  
21 some 150-odd IPPs, of which I think there's four --  
22 three or four are capitalized on their balance sheet.  
23 And they use a similar treatment where it's included in  
24 their rate base, but it's excluded from the  
25 determination of revenue requirement for ratemaking

11:41

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Questioned by Ms. Sabo

1 purposes. So if the auditors determine there's a  
2 balance sheet impact, we won't charge for that. It  
3 will still be based on the terms as discussed in the  
4 agreement.

5 A. MR. OSLER: For the record, it's YUB-2-18, is  
6 the one that Mr. Mollard was referring to that details  
7 what he was talking about.

8 Q. Thank you, Mr. Osler.

9 Mr. Mollard, in terms of what you just stated, if  
10 it's -- if you're not going to include it in rates and  
11 rate base, how does this affect YEC's accounting  
12 principles for your hard books and your compliance with  
13 IFRS? Do you know?

11:41

14 A. MR. MOLLARD: Yeah, so the -- I mean, the  
15 assessment my auditor would do would be under IFRS.  
16 I'm bound by that accounting regulation. And typically  
17 we would follow those rules for ratemaking purposes.  
18 In this instance, I would be applying to the Board for  
19 an exception to exclude that asset from the  
20 determination of return on rate base for ratemaking  
21 purposes.

11:42

22 Q. Okay. Thank you. And has YEC taken any steps with the  
23 Auditor General of Canada, such as requesting an  
24 advanced ruling on this or are you just waiting to see  
25 until the project is complete?

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1     A.   MR. MOLLARD:            I've worked with the Auditor  
2           General for -- well, I worked with them for ten years,  
3           and they've been -- I've been audited by them for  
4           20 years. The Auditor General does not offer advance  
5           opinions. I can say that with some confidence.

6     Q.   Okay. Thank you, sir.

7     A.   MR. MOLLARD:            Yeah.

8     Q.   I'm going to move to climate change risk. To what  
9           descent has YEC factored in climate change into your  
10          negotiations in the Atlin EPA?

11:43

11    A.   MR. HALL:                Andrew Hall. The -- I think  
12          there's a couple of ways in which climate change risk  
13          gets manifested in or can impact a project like this.  
14          The one would be in the physical infrastructure, you  
15          know, in terms of, you know, risk of events that would  
16          impact its reliability or its operations. And then the  
17          other one relates to the long-term impact on the hydro  
18          resources.

19                So, I mean, I would say in general we -- climate  
20          change risk isn't specifically addressed through the  
21          EPA. The -- if you look at the hydro resources, you  
22          know, our current methodology is to look at historic  
23          records and to establish and evaluate that water  
24          history. It doesn't look prospectively. I think in  
25          general, when we look at the work that we have done on

11:43

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Questioned by Ms. Sabo

1 the expected impacts of climate change on the Yukon and  
2 that watershed, the conclusion -- and this is work that  
3 we did with Yukon College and Southern University -- is  
4 that this area and this jurisdiction will become warmer  
5 and wetter. So our overall conclusion is that the  
6 availability of hydro resources, if anything, will  
7 increase with the impact of climate change.

8 And so, you know, in terms of the availability of  
9 water, I think, if anything, there will be more in the  
10 future. And that's certainly the conclusion that we've  
11 drawn as it relates to our watershed for the Whitehorse  
12 hydro facility, which is, you know, somewhat adjacent  
13 to -- to THELP's watershed around Surprise Lake.

14 In terms of building their infrastructure to  
15 accommodate potential climate change risks, that hasn't  
16 specifically been contemplated in...

17 Q. Sorry, we just -- our feed must have cut out.

18 Mr. Osler, can you repeat what you said? I heard what  
19 Mr. Hall said, but I didn't hear --

20 A. MR. OSLER: I just said to him I think you  
21 might want to tell them you're finished.

22 Q. It's a good nudge. I -- my staff does that as well.

23 Your opening statement referenced the renewable  
24 portfolio standard and the *Clean Energy Act*. Can you  
25 comment on how that act is expected to impact your

11:44

11:45

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 planning for generation?

2 A. MR. HALL: Andrew Hall. As I outlined in my  
3 verbal opening remarks, when we developed our ten-year  
4 renewable plan, we had visibility on the likelihood  
5 that there was going to be a renewable portfolio  
6 standard. The Yukon government's "Our Clean Future"  
7 hadn't been finalized when we brought up the ten-year  
8 plan, but we had enough intelligence on the draft copy,  
9 for example, that we knew it was coming.

11:46

10 So the whole construction of that ten-year plan  
11 was very much geared to delivering on that 93 percent  
12 average renewable content.

13 And, actually, in the ten-year renewable plan  
14 report, I believe we actually report out on the  
15 forecast percentage renewable, you know, just to  
16 demonstrate that if we're successful in executing on  
17 the ten-year plan, including the Atlin project, that  
18 we'll be able to deliver on the 93 percent requirement.

19 So I would say it's an integral part of the plan  
20 and how we constructed it.

11:47

21 Q. And how does it affect your dependable capacity  
22 requirements or impact to the N minus 1 criterion, if  
23 at all?

24 A. MR. HALL: I wouldn't say it impacts it at  
25 all. I think our planning to meet N minus 1 is

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 somewhat of a separate exercise. But I would say  
2 indirectly, if we're focus -- if we're looking at  
3 renewable resources in the future, what's much more  
4 valuable to us are renewable resources that bring  
5 dependable capacity or contribute dependable capacity,  
6 and of which this project does very clearly.

7 And this contrasts to, for example, intermittent  
8 renewable such as solar and wind, which do not  
9 contribute that dependable capacity.

10 So there's an indirect link there, and we take  
11 that into consideration when developing the plan. We  
12 like a renewable that brings both, energy -- renewable  
13 energy and dependable capacity.

14 Q. Okay.

15 A. MR. OSLER: If I could, Ms. Sabo, the ten-year  
16 plan highlighted Moon Lake but also the  
17 transmission line that could connect the Yukon system  
18 to Skagway. And so the thought process is there, aside  
19 from focusing on southern Yukon or south of Yukon, was  
20 you might have -- you have the opportunity to develop  
21 something that could provide dependable capacity that  
22 was renewable; but if that transmission line access  
23 goes all the way to Skagway, it would be something that  
24 would really market the surplus renewable that we have  
25 on the Yukon grid as well as contribute to climate

11:48

11:48

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 relief in Skagway in the sense of the atmosphere there  
2 with all the cruise ships during the summer, swamping  
3 the local population with a lot of thermal generation.

4 Whereas if I went to Scandinavia or other places,  
5 I'd have to have electricity provided from shore that's  
6 hydroelectric or clean energy for my boats, and the  
7 cruise ships are interested in that.

8 So the ten-year plan brought together an  
9 amalgamation of a couple of different thinkings that  
10 related to how this might work if you could get the  
11 funding and you could get the support for it to happen.  
12 I just thought I'd bring that out. It's an unusual  
13 confluence of opportunities, I'll put it that way.

11:49

14 Q. So is it fair to say, Mr. Osler, that you think this  
15 EPA is a good touch point or a starting point? You  
16 know, I've looked at the slides and the maps and how  
17 that's all supposed to interconnect. Do you think this  
18 is the first step in creating that advantage?

19 A. MR. OSLER: I think that when people were  
20 talking about the ten-year plan, it wasn't accidental  
21 that the Atlin project was a very important pivot to  
22 getting people to think about southern areas and  
23 working with various parties to try and make something  
24 like this happen. They did talk about it way back in  
25 the early 90's. We almost did the project back then,

11:50

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 but this is quite different.

2 The First Nation had already developed hydro at  
3 Atlin, so we had a start; and secondly, they had done a  
4 lot of work on it, which I think Mr. Hall emphasized in  
5 the ten-year plan that this project was much further  
6 advanced than any other project that we could look at  
7 that was equivalent to having hydro capabilities for  
8 storage, and they've got a bunch of money and they've  
9 done a bunch of feasibility work.

10 So, yes, I think -- I should learn to answer  
11 questions simply. Yes, I think it is a good first  
12 step.

13 Q. Thank you, sir. And conceptually, do either of you,  
14 Mr. Hall or Mr. Osler, do you see -- do you have a  
15 vision on what the future ratepayer impacts to be of  
16 some of these initiatives or climate change  
17 initiatives? If you had a crystal ball, what do you --  
18 where do you think we're going to be in five or ten  
19 years?

20 A. MR. HALL: One of the fundamental assumptions  
21 we made in the ten-year plan, and it's borne out  
22 through our experience historically as that the federal  
23 and territorial governments would make material grant  
24 contributions to any project developed in the plan. So  
25 there was a -- there was a very deliberate assumption

11:51

11:51

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 and principle applied that we wanted to mitigate  
2 ratepayer impacts. In other words -- and those are  
3 aggressive assumptions, no doubt.

4 But as I said, I mean, historically the Federal  
5 Government has come in in a very meaningful way to  
6 support historic infrastructure development in the  
7 Yukon, and so it's not without precedent. But it was  
8 an underlying assumption. And, frankly, it's been  
9 borne out with our experience with Atlin, is we have  
10 \$150 million of grant funding committed, which supports 11:52  
11 that assumption we made in the ten-year plan. So we --  
12 we were very deliberate in not wanting to impact  
13 ratepayers in the pursuit of this 93 percent target.

14 I would say in other jurisdictions where, you  
15 know, federal funding might be less forthcoming, you  
16 know, some utilities are looking at significant rate  
17 drivers to achieve climate change goals, and that's  
18 either because they don't have access to federal  
19 funding or they have much further to go. You know,  
20 they're starting from a place where they're very 11:53  
21 low percent renewable and they -- their gap is much  
22 bigger. Ours, as Mr. Osler explained, you know,  
23 already, we're starting from a good place. I mean,  
24 last year we were 92 percent renewable.

25 So we're talking about, you know, the last

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Questioned by Ms. Sabo

1           few percent and how do we maintain or minimize thermal  
2           generation.

3       Q.   Thank you.  What is the status of the facility's  
4           approval in the BC for the Atlin project?  So that's  
5           another risk; right?

6       A.   MR. HALL:                Yeah, so there's a permitting  
7           process that the project has to go through in  
8           British Columbia.  The most recent information we  
9           received is they're still on track to receive  
10          that -- those permits the end of the first quarter of  
11          next year.  And it is a conditions precedent in the  
12          agreement, so we recognize that that's an outstanding  
13          task, but we haven't received any indication that  
14          there's a material risk there.

11:54

15      A.   MR. OSLER:             One thing they've had to do is  
16          re-file it because of the change.  I'm not sure  
17          that -- they -- they were a bit surprised I think in  
18          the end that they had to do that, but that's the way  
19          the world goes.

20                And I think the re-filing is -- they're working  
21                away at it with a lot of -- I'm told a lot of  
22                interaction with the people who regulate, so that's a  
23                good sign, that they're not -- they're talking back and  
24                forth and making sure that the document they're going  
25                to re-file is going to deal with all the questions that

11:54

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           these people have. And I'm told, I think --  
2           Mr. Hall -- it's the end of August that they're  
3           planning to file that document.

4                        So it sounds like it's under control in a way that  
5           everybody is trying to make it work rather than causing  
6           trouble for each other.

7           Q. Thank you. Can you give me a status update on the  
8           grant funding from the British Columbia government?

9           A. MR. HALL:                        Certainly. So the BC funding is  
10           not included in the \$150 million that we -- we reported  
11           on thus far. It's additional funding that -- that the  
12           proponent is pursuing. We've been provided with some  
13           updates on what the status is. There was an  
14           application for an initial amount of 20 million that is  
15           before the British Columbia Treasury Board, but we  
16           don't know the outcome of that at this time.

11:55

17           Q. So if that funding comes through of 20 million,  
18           Mr. Hall, what impact or change does that have?

19           A. MR. HALL:                        Yeah, I mean, I think as we've  
20           disclosed in the IR responses, I think one of the  
21           experiences that the project has had is through  
22           engaging with their contractor, Dent Construction, and  
23           receiving firm supplier and contractor quotes, is  
24           they've seen some cost escalation beyond the numbers  
25           that we've reported in -- thus far, the 240 million.

11:56

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Questioned by Ms. Sabo

1           And so, you know, they're working through that  
2           right now. The reasons are -- the obvious ones --  
3           around inflation and the supply chain and COVID-related  
4           impacts. And so the British Columbia funding is a key  
5           part of the puzzle to mitigate the increases that they  
6           may be experiencing above that \$240 million capital  
7           number.

8           They don't -- you know, this issue doesn't impact  
9           the commercial terms of the EPA as it relates to  
10          pricing, for example.

11:56

11          Q. Thank you. And do you know if that grant funding  
12          decision will be forthcoming in the near future, next  
13          30 days, or is that kind of going to be a longer  
14          trajectory?

15          A. MR. HALL:                   I believe they're shooting for the  
16          next sort of 60 days, would be the time frame, but we  
17          don't have a whole lot of visibility on that exactly.

18          Q. That's sufficient, Mr. Hall.

19          A. -- MR. OSLER:            Just to be clear, Ms. Sabo, when  
20          you said -- I think Mr. Hall was referring to decisions  
21          on whether the funding is made --

11:57

22          A. MR. HALL:                   Yeah, right.

23          A. MR. OSLER:                -- as distinct from it actually  
24          being provided.

25          Q. Correct.

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1       A.   MR. OSLER:                We understand -- we understand it  
2       would be provided over a few years type of stuff, just  
3       so that the record clearly shows that. But what we're  
4       focused on right now is when are we going to -- when is  
5       THELP going to know that it has the commitments it  
6       needs, and that's --

7       Q.   I --

8       A.   MR. OSLER:                -- his answer.

9       Q.   I appreciate that detail, sir.

10      MS. SABO:                    Chair Buchan, I think it is a few  
11      minutes before our lunch break, but that's a good place  
12      for me to stop.

11:57

13      THE CHAIR:                   Yes. Sounds like a good time to  
14      break for lunch.

15                So we'll see everyone back at 1:30. Enjoy the  
16      first part of the afternoon, if you can, while it's  
17      still nice.

18      (PROCEEDINGS ADJOURNED AT 12:00 P.M.)

19

20      PROCEEDINGS ADJOURNED TO 1:30 P.M.

21

22

23

24

25

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Questioned by Ms. Sabo

1 Volume 1

2 July 19, 2022

3 P.M. Session

4

5 (PROCEEDINGS RECOMMENCED AT 1:30 P.M.)

6

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

8 Corporation), previously affirmed

9 THE CHAIR: Okay. Welcome back, everyone.

10 We're ready to proceed.

11 So, Ms. Sabo.

12 MS. SABO: Thank you, Mr. Chair.

13 Q. As promised, YEC, I move to conditions precedent. So  
14 if you could please turn up the Exhibit B-11, which is  
15 the June 10th, 2022, letter updating the dates of the  
16 conditions precedent under the EPA, which the next  
17 page of that exhibit has the May 25th, 2022, letter.  
18 Just let me know when you're there.

19 THE COURT REPORTER: Ms. Sabo, can we get your sound  
20 increased a little bit?

21 A. MR. HALL: Give you a chance to do your...

22 A. MR. MOLLARD: Sorry, Ms. Sabo?

23 MS. SABO: Yes.

24 A. MR. MOLLARD: Sorry, we had some audio  
25 difficulties here. I was wondering if I could have

13:31

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Questioned by Ms. Sabo

1 opportunity to cover off the two undertakings from  
2 Mr. Maissan's questions this morning? Would that be  
3 okay?

4 MS. SABO: Most certainly, Mr. Mollard.  
5 Can you all hear me better now?

6 A. MR. MOLLARD: Yes.

7 MS. SABO: Okay. Thank you, Madam Court  
8 Reporter.

9 Q. And over to you, Mr. Mollard.

10 A. MR. MOLLARD: Sure. Okay. So with reference to  
11 the first undertaking, we're on Exhibit B-8, IR  
12 JM-YEC-1-3(b), and the question was whether the loads  
13 experienced at the time of the cold weather referenced  
14 in the response, whether those were record -- record  
15 peaks for the grid.

16 So keeping in mind this was before we had  
17 connected the two grids, so it was just the southern  
18 grid, what we called the "Whitehorse-Aishihik-Faro  
19 grid" back in the day.

20 And, unfortunately, we only have data back to  
21 January 2004, but as at that point in time in 2006, in  
22 November, that was a new peak for the southern grid.

23 Subsequent to that date, the peak was -- we had a  
24 higher peak again in early 2008 and late 2008, but at  
25 the time of that November weather event, that was the

13:32

13:33

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Questioned by Ms. Sabo

1 highest peak on the southern grid.

2 MS. SABO: Thank you.

3 A. MR. MOLLARD: And with respect to the second  
4 undertaking referred to, Exhibit B-10, IR JM-YEC-1-6  
5 Revised Amended, question on the 2020 table with  
6 respect to secondary sales, there was a negative amount  
7 noted in December of that year, and we confirmed that  
8 there was an error in the billing in October. You can  
9 see the .66, there was an error in that, and the  
10 minus .46 is a correction to that billing.

13:34

11 Q. Okay. Thank you, Mr. Mollard.

12 I'm actually just going to take a moment. We've  
13 just lost our real-time transcript on my end, so just  
14 hold on for a moment.

15 (DISCUSSION OFF THE RECORD)

16 MS. SABO: Okay. Apparently our IT was on  
17 lunch along with us. Thank you, everybody.

18 Q. If you could turn up that Exhibit B-11 which is the  
19 June 10th, 2022, condition precedent letter that  
20 updated those dates. And the condition precedents are  
21 attached in the May 25th, '22, letter in that same  
22 exhibit. And just let me know when you're there.

13:36

23 A. MR. MOLLARD: Okay, we're there.

24 Q. Okay. And the interconnection agreement, which is  
25 Condition 2.1 D1 in that table has a revised date of

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 July 29th, 2022. And we talked about this a little bit  
2 this morning, but can you just confirm for me  
3 that -- that that -- that there's no more drivers of  
4 the delay on that interconnection agreement, that it is  
5 still well in progress for up to 60-day delivery or  
6 completion -- not of the actual --

7 A. MR. HALL: The drivers of the change in the  
8 CP date for the interconnection agreement were a number  
9 of things.

10 Once the plant design had changed, we and ATCO had  
11 to go back and look at whether the new plant  
12 configuration had any impacts on the system, so we had  
13 to redo the system impact studies, particularly our  
14 system impact study of the Yukon Energy System.

13:37

15 There was also some further cost refinements of  
16 not only ATCO's costs for their system upgrades but  
17 also Yukon Energy's. And then there was a number of  
18 others -- you know, details that still needed to be  
19 ironed out.

20 I would say we're on track for the end of July,  
21 but I mean it's always possible there would be a little  
22 bit of further delay, but I wouldn't say materially so.

13:38

23 And, so, you know, I think if all goes well, we  
24 should be able to sign by end of July or shortly after  
25 that.

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Questioned by Ms. Sabo

1 Q. Okay. I would like to take a little bit of a segue and  
2 take you to the amended IRs with track changes at  
3 Exhibit B-10. And I'm looking at pdf page 94 of 125,  
4 and it's the response to YUB-YEC-1-20. And, Mr. Osler,  
5 that's at hard copy page 1 of 2, Part E. The question  
6 was posed: (as read)

7 "What First Nation settlement lands and  
8 traditional territories would be  
9 affected by the Atlin, Jakes Corner  
10 infrastructure, and what is the extent  
11 of consultation or accommodation to  
12 date?"

13:39

13 YEC responded, including in Part E on the next  
14 page at line 12: (as read)

15 "The THELP-owned and developed project  
16 facilities in Yukon between the BC-Yukon  
17 border and Jakes Corner are in the  
18 traditional territory of the  
19 Carcross Tagish First Nation, but do not  
20 effect any First Nation settlement  
21 lands. Project facilities in British  
22 Columbia are in the traditional  
23 territory of the Taku River Tlingit  
24 First Nation. THELP is responsible for  
25 consultation/accommodation related to

13:39

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Questioned by Ms. Sabo

1           the project. YEC is not able to advise  
2           on the specifics to date regarding these  
3           activities."

4           What is the status of any Indigenous consultations  
5           related to the Atlin hydro expansion project, if you  
6           know?

7           A. MR. HALL:                   Andrew Hall. You know, consistent  
8           with what we said in the IR response, we're not privy  
9           to all the details of what transpires, particularly as  
10          it relates to specific meetings or, you know,  
11          engagements that may be going on between THELP and the  
12          Carcross Tagish First Nation.

13:40

13                   But, in general, there is ongoing engagement  
14           between the two in order to satisfy, in a way, the  
15           Yukon government, because Yukon government is the  
16           decision body on the YESAA process and, ultimately,  
17           will be granting permits for construction of the  
18           transmission line. And as part of their duty as the  
19           Crown, they have to be satisfied that adequate  
20           consultation and accommodation has taken place.

13:41

21                   So Yukon government is clearly an important  
22           interested party in making sure that, you know, THELP  
23           and Carcross Tagish First Nation reach an agreeable  
24           upcoming settlement.

25                   So I know those conversations are ongoing between

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 the two First Nations, but I don't really have a  
2 precise view on when they're going to be done. I  
3 believe there's meetings scheduled for July and August,  
4 and hopefully on the basis of those meetings, that they  
5 can reach a successful outcome.

6 Q. So extrapolating from what you've said, Mr. Hall, is it  
7 YEC's view that, in terms of the Atlin expansion  
8 project in BC, as you've said, you know, that's a THELP  
9 responsibility. In terms of the YESAB and the Yukon  
10 system upgrade side, that is a Yukon responsibility.

13:42

11 So is the territorial versus province distinction  
12 important, particularly when settlement lands can cross  
13 borders, right? They don't necessarily recognize that  
14 it's a border or a project-specific driver, that it  
15 would affect Indigenous rights?

16 A. MR. HALL: Yeah, that's true, and I can't  
17 really speak to the BC process or how that might  
18 feature, you know, what -- how the interests of other  
19 First Nations are taken into consideration in the BC  
20 permitting process; we don't have visibility on that.  
21 With the focus for us very much being on the Yukon side  
22 and the obligations under -- and the YESAA, and then  
23 ultimately what the decision body, namely, Yukon  
24 government, needs to see.

13:43

25 Q. So have there been any terms or discussions that will

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Questioned by Ms. Sabo

1 deal with the adequacy of consultations either between  
2 YEC and THELP on what will be done or kind of what your  
3 expectation is in reporting of adequacy of  
4 consultations?

5 A. MR. HALL: Yeah. I think just to reiterate  
6 what I said previously, it's ultimately Yukon  
7 government as the Crown that has those expectations.  
8 And so we're very aware that those have been  
9 communicated through to THELP in terms of what YG needs  
10 to see. And that's, frankly, one of the reasons why a 13:44  
11 decision document hasn't been issued thus far by a  
12 Yukon government, is they're waiting to get comfortable  
13 that THELP has adequately met those consultation  
14 requirements.

15 Q. Thank you, Mr. Hall. And when we're talking about  
16 government of Yukon, we're talking about the ultimate  
17 government, not the penultimate, your parent  
18 development corporation. I just want to make that  
19 clear, right, about which level of government we're  
20 talking about that's going to be reviewing the 13:44  
21 consultation in honour of the Crown piece?

22 A. MR. HALL: Correct. It's -- it's -- you  
23 know, typically in something like this, the Department  
24 of Aboriginal Relations gets pulled in as -- to lend  
25 their expertise to the process and then together with

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Questioned by Ms. Sabo

1           the major projects group within the executive counsel  
2           office.

3       Q.   Thank you, sir.

4           Does YEC have a view, given that there is a need  
5           for consultation based on impacts to First Nation  
6           rights, how the Minister should evaluate any duty to  
7           consult or impacts to First Nations rights?

8           I appreciate you're not a lawyer, but I'm just --  
9           do you have a view on kind of what that process should  
10          look like, or does that just get left to the  
11          government?

13:45

12       A.   MR. HALL:                    Andrew Hall. I'll give my sort of  
13          thought on that. I mean obviously there's a condition  
14          precedent for the -- for the proponents to get all the  
15          required permits. So the duty to consult and the  
16          adequacy of consultation really feeds into the  
17          permitting process ultimately. So I would -- in a way,  
18          it's a condition precedent. Like, that has to  
19          be -- that requirement has to be met in order for this  
20          EPA to come into effect.

13:46

21          I'm not certain that the Minister of Justice needs  
22          to look beyond that because another arm of government  
23          would be looking at the adequacy of consultation as the  
24          permitting agency.

25       Q.   Okay. And just stepping back, I know YEC has a VP of

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Questioned by Ms. Sabo

1 government relations. And so what's their level of  
2 involvement in kind of liaising with the government or  
3 Aboriginal engagement for Yukon projects or this EPA?  
4 Do they have any discussions with THELP to help them  
5 out or?

6 A. MR. HALL: Yeah, I mean, our VP of government  
7 relations has been involved. I think I've -- I've been  
8 directly involved in this -- this aspect of the project  
9 in terms of trying to be a key influencer, you know,  
10 not only, you know, facilitating from both sides, so  
11 trying to help THELP think through the process as the  
12 proponent and then also making sure that, you know,  
13 Aboriginal relations is, you know, putting in the  
14 required amount of care and attention onto it, which I  
15 would say they have. Like, there's been no concern  
16 around that. But, yeah, we -- I've been directly  
17 involved in that.

13:47

18 Q. Okay. And meeting processes or -- what does "involved"  
19 mean?

20 A. MR. HALL: Well, meeting with all parties.  
21 So meeting regularly with the CEO of THELP and,  
22 likewise, with the head of Aboriginal relations and  
23 also the DM of executive council office. So, yeah,  
24 like, direct one-on-one engagement with the relevant  
25 people.

13:47

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Thank you, Mr. Hall. I really appreciate that context.

2 I'd like to move to a different condition  
3 precedent in that May 25th letter, and I'm looking at  
4 Condition 2.1 D4, which deals with the Clean Energy  
5 Development Plan. So what's the most recent status of  
6 that plan's authorization?

7 A. MR. HALL: Andrew Hall. I think Mr. Osler  
8 just spoke to that before lunch in that following the  
9 change to the project design, it's our understanding  
10 that the proponent had to resubmit their -- their  
11 application for the Clean Energy Development Plan and  
12 that they were on track to resubmit in August. And as  
13 Mr. Osler said they've been working closely with the BC  
14 regulators and have a view that that permit should be  
15 forthcoming the end of Q1 of 2023. So that's about the  
16 extent of the update we've been provided.

13:48

17 Q. Thank you. And what is the status of the YESAA  
18 decision documents? You referenced them a few minutes  
19 ago.

20 A. MR. HALL: Well, the YESAA evaluation report  
21 was published some time ago, and it only had a limited  
22 number of recommended terms and conditions. And then  
23 so the final -- the final step is for the YG to issue  
24 the decision document, which has not been issued yet.  
25 And then that's subject to resolution of this

13:49

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           **consultation requirement, which we just talked about.**

2           Q.   For the two conditions under Condition 2.1 D3 in  
3           respect of the funding plan, are the delays due to the  
4           change in the Atlin hydro expansion project scope?

5           A.   **MR. HALL:                    Sorry, Ms. Sabo, can you just  
6           repeat the question?**

7           Q.   Yeah. In respect of the funding plan and the  
8           conditions under 2.1 D3, are the delays in dates due to  
9           the change in the Atlin hydro expansion project scope?  
10          So what are the reason for the delays for 2.1 D3 parts?

13:50

11          A.   **MR. HALL:                    Yeah, so on the back of the change  
12          in the design, what was a change in costs, right, so an  
13          escalation in costs. And then the requirement to seek  
14          additional funding. So, yeah, there was -- that was  
15          basically the chain of events there.**

16          Q.   Okay. To the extent you're able to comment on the  
17          public record, what information did YEC receive to  
18          inform the revised date of October 31st, 2022, for  
19          Condition 2.1 D2 -- or, sorry, rather, 2.1 D4  
20          Taku River Tlingit First Nation approval of the EPA?  
21          So -- or, sorry, Part 6. My apologies.

13:51

22                        So that's Condition 2.1 D6 Taku River Tlingit  
23          First Nation approval of the EPA.

24          A.   **MR. HALL:                    Yeah, I don't recall there was any  
25          specific change related to the Taku River Tlingit**

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 government approval. There was a bit of an effort to  
2 converge a number of those conditions precedent on a  
3 single date, and that could have been why we -- just to  
4 simplify things; right? So that could have been why we  
5 changed that one to October 31st.

6 Q. Thank you, Mr. Hall.

7 I'm now going to move to dependable capacity  
8 energy and levelized cost capacity. If you could  
9 please turn up the blackline version of the amended  
10 application at Exhibit B-6, pdf page 22. So that's  
11 B-6, pdf page 22, hard copy page 18.

13:52

12 On pdf page 22, in the first bullet under  
13 "Dependable Plant Capacity Committed" has the  
14 dependable capacity price with an explanation of the  
15 calculation of the price in Footnote 16. Do you see  
16 that? And I guess our --

17 A. MR. OSLER: You're talking about capacity  
18 payment? Is that the one you're...

19 Q. Yes. Footnote 16.

20 A. MR. HALL: Footnote 16.

13:53

21 Q. Yeah. And we're wondering if you can undertake to  
22 provide the calculation of the dependable capacity  
23 price in the next cell workbook with all formulas  
24 intact and including the assumptions of how the \$200  
25 per kilowatt hour per year was determined? And I'm

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 assuming that's you, Mr. Osler, who would be taking  
2 that undertaking.

3 A. MR. OSLER: I think we can get you that.  
4 We -- it's been on the record before, but you want an  
5 Excel worksheet?

6 Q. Yes, we do.

7 A. MR. OSLER: Yeah, we will undertake that.

8 Q. Thank you, sir.

9 A. MR. HALL: And just to clarify, to calculate  
10 how the 2024 numbers of 193 and 220.6 were calculated?  
11 Because the 200 is just simply within that range.

13:54

12 Q. Yes, that's fine, thank you.

13 UNDERTAKING - TO PROVIDE THE  
14 CALCULATION OF THE DEPENDABLE CAPACITY  
15 PRICE IN THE NEXT CELL WORKBOOK WITH  
16 ALL FORMULAS INTACT AND INCLUDING THE  
17 ASSUMPTIONS OF HOW THE \$200  
18 PER KILOWATT HOUR PER YEAR WAS  
19 DETERMINED; I.E., TO CALCULATE HOW THE  
20 2024 NUMBERS OF 193 AND 220.6 WERE  
21 CALCULATED

13:54

22 Q. MS. SABO: And I'm glad you mentioned that,  
23 Mr. Hall, because I do have some clarifying questions  
24 on that, that range in a minute, so...

25 A. MR. HALL: Yeah.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay. I'm going to take it up for a moment. Keep that  
2 reference handy, but we understand that the  
3 determination of levelized cost of capacity is done by  
4 taking the cost of the asset over the life of the asset  
5 and smoothing those costs over the number of years that  
6 comprise the asset life. Is that understanding  
7 correct?

8 A. MR. HALL: It's the upfront capital costs and  
9 the non-fuel operating and maintenance costs are the  
10 two components of LCOC.

13:55

11 Q. Okay. And in determining LCOC, does this take into  
12 account the time value of money?

13 A. MR. HALL: Yes.

14 Q. Okay. And are LCOC costs expected to escalate as time  
15 moves forward?

16 A. MR. OSLER: Yes, in the sense that the  
17 calculation process to levelize a cost, the way it's  
18 been done by YEC, takes all of the costs Mr. Hall  
19 mentioned, the capital costs and the fixed O&M costs,  
20 brings them back to a present value at the beginning of  
21 the operating life of the facility, which means its  
22 present -- it's taken those non-fuel fixed costs and  
23 brought them back to one number for all the 40 years.  
24 And then it takes that and annualizes it into a number  
25 per kilowatt. It starts at the beginning of the life

13:56

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 of the project and is assumed to escalate at the same  
2 inflation that you used for your calculation of the  
3 present value. Okay?

4 So if you built that plant yourself, you would  
5 incur those fixed costs at the beginning, and then you  
6 would incur those fixed annual costs every year. If  
7 you're trying to levelize that number you have to do  
8 what I just described, and you're subject to escalation  
9 by definition to match the way you did the present  
10 value.

13:57

11 Q. Yeah, so I think you lost me at that -- at that last  
12 response. I understand you levelize it at the front  
13 end and it runs through the term, Mr. Osler, but can  
14 you just explain a little bit more about escalation and  
15 how that matches the way you calculate the present  
16 value?

17 A. MR. OSLER: The present value is made up of  
18 two items: One of them is a capital cost estimate  
19 taken to the time when the project begins operation, so  
20 it's been -- if somebody is doing estimates, they've  
21 escalated the cost to that date.

13:57

22 The other number that's used is the present value  
23 of the fixed operating costs, which would occur year by  
24 year by year over the life.

25 If you want a present value of that number, you

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           have to make an assumption about inflation. You have  
2           to make an assumption about what present value you're  
3           using. Are you using YEC's weighted cost of capital or  
4           what?

5                     Once you make those assumptions, you can then do  
6           the calculation.

7                     Having done the calculation, you then have a  
8           level -- you have a total number. You levelize that  
9           per kilowatt, but it's then -- it -- if you want to go  
10          forward two years, three years, or four years -- that  
11          number is in 2024 dollars, let's say. It's got to be  
12          escalated by the inflation assumptions consistent with  
13          the ones you used when you did the calculation, which  
14          is full inflation, not 50 percent inflation or two  
15          times inflation but whatever CPI you used.

16        Q.   Actual inflation, yeah.

17        A.   MR. OSLER:                     But it becomes actual inflation  
18          when you have to actually do it. But when you're just  
19          doing the calculations, it's the 2 percent you assumed  
20          in the footnote.

21        Q.   Understood.

22        A.   MR. OSLER:                     Okay.

23        Q.   Hold on one moment. So I understand that there's both  
24          the fixed cost and the operating cost when you do that  
25          calculation, right, so can you explain to me how those

13:58

13:59

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 pieces work and are -- how they're escalated by  
2 inflation? Are they on the same basis, I guess, is  
3 what I'm getting to, or is there a different  
4 calculation?

5 A. MR. OSLER: If you're implementing the EPA and  
6 you were going to increase it by inflation, as it says  
7 in the EPA, then you would have to get the actual facts  
8 for what the inflation was for the time period  
9 involved, the last 12 months; and then you would apply  
10 that number to the previous year's value, and you would  
11 escalate it per kilowatt. 14:00

12 So if it was \$200 per kilowatt in December 2023  
13 and you're going to December 2024 and you'd had a -- a  
14 very -- an inflation of 2 percent, you would have  
15 escalated that \$200 by 2 percent for December 2024,  
16 et cetera. You'd keep on -- but if the real inflation  
17 was 5 percent, you would have to escalate it by  
18 5 percent. That's what the real inflation is.

19 Q. Yeah. And I think, Mr. Osler, what I was trying to  
20 figure out if you're using net present value, there's  
21 the fixed-cost component and the operating cost, and  
22 does -- and that's kind of what is used in the  
23 levelized cost capacity, and then that's escalated on  
24 the same basis? They're not treated differently, the  
25 fixed and -- 14:00

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. OSLER: No.

2 Q. -- the O&M?

3 A. MR. OSLER: The whole -- the whole total is  
4 escalated by inflation, you're right.

5 Q. Thank you.

6 A. MR. OSLER: And -- and, you know, levelized  
7 costs are a mathematical thing you do only to try and  
8 get to the exercise we just described.

9 Q. Right.

10 A. MR. OSLER: If YEC actually built that plant,  
11 built the assumed diesel plant, and we went to the  
12 Utility Board to put it into rates, we would do it  
13 differently. We would have the capital cost, and then  
14 we would depreciate that cost for each one of the  
15 40 years. So we'd actually pay -- we'd actually ask  
16 the ratepayers to pay a lot more in year 1 and a lot  
17 less in year 39 than the approach that we take when we  
18 do a levelized cost approach.

19 Q. Right.

20 A. MR. OSLER: It changes the whole dynamics over  
21 the 40 years, but it allegedly has the same present  
22 value at the beginning.

23 Q. Correct. So it's just whether you're collecting more  
24 earlier or you're levelizing it over the term?

25 A. MR. OSLER: Exactly.

14:01

14:01

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Thank you.

2 A. MR. OSLER: So it means, from a ratepayer  
3 point of view, they end up with the IPP approach paying  
4 less at the beginning and more later on. It's an  
5 important point, if you're a ratepayer, to understand.

6 Q. Thank you. I'd like to refer you to John  
7 Maissan-YEC-1-7 Amended Appendix A, which is in the  
8 amended consolidated Round 1 IRs. So let's start at  
9 Exhibit B-10. And that's pdf page 34. And, again,  
10 it's John Maissan-YEC-1-7 Amended. And there's an  
11 Appendix A which has a table on it. And part of that  
12 table is also in the aid to cross, not the entire  
13 table, but part of it's there.

14:02

14 You're there, Mr. Osler?

15 A. MR. OSLER: Yes.

16 Q. Thank you. One of the assumptions noted in that table,  
17 Note 8, is that the assumed project life of 40 years.  
18 So how realistic is that a number of years for the life  
19 of a hydro facility? I know that's the term of the  
20 EPA, but I'm wondering if that's a normal term for a  
21 hydro facility rather than 60 or 70 or 80 years?

14:03

22 A. MR. OSLER: The normal -- if a utility was  
23 doing a hydro project, we'd probably be talking a  
24 minimum of 65 years, and sometimes they get translated  
25 up higher than that. I think some of the updated

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1            accounting depreciation even gets up to some of the key  
2            parts being a hundred years.

3            Q.    Okay.

4            A.    MR. OSLER:                    But, but, when I've asked this  
5            question of engineers doing IPP projects, they've  
6            tended to get a bit unclear with me on the grounds that  
7            building a project for a utility is not the same as  
8            building it for an IPP and, therefore, you cannot  
9            necessarily assume the same lives unless they spend the  
10           same amount of money making sure everything is going to  
11           work.

14:04

12                            So I pass on that caveat to the answer. This is  
13            an IPP, and it may be it can only have 40 years. I  
14            don't know. I don't know enough to know what they're  
15            doing to protect the life the way the utility would do.

16            Q.    Right, because depreciation uses an average service  
17            life?

18            A.    MR. OSLER:                    Yes.

19            Q.    Right?

20            A.    MR. OSLER:                    And it's based on somebody going  
21            and looking at the status of the actual assets and how  
22            well they're lasting over life.

14:05

23            Q.    Okay. Which you're saying may be variable under an  
24            IPP, if I understand the implication --

25            A.    MR. OSLER:                    I've been advised by engineers who

1 work on this type of stuff that it can vary depending  
2 on the level of effort put into the original asset  
3 development.

4 Q. Okay. In the response to that IR, does the use of a  
5 40-year period in Appendix A result in a higher number  
6 for the levelized cost of capacity than a higher  
7 period, such as 65 years, would?

8 A. MR. OSLER: I think the levelized cost of  
9 capacity is a number that is a present value number to  
10 collect a fixed set of cost ideas. So if you tend to  
11 lengthen the life, you have a tendency to lower that  
12 number. But I'll take that subject to check when  
13 I'm -- when I'm away from the witness stand, okay.

14 Q. That's fine. I'll take that subject to check.

15 A. MR. OSLER: Okay. And the bulk of the costs  
16 that we're levelizing are the capital costs, not the  
17 fixed O&M. So the type of comment I just made is if  
18 you -- if you're going -- it's like a mortgage, if you  
19 like. If you can get your mortgage over a longer  
20 period of time, you may pay a little bit less, but  
21 you're going to be paying it a lot longer.

22 Q. Right.

23 A. MR. OSLER: And so the fixed-cost element of  
24 the capital is what I'm focussed on, not the annual  
25 O&M, which will keep escalating.

14:06

14:06

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay. Great. I actually have some questions about the  
2 table. I was a little confused about some of the  
3 labelling on it, so I'm just going to walk you through  
4 this.

5 Can you please explain the difference between  
6 "With Annual Energy" and "With LTA Thermal Displaced  
7 Energy"? What's the difference in those titles?

8 A. MR. OSLER: Okay. So you'll notice that the  
9 only difference it made it to the numbers was for the  
10 energy, not for the levelized cost of capacity, first  
11 of all. So that means I don't have to worry about  
12 anything more than energy. Okay?

14:07

13 And, effectively, the first one with annual  
14 energy, as the Footnote Number 6 says, it took the  
15 total energy the project could develop over the full  
16 year, 41.5 gigawatt hours. Not just the 34 just during  
17 the winter period. Okay?

18 Q. Okay.

19 A. MR. OSLER: Because that's the normal way  
20 people do a levelized cost of energy for a new project.

14:08

21 So it took all the costs, and it divided them by  
22 the present value of that 41.5 every year number.

23 Q. Okay.

24 A. MR. OSLER: Now, over -- when we go to the  
25 second one, which you didn't really ask us about, but

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 we gratuitously provided it, levelized cost of  
2 long-term average thermal displaced energy. And  
3 Yukon Energy has used this analysis from time to time  
4 to try and make the point that the energy is useful to  
5 them to the extent that it actually displaces thermal,  
6 not just because it's generated. So if you're going to  
7 have 41.5 gigawatt hours of energy, you can generate on  
8 a long-term average basis but you can only displace  
9 34 gigawatt hours of thermal, then we've divided the  
10 total cost picture by the 34 number, present value,  
11 rather than the 41.5, saying, "okay, for every kilowatt  
12 hour of diesel that I displace, what's it costing me?"  
13 For every kilowatt hour of diesel that you displace  
14 after the payment of the grant assumed in the example,  
15 I'm paying 23.8 cents levelized. That's more  
16 realistic, is the assertion, than the 14.1 cents that  
17 you can get for all the energy you're generating, but  
18 it's not displacing -- every kilowatt hour is not  
19 displacing another kilowatt hour of thermal.

14:08

20 So it's a way of helping people understand that in  
21 this grid on this system what really counts is  
22 displacing the thermal, not just generating a bunch of  
23 energy. And it only applies to the energy calculation,  
24 to repeat what I'm saying, because that's the one  
25 that's at stake here.

14:09

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay. Thank you. And this might just be a track  
2 changes version issue, but I understood that the top  
3 table of Appendix A between lines 1 and 2 is -- was the  
4 original -- used the original project cost of  
5 206 million, and I'm thinking that the second table was  
6 the 240 million. So I don't know if you can confirm  
7 that for me now or if you need to take that subject to  
8 check.

9 A. MR. OSLER: Let me try and see if I can  
10 confirm it right away.

14:10

11 Yes, the top table in the amend -- on the tracked  
12 version is the one that's supposed to be removed. And  
13 the bottom --

14 Q. Okay.

15 A. MR. OSLER: The bottom one I'm finding in my  
16 clean copy having the numbers 14 point -- dollar  
17 sign 0.141 for the project LCOC with the grid. Okay.

18 Q. Correct. Thank you.

19 A. MR. OSLER: Does that answer your question?

20 Q. Yes.

14:11

21 A. MR. OSLER: Thanks.

22 Q. And this goes to a little bit more about our -- your  
23 more lengthy response to me just a minute ago, but our  
24 assumption between the upper table and the lower table  
25 is that there's a few chief differences that cause the

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 increase -- increases between these tables.

2 So we talked about annual energy and we talked  
3 about the LTA displacement energy, but I'm assuming  
4 that the cost of the project and the dependable  
5 capacity were also drivers in the cost increases?

6 A. MR. OSLER: The tracked version shows you the  
7 various changes and assumptions --

8 Q. Yes.

9 A. MR. OSLER: -- and so the costs went up. Now,  
10 all those types of things as well as the changes in the  
11 annual energy, et cetera. And the capacity also  
12 changed. So you've got a list of how many different  
13 things changed.

14 Q. Right. And I saw four there, so I think I've got all  
15 four. Thank you.

16 A. MR. OSLER: Okay.

17 Q. When comparing the two tables, we just were curious  
18 about some of the resulting numbers.

19 In the levelized cost of energy per unit cost with  
20 annual energy, it is decreased from the first table to  
21 the second table when looking at the amounts under the  
22 column "No Grant Assumption."

23 So when comparing the two tables, can you explain  
24 the difference, why that's occurred?

25 A. MR. OSLER: Let me make sure that I've got the

14:11

14:12

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 question correctly. You're looking on the tracked  
2 version.

3 Q. Right.

4 A. MR. OSLER: You're asking me whether the "No  
5 Grant" column --

6 Q. Yes.

7 A. MR. OSLER: Before we had the changes to make  
8 the amended EPA, we had 29.8 cents for the levelized  
9 cost of energy, and then it went down to 28.7 cents.

10 Q. Correct.

14:13

11 A. MR. OSLER: You're asking me if I can explain  
12 that; is that correct?

13 Q. So, yeah, I look at that piece, and then I look at the  
14 next column over with "Grant Funding" as well, where  
15 there's an increase in those two different amounts, the  
16 .125 and the .141.

17 So we're wondering why, directionally, with no  
18 grant funding, why are those numbers increasing in one  
19 direction, but with grant funding they're going in the  
20 other direction?

14:13

21 A. MR. OSLER: And the short answer, which you'll  
22 enjoy, is that the capital grant didn't change. It's  
23 still 150 million, but the costs went up from an  
24 assumed 2,000 -- 206 million to 240 million. So the  
25 net cost that the owner of the project would have to

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 worry about. And this question asked us to assume YEC  
2 owned the project, which we don't.

3 Q. Right.

4 A. MR. OSLER: So this is not relevant. But in  
5 terms of the math, the cost to the owner went up  
6 because they have to pay more after the grant.

7 Q. Great.

8 A. MR. OSLER: But, effectively, if we weren't  
9 worry worrying about grants and we were just looking at  
10 the total, the energy also went up; and it seems, just  
11 taking the math on face value, that the energy went up  
12 more than the total costs went up, so that's why the  
13 first column went down a little bit.

14 Q. Okay. That's helpful. Thank you, sir.

15 I'm now going to move to the aid to questioning  
16 that I have provided to Mr. Landry yesterday evening,  
17 and I'm going to start with the premises just to ask  
18 the panel if they've had an opportunity to check this  
19 aid to cross, because I don't want to ask you questions  
20 on something you haven't had a chance to review.

21 A. MR. OSLER: We have had a chance to review.

22 Q. Thank you, sir.

23 I will start with this aid under "Reference 1,"  
24 where we are taking the LCOC in the second table and  
25 calculated a number, if the LCOC was applied to a YEC

14:14

14:15

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 owned and operated 8.75 plant.

2 So we were -- first wanted to ask you, do you  
3 agree with the actual calculation as we've referenced  
4 it at the bottom of Reference 1 on the first page of  
5 the aid to cross?

6 A. MR. OSLER: We haven't actually checked the  
7 math, but the equation is fine.

8 Q. Okay.

9 A. MR. OSLER: In other words, if you assumed YEC  
10 ownership and operations, which the original table was  
11 asked to assume by Mr. Maissan --

14:16

12 Q. Right.

13 A. MR. OSLER: -- then you would have \$645,000 in  
14 round numbers per megawatt of LCOC. And if you  
15 multiply that by 8.75 megawatts, you get a total 2024  
16 dollar cost for 8.75 megawatts. Either one.

17 Q. Right.

18 A. MR. OSLER: You're zero. And then you'd  
19 escalate that every year by inflation.

20 Q. Great. Thank you, sir. And if it turns out you need  
21 to correct our numbers, you can always bring that back.

14:16

22 And the second reference in the aid to cross  
23 question which is on the second page, we've included a  
24 table that we've referenced there, also from a  
25 John Maissan IR. And we were looking at, in that

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 excerpt of that table, is you can see that it's -- the  
2 third-last line is "dependable capacity payment dollar  
3 per kilowatt hour" and for 2024, it's a highlighted  
4 number of 200. Do you see that?

5 A. MR. OSLER: Sorry. It's \$200 a kilowatt,  
6 which would be --

7 Q. Thank you.

8 A. MR. OSLER: -- \$200,000 a megawatt.

9 Q. Correct. So, again, we just wanted some verification  
10 if our proposed calculation on an 8.75-megawatt plant  
11 at the bottom of that page would -- would -- is correct  
12 conceptually?

14:17

13 A. MR. OSLER: Two comments. I want to comment  
14 on the calculation and also on the sentence.

15 Q. Okay.

16 A. MR. OSLER: On the calculation, it's correct.  
17 I know that because the table copy you've got there is  
18 the one that should be removed. But the version that  
19 is corrected, that comes to that same number later on.  
20 So you'll find it on page 4 of the answer to  
21 Mr. Maissan's question in the table there.

14:17

22 Q. Okay.

23 A. MR. OSLER: The other comment I have, though,  
24 is that the question that we were asked in Number 10  
25 did not assume that YEC owned and operated the plant,

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 unlike JM-7. Okay?

2 So this was asking us to do the calculations that  
3 are in the EPA and show over the whole 40 years some  
4 interesting information that Mr. Maissan wanted us to  
5 show.

6 So it's quite a different question, and the result  
7 is the \$200 a kilowatt here is the levelized cost you  
8 were asking me about earlier to do with a diesel plant,  
9 not a hydro plant.

10 Q. Correct.

14:18

11 A. MR. OSLER: Okay? So I think I'll stop there  
12 and see what other questions you have.

13 Q. One moment, Mr. Osler. Thank you.

14 So you beat me to the punch. I was checking with  
15 my colleague.

16 We would like you to run the same scenario in the  
17 John Maissan-YEC-1-7, using the assumptions there, to  
18 apply it to an 8.75-megawatt plant and just generate a  
19 similar table for us. Would you be able to do that?

20 A. MR. OSLER: Not easily, no, because  
21 there -- we're really comparing things that are totally  
22 different that I'm not sure --

14:19

23 I know what Mr. Maissan was asking in Number 10.  
24 He's trying to see how the EPA works out over 40 years,  
25 but taking the levelized cost of a hydro plant, you'd

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 never want to use that as the basis for the capital  
2 cost of an IPP such as this one because you're  
3 comparing -- I can give you all sorts of different  
4 words, but you are comparing two things you shouldn't  
5 compare.

6 A hydro plant is a very capital-intensive facility  
7 that you would never build just for the purpose of  
8 providing capacity, but a diesel plant is something  
9 that would be very intelligent to build if I just  
10 needed it for capacity because it's much cheaper  
11 per kilowatt -- capital.

14:20

12 Q. One moment. Okay. And given that discussion and  
13 response, Mr. Osler, I guess the key question we're  
14 trying to get to is, assuming that YEC could obtain the  
15 same government funding as THELP did, so let's go into  
16 the level of grant funding would be available for a  
17 project, could you build -- could YEC build and operate  
18 a hydro plant to provide the same capacity and energy  
19 deliverables as what's done with the Atlin project at a  
20 less price, I guess is what we're trying to get to?  
21 Like, if we can't compare apples to apples in terms of  
22 diesel and hydro --

14:21

23 A. MR. OSLER: Right. So, at a very high level  
24 to start with, the question you're now asking is not to  
25 do with how we calculate the EPA because that is one

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 where we don't by definition own the asset.

2 Q. Correct.

3 A. MR. OSLER: But how would ratepayers be  
4 affected if you assumed all of the same costs, but if  
5 YEC was to own the assets. Is that effectively the  
6 question?

7 Q. Right. All else things being equal, grant funding.

8 A. MR. OSLER: So for --

9 Q. And on -- I'm sorry, on a levelized basis?

10 A. MR. OSLER: Yeah. In a sense, Mr. Maissan's  
11 question Number 7, in principal, was asking that type  
12 of a question. And the answer in the table that's  
13 talked about in Appendix A to that answer gives you the  
14 levelized cost of energy and levelized cost of  
15 capacity.

16 And I'd have to double check with the people that  
17 did it how much they separated energy and capacity when  
18 they did those two calculations for this particular  
19 example. I didn't do them, so I'd need to double  
20 check.

21 But if we were doing a -- an assessment for  
22 Yukon Energy of this project and they were going to own  
23 it, the levelized cost of energy would probably roll  
24 together all of the costs of the project and talk about  
25 how much it is per kilowatt hour, capacity and energy,

14:22

14:22

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           because we wouldn't break it out into capacity versus  
2           energy; we'd just say, "Okay, here is the whole thing."  
3           If that's how this has been done, which, subject to  
4           check, I will assume is how it's been done, then it's  
5           telling you that, with the grants, and with YEC's  
6           capital structure which is 60/40 debt equity, not the  
7           type of capital structure that IPP has, the cost seems  
8           to be 14 cents levelized, year zero, escalating at, in  
9           this case, inflation, not 50 percent of inflation.

10           So that's what it tells you. But, in fact, if we  
11           were to own the project, we wouldn't do a levelized  
12           cost, we'd have to do it the way I described earlier.  
13           Capital costs, first year is the most expensive. Each  
14           year gets to be a bit cheaper as you depreciate the  
15           asset base.

16           So levelized cost is very interesting, but if  
17           you're a ratepayer, you're going to accuse me in the  
18           next moment of having fooled you because this is not  
19           the number that you would see in the first year of the  
20           project if YEC owned it.

21       Q.    Right. And this is not a usual rate base revenue  
22           requirement concept, right?

23       A.    MR. OSLER:           No. No. I mean, at a very high  
24           level, the information shows you that the grants make a  
25           big difference to the costs, obviously. And the cost

14:23

14:24

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 is going to give you capacity and energy at a levelized  
2 cost that's per kilowatt hour generation is less than  
3 the cost of fossil fuel.

4 But when I go to the second bunch of numbers that  
5 you asked me about, it isn't quite as cheap once you  
6 figure out I'm only displacing some -- I've only got a  
7 certain percentage and my energy is being used to  
8 displace thermal.

9 So, effectively, it isn't that easy for -- it  
10 would look a bit expensive if we went to the utility  
11 board and said, "Well, why don't we do this project for  
12 23.8 cents for every kilowatt hour we displace at 19  
13 cents?" There probably would be a few cross-exam  
14 questions as to the prudence.

15 Q. Thank you, sir.

16 A. MR. OSLER: But that goes to us owning it as  
17 distinct from somebody else owning it.

18 Q. Thank you. Just one moment.

19 Okay. I might circle back to that later,  
20 Mr. Osler, but I'll have that discussion at a later  
21 date.

22 Chair Buchan, I would like to mark the aid to  
23 questioning titled "Levelized Cost of Capacity, LCOC  
24 Scenario for 8.75 Megawatt Project" as the next board  
25 hearing exhibit, which is Exhibit A-11.

14:25

14:26

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 THE CHAIR: A-11.

2 MS. SABO: Yes, sir.

3 THE CHAIR: Aid to cross is now Exhibit A-11.

4 MS. SABO: Thank you.

5 **EXHIBIT A-11 - AID TO QUESTIONING**  
6 **TITLED "LEVELIZED COST OF CAPACITY,**  
7 **LCOC SCENARIO FOR 8.75 MEGAWATT**  
8 **PROJECT"**

9 Q. MS. SABO: I'd like to move to the EPA, its  
10 impacts, and we've been talking about comparisons to  
11 SOP for an IPP. And I would like to start -- if you  
12 have a copy of the OIC 2019-25, I'd ask you to pull  
13 that up?

14:26

14 A. MR. MOLLARD: Okay, we have that.

15 Q. Thank you, Mr. Mollard. I'd like to just talk a little  
16 bit about Section 2 of that OIC which describes the  
17 costs that are recoverable by an electrical utility.  
18 And there's three subparts in that section which are  
19 (a) the cost of purchasing electricity under an  
20 Electricity Purchase Agreement; (b) third-party  
21 consultant costs including legal fees incurred by an  
22 electric utilities in relation to the development and  
23 implementation of the agreement; and (c) the costs of  
24 maintaining or replacing equipment or infrastructure  
25 necessary to purchase electricity under the agreement.

14:27

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Do you see that?

2 A. MR. HALL: Yes.

3 Q. And I would just kind of like to get a sense from  
4 you -- I mean, obviously, we're not dealing with an  
5 SOP/IPP here, but are these criteria a good marker, or  
6 were they used as a reference point for what you were  
7 doing with EPA? Can we do maybe a bit of a compare and  
8 contrast with this section?

9 A. MR. OSLER: We were aware of this. I think  
10 the lawyers looked at the agreements that were SOP  
11 agreements because they wanted to understand  
12 similarities and differences. And they looked at -- as  
13 you know from other answers, they looked also at  
14 certain other IPPs in British Columbia.

14:28

15 But I could not give you a distilled version of  
16 how each one of them compares with each other because  
17 that was more of a lawyer's exercise.

18 Q. That's fine, sir.

19 A. MR. HALL: If you look at the three  
20 categories, I mean we have brought forward costs  
21 certainly in the first two; right?

14:29

22 Q. Correct.

23 A. MR. HALL: Yeah. We have not yet incurred  
24 costs in the third category. So those are obviously in  
25 the future.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. In terms of consultants, this just kind of raised --  
2 can you speak how many consultants did THELP and YEC  
3 use for the development and implementation of the EPA?

4 A. MR. HALL: Well, there was -- there was  
5 InterGroup for their negotiation support, and then  
6 there were at least one or two consultants who were  
7 done in the evaluation of the system impact studies.  
8 One comes to mind, but there could have been a second  
9 one as well.

10 A. MR. MOLLARD: And the lawyers.

14:30

11 A. MR. HALL: And then our legal counsel which  
12 aren't really consultants, but a different category.

13 Q. Okay. And so was it InterGroup that was primarily  
14 employed for development and implementation? I mean  
15 Mr. Osler is kind of -- he's been kind to  
16 explain -- he's been at the negotiation table. Is  
17 there anybody else involved in development and  
18 implementation?

19 A. MR. HALL: Well, I mean, it's Masaza  
20 (phonetic) was involved in the sort of structuring  
21 of the -- and analysis piece, supported by his staff,  
22 and then the lawyers also play a key role into the  
23 legal drafting to put that into a legal construct.

14:30

24 Q. Okay.

25 A. MR. HALL: And internal costs, of course, on

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 YEC's side.

2 Q. Of course. Can you please turn up the consolidated IRs  
3 at Exhibit B-8? And I'd like you to turn to  
4 YUB-YEC-1-8. So at pdf page 125.

5 And in that IR, there was -- YEC provided the  
6 Electricity Purchase Agreement of November 21, 2006,  
7 with the Taku land corporation for the Pine Creek  
8 project and the amending agreement, which is also  
9 included in the attachment to that IR.

10 So I'd like you to keep that document open, and  
11 now I would like to move you to the application, your  
12 amended application, Exhibit B-6, pdf page 16, hard  
13 copy, page 12. So B-6 is the exhibit, pdf 16, hard  
14 copy page 12.

14:31

15 And in the amended application in Section 3 in the  
16 second paragraph, YEC stated: (as read)

17 "The original EPA was negotiated over a  
18 period of approximately 18 months. The  
19 parties used as a starting template for  
20 the negotiation an amalgam of the YEC  
21 Standing Offer Program, SOP EPA, and the  
22 BC Hydro IPP large project EPA, and  
23 certain other commercial principles and  
24 basic terms relevant to the parties.  
25 The additional terms related to the

14:32

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 delivery of dependable capacity went  
2 beyond the IPP template document."

3 Why were the YEC SOP EPA and the BC IPP large project  
4 EPA used as the basis or model for the Atlin EPA rather  
5 than the one at Pine Creek, which I just referred you  
6 to? It seemed to us that the Pine Creek one might be  
7 more intuitive because it was related to the original  
8 project.

9 A. MR. OSLER: The Pine Creek document I think  
10 THELP understood was confidential. And certainly we've  
11 never really studied it carefully, but it became  
12 available to us because it was filed with the BCUC. It  
13 was on the record.

14:33

14 Q. Okay.

15 A. MR. OSLER: So in all fairness, it wasn't a  
16 document in front of the parties and it wasn't -- I've  
17 never read it, for example. I've never looked at it.

18 The parties at the very beginning of the exercise  
19 were aware of the SOP in Yukon, and this project would  
20 be different than an ordinary SOP, so what experience  
21 did -- the lawyers had with -- the example's in  
22 British Columbia. Because the Yukon is based, to a  
23 certain degree, on British Columbia history or  
24 experience.

14:34

25 So the parties did look, as this -- as the text

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           that you've read. The parties did look at a lawyer  
2           level at those agreements. But to the best of my  
3           knowledge, YEC's team never really studied the  
4           Pine Creek one. We just -- it came into our  
5           possession, and somebody asked it for us, so we passed  
6           it on.

7        Q.    Okay.

8        A.    MR. OSLER:                    But it's not been one that we've  
9           studied in any great depth.

10       Q.    Thank you, Mr. Osler. I'm just -- I'm going to ask  
11           some follow-up questions, but you might not be able to  
12           answer them. I guess we can always go to a conceptual  
13           level as well.

14:34

14                    But the Pine Creek agreement in clause 8.8 -- and  
15           on the pdf, it's page 138 and 139 -- it actually  
16           includes a clause where BC Hydro retains all green  
17           rights and emission credits.

18                    So, again, you might not be able to compare that  
19           exact term, you don't have knowledge of it, but I'm  
20           just curious why green credits got factored into the  
21           EPA here when traditionally, for this other agreement,  
22           they weren't. You can take that subject to check if  
23           you want to read that later, but, you know, I think  
24           it's pretty clear from the agreement that they baked  
25           in -- or they excluded green rights and emissions,

14:35

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 where the EPA here included them.

2 A. MR. OSLER: I can't comment on the Pine Creek  
3 one, but I think Mr. Hall can comment on the EPA  
4 that -- the treatment of --

5 A. MR. HALL: Yeah --

6 A. MR. OSLER: -- treatments there. Like, why  
7 was that done that way there.

8 A. MR. HALL: Well, but, I mean, the credits --  
9 Yukon Energy retains the rights to them; right? So it  
10 seems that they're consistent with the -- what I  
11 will -- we understand you explaining the Pine Creek  
12 agreement.

13 Just for clarity, we don't have a copy of the  
14 Pine Creek agreement in front of us. I know there's a  
15 link there, but...

16 A. MR. OSLER: Because of the volume of  
17 documents, we don't have all the attachments in front  
18 of us, so we'd have to get a copy brought over.

19 But, essentially, the EPA has a clause in it that  
20 has YEC retaining credits for environmental attributes  
21 subject to potential condition precedent adjustment  
22 because the British Columbia government put some money  
23 in, as well as others, and there may be some need for  
24 some allocation of those credits between the two  
25 jurisdictions.

14:36

14:36

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay.

2 A. MR. OSLER: That's -- that was the only caveat  
3 that was put into the exercise because people were  
4 quite happy to encourage funding to help solve the  
5 problem of the project; right?

6 Q. Thank you, Mr. Osler. I think that answers what I was  
7 trying to get to, because I was just trying to figure  
8 out why YEC would give up an obligation that it was  
9 entitled to. Between what you and Mr. -- you and  
10 Mr. Hall said, that is sufficient.

14:37

11 Just thinking about the rate of inflation of  
12 50 percent of CPI that was used as a starting point  
13 from the SOP IPP inflation rate, right. They used  
14 50 percent. Why was that the starting point rather  
15 than a lower inflation amount? I just kind of think if  
16 you're negotiating, you don't want to start too high,  
17 you don't want to start too -- well, maybe you do want  
18 to start too low. I don't know.

19 A. MR. OSLER: Well, I don't think it ever got a  
20 lot of -- among all the different things that had to be  
21 considered, the concept of having a price escalating at  
22 50 percent of inflation, which is the norm in northern  
23 British Columbia IPPs as well as the SO -- as well as  
24 the SOP IPP in Yukon, that seemed to be something  
25 people just sort of walked into assuming is a

14:37

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 fundamental as distinct from we'll adjust the price  
2 based on what the last time the Utility Board approved  
3 a price. Or anybody suggesting that we could  
4 get -- that they would estimate it at full inflation,  
5 which would get about three seconds of consideration.  
6 And if we said escalate it at less than half, you know,  
7 you can imagine how much consideration that would get.

8 So, I mean, you're trying to get an agreement.  
9 That's not the type of thing you spend a lot of time  
10 fussing about, bottom line. And it really means that  
11 the price in real terms is going down over the  
12 40 years. That's what it means. And I guess that's  
13 why it's been adopted by some jurisdictions such as  
14 British Columbia and Yukon.

14:38

15 Q. Thank you. I'll now refer you to YEC's second round IR  
16 responses at Exhibit B-12 and YEC -- or, sorry, excuse  
17 me, YUB-YEC-2-9. And I'm looking at the response in  
18 Part D at pdf page 46.

19 Okay. In the second paragraph, it states:  
20 (as read)

14:39

21 "As referenced in the January 2022  
22 submission..."

23 That's where I'm at, Mr. Osler. Are you there  
24 at line 13?

25 A. MR. OSLER: Yes.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Okay, great.

2 A. MR. HALL: Yes, we've got it.

3 Q. Great: (as read)

4 "As referenced in the January 22, 2022,  
5 submission, the parties used these EPA  
6 documents only as a starting template  
7 for the initial negotiations and have  
8 not referenced these documents  
9 thereafter due to, in part, to the need  
10 to extensively edit the BC document to  
11 suit the Yukon environment."

14:40

12 So, again, Mr. Osler, understanding that negotiations  
13 and agreements take puts and takes, can you expand on  
14 why these documents required substantial editing to suit  
15 the Yukon environment, or Mr. Hall?

16 A. MR. OSLER: At a very high level, because I  
17 ran this answer past our legal team, and they agreed  
18 with it, when people went through the documents, there  
19 were obviously elements in the British Columbia larger  
20 projects that weren't in the SOP in the Yukon. And  
21 then lawyers talked about it. They agreed that certain  
22 things that were in these documents they didn't really  
23 want to have or need to have in this document.

14:41

24 So it was more of a question of sections of the  
25 documents to look at seriously versus not, as I recall

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           it.

2                   But I repeat, you know, it's a long, long time  
3 ago, and a lot has happened since then, so I can't  
4 really help you very much in terms of anything much  
5 more detailed than that.

6       Q.   I'm going to get back to the numbers, Mr. Osler. Thank  
7 you very much for being as forthcoming as you can with  
8 those questions.

9                   Looking only at energy costs on a per-unit basis,  
10 are the energy costs under the EPA the same as they  
11 would be for an SOP IPP? I mean, you've said there's  
12 distinguishing elements, but in terms of energy costs,  
13 is that a difference?

14:41

14       A.   MR. OSLER:                   Energy costs per kilowatt hour  
15 that we would pay the IPP, if that's the question?

16       Q.   Right. Compared -- yeah.

17       A.   MR. OSLER:                   They're fundamentally different  
18 between an SOP and the EPA. And I explained earlier,  
19 the big difference, which is that for the EPA, we're  
20 doing this, what you called "modelling," to try and  
21 estimate the long-term average diesel displacement or  
22 thermal displacement -- excuse me -- from the 34 gigs  
23 of winter energy that we're purchasing on average. So  
24 that process, that step is not part of an SOP.

14:42

25                   So if I took an example, if we could agree that

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 the fuel cost that we should use is 19 cents  
2 because -- let's just assume the evidence is that  
3 19 cents is the -- is the levelized -- is the blended  
4 fuel cost that Yukon Energy would otherwise incur for  
5 90 percent LNG and 10 percent diesel. If I was doing  
6 an SOP, that 19 cents would apply to every kilowatt  
7 hour you bought. If I'm doing the EPA, it applies  
8 to -- up till 2034, roughly 72 percent and, after that,  
9 goes down because of -- okay? So that's the big  
10 difference.

14:43

11 The other difference is that the 19 cents here is  
12 something that was negotiated well in advance of the  
13 time period, whereas the SOP says you will get whatever  
14 price was the last one the Board approved at the time  
15 that your EPA becomes, what, signed --

16 A. MR. HALL: Signed.

17 A. MR. OSLER: -- executed?

18 A. MR. HALL: Yeah.

19 A. MR. OSLER: Executed. Okay. Not when you've  
20 actually operated it, but when you finally -- you  
21 finalize the deal.

14:44

22 And in this case, for this project with everybody  
23 we were dealing with, they needed to know up front what  
24 the price is you're going to deal with, not wait until  
25 something happens later on. And it was further into

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 the future that most SOPs are too. We were talking  
2 several years into the future when we started talking  
3 about it.

4 A. MR. HALL: But, I mean, but in raw numbers  
5 right now, the prices we pay per kilowatt hour in this  
6 EPA are lower than what we paid in the SOPs.

7 A. MR. OSLER: Today.

8 A. MR. HALL: Today. They're lower.

9 Q. Okay. Thank you, Mr. Hall, that's good context.

10 MS. SABO: Mr. Chairman, I'm wondering if we  
11 could just take -- maybe take a -- I know we're really  
12 early, but I'm wondering if we could just take a quick  
13 10-minute break, and then maybe we can go till 4 today  
14 if we take a 10- or 15-minute break now and end at 4?  
15 I don't know if anybody else has an objection --

16 THE CHAIR: Let's make it 15, you know,  
17 because of -- yeah, we've got another 45 minutes or so.

18 MS. SABO: Great.

19 THE CHAIR: Okay. So reconvene at 3:00.

20 MS. SABO: Great. Thank you, sir.

21 Thank you, panel.

22 (ADJOURNMENT)

23 THE CHAIR: All right. Ms. Sabo, would you  
24 like to continue.

25 MS. SABO: Okay. And I'll just wait until

14:44

14:45

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 the YEC is back online.

2 Q. Any preliminary matters, YEC panel?

3 A. MR. MOLLARD: Nothing.

4 MR. LANDRY: Nothing from me.

5 MS. SABO: Mr. Landry, all good?

6 MR. LANDRY: I think we're ready to go.

7 Q. MS. SABO: Okay. I see smiling faces. I  
8 can't hear you, but I can see you.

9 I'm going to move now to hydrological modelling of  
10 SNC and Knight Piésold and low water years. So,  
11 Mr. Osler, I think that's back to you.

15:03

12 Moving to Round 2 IRs at Exhibit 12, I want to  
13 look at YUB-YEC-2-16(a), so 16(a), which is at pdf  
14 page 64, and I'll try and get you a hard copy page if  
15 you could just scroll down. Here, sir. Hard copy  
16 page 2 of 3.

17 And starting on line 9, it reads: (as read)  
18 "YEC did not attempt to verify or  
19 validate the modelled flows developed by  
20 SNC-Lavalin and/or Knight Piésold;  
21 however, the SNC-Lavalin information  
22 shows that two experienced engineering  
23 firms used industry-accepted methods to  
24 develop simulated water flows, reviewed  
25 the results, and combine two separate

15:04

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 results to come up with reasonable  
2 inflow estimates. The results were also  
3 within the range of prior estimates  
4 developed first by Morrison Hershfield  
5 and then SNC-Lavalin (for the  
6 January 2020 submission)."

7 I just wanted to understand the relationships here. So  
8 is Knight Piésold a subcontractor of SNC?

9 Oh, Mr. Osler, I can't hear you. I don't know  
10 if --

15:05

11 A. MR. OSLER: I just -- I'm --

12 Q. -- you guys are on mute.

13 A. MR. OSLER: Can you hear me now?

14 UNIDENTIFIED SPEAKER: Your microphone's not on.

15 Q. Just hold on.

16 A. MR. OSLER: Can you hear us?

17 A. MR. MOLLARD: Can you hear us? We got audio...

18 A. MR. OSLER: I'm speaking now. Can you hear  
19 me?

20 MS. SABO: No.

15:05

21 A. MR. OSLER: No.

22 THE COURT REPORTER: The court reporter can hear them.

23 The court reporter can hear them.

24 MS. SABO: We'll check on our end here and  
25 see...

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1       A.   MR. OSLER:                Okay.

2       MR. LANDRY:                Can you hear me, Ms. Sabo?

3                No, you can't hear.   Okay.

4       MS. SABO:                 Can you say something again?

5       A.   MR. OSLER:                I guess, Mr. Landry was --

6       MS. SABO:                 Just hold on, Mr. Osler.

7       A.   MR. LANDRY:               Madam Court Reporter, can you hear  
8       me?   Yeah.

9       MS. SABO:                 Can you say something again,  
10       Mr. Osler?

15:06

11       A.   MR. OSLER:                Can you hear me?

12       MS. SABO:                 Yes, we can hear you now.

13       A.   MR. OSLER:                Okay.   Mr. Landry was also trying  
14       to see if you could hear him.

15       MS. SABO:                 Okay, Mr. Landry, can you speak up  
16       as well, please, sir?

17       MR. LANDRY:                Ms. Sabo, can you hear me?

18       MS. SABO:                 I can, sir.   Thank you.

19       MR. LANDRY:                Thank you.

20       Q.   MS. SABO:                Back to you, Mr. Osler.   I don't  
21       know if you could hear me all the way through that  
22       question, but I'm assuming you did.

15:06

23       A.   MR. OSLER:                I heard you read  
24       the paragraph from YUB-2-16, and the question that --  
25       as I recall, was who was retained through both versions

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 of the EPA, the January version and the amended  
2 version, and SNC-Lavalin was retained by THELP for both  
3 of those processes. Knight Piésold became associated  
4 later on in the amended version because they were  
5 working for Dent Construction.

6 Q. Okay.

7 A. MR. OSLER: So they became involved. And  
8 Morrison Hershfield, who are also mentioned in the  
9 paragraph, were working with KGS engineers from  
10 Winnipeg for THELP before SNC-Lavalin was retained.

15:07

11 Q. Okay.

12 A. MR. OSLER: In other words, THELP went through  
13 a process of hiring an owner's engineer. They ran a  
14 competition. In the end, SNC-Lavalin got that. But  
15 all the pre-feasibility work that was done for THELP  
16 was done by Morrison Hershfield working with KGS.

17 Q. Okay. Thank you, sir. The quote was a little bit  
18 unclear to us, and I'm hoping you can clarify that SNC  
19 and Knight Piésold did separate modelling and combined  
20 modelling, or did they just do their own modelling and  
21 not do a combined model? It was an and/or, so it threw  
22 us a bit.

15:08

23 A. MR. OSLER: I'm trying to just make  
24 sure -- there's an answer to a question, gives more  
25 information than just sitting here.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Take your time, sir.

2 A. MR. OSLER: Oh, okay. Just a moment.

3 Okay. So the answer to YUB-2-29 will help you  
4 understand what I'm going to say.

5 Q. Okay. I'll get that up, sir. I'm also working on the  
6 hard copy, so just give me a minute here. 2-29. I'm  
7 there, sir. Oh, I lost Mr. Osler's sound again.

8 A. MR. OSLER: Hello. I'm speaking.

9 Q. Yes, I can hear you now. Can you start again,  
10 Mr. Osler?

11 A. MR. OSLER: Okay. So we're looking at  
12 YUB-2-29(a) and (b) combined, those responses; and the  
13 questions had asked about, you know, the modelling that  
14 was done, essentially. So this was the most elaborate  
15 answer to that type of question. Okay.

16 Q. Okay.

17 A. MR. OSLER: And it -- it explained that SNC  
18 did a model. And there's a quote on page 2 of 4 from  
19 material that SNC had given us as to the explanation of  
20 their model.

21 And there's also more explanation of a modelling  
22 done by Knight Piésold at the bottom of that page, the  
23 top of the next page.

24 Then there's a graph at the bottom of page 3 of 4.  
25 And the graph compares results of those two models in

15:09

15:10

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 terms of mean annual flows, which for some reason is  
2 referred to as "MAD," M-A-D.

3 And then the explanation goes on to say that they  
4 worked together to create a combined result, which had  
5 70 percent SNC and 30 percent Knight Piésold, and that  
6 was the result that was given to YEC as the estimates  
7 that are in Table A1 of our submission in Appendix A.

8 So that's the long version. The short version is  
9 they did two separate models, and they combined them.

10 Q. Excellent. Thank you. That made perfect sense. Thank  
11 you for that reference to the table.

15:11

12 While we're in that IR -- well, yeah, while we're  
13 in that IR, on page 2 of 4 of the hard copy, it states  
14 at line 10: (as read)

15 "In order to calibrate the model, an  
16 inflow series into Surprise Lake was  
17 reconstituted based on the available  
18 lake level data from 2015 to 2018 and  
19 the hydraulic properties of the outflow  
20 structures. The reconstituted inflow  
21 series was verified based on the lake  
22 level data and the intermittent  
23 downstream flow data. The model is  
24 calibrated on the reconstituted inflow  
25 series at the lake. Since the flow of

15:12

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 data is available only for a four-year  
2 period, the model is simulated for this  
3 period wherein overlapping climate data  
4 is also available."

5 So -- and then that paragraph goes on.

6 We interpreted that quotation to mean that 51 of  
7 the modelled years are based on four years of actual  
8 flow data. Is that correct or incorrect?

9 A. MR. OSLER: At the level of my understanding  
10 of what is really a technical document that I had  
11 nothing to do with, and Yukon Energy's people that deal  
12 with hydrology did interact a bit with SNC-Lavalin in  
13 the home stretch on this material, yes, I think it  
14 tells you that they took a bunch of material and put it  
15 into a model that allowed them to then take other  
16 information that was available to that model in order  
17 to extend the four years over the full 51.

15:12

18 Q. Mr. Osler, can you just undertake for me to confirm  
19 that your response here is correct with referring  
20 back --

15:13

21 A. MR. OSLER: Yeah.

22 Q. -- to the -- to your sources?

23 A. MR. OSLER: We'll take that answer back to the  
24 sources and see if they have any concern with it.

25 Q. Okay. And so the undertaking would be for you to

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 confirm that the model -- 51 modelled years are based  
2 on four years of actual flow data. And, you know,  
3 certainly include any explanation or assumptions or any  
4 support in confirming that response or, if it's not  
5 correct, what is correct. Thank you.

6 **UNDERTAKING - TO CONFIRM THAT THE 51**  
7 **MODELLED YEARS ARE BASED ON FOUR YEARS**  
8 **OF ACTUAL FLOW DATA, INCLUDING ANY**  
9 **EXPLANATION, ASSUMPTIONS OR SUPPORT,**  
10 **OR, IF THE ABOVE IS NOT CORRECT, TO**  
11 **ADVISE WHAT IS CORRECT**

15:14

12 **A. MR. OSLER:** I would point out that the  
13 **Knight Piésold version is based on a different bundle**  
14 **of information. So, you know, and the end result of --**  
15 **as used by THELP is a combination of the two, just for**  
16 **the record.**

17 **Q.** Thank you, sir. That's helpful.

18 Moving back to Exhibit 6, which is the amended  
19 application blackline version, I'm looking at  
20 Appendix A, Table A1. And, Mr. Osler, that's at hard  
21 copy A3. The pdf of Exhibit B-6 is page 49. Hard copy  
22 A3.

15:14

23 **A. MR. OSLER:** You're looking at Table A3?

24 **Q.** That's correct. And it's entitled "Forecast Atlin, BC,  
25 Hydro Load 2032."

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. OSLER: Just a moment.

2 A. MR. MOLLARD: A3?

3 Q. Yes. Hard copy --

4 A. MR. MOLLARD: (Indiscernible) A3.

5 A. MR. OSLER: Yeah.

6 Q. Yeah.

7 A. MR. OSLER: Where do you see the heading.

8 A. MR. HALL: You mentioned BC Hydro. We don't  
9 see any reference to BC --

10 A. MR. MOLLARD: Top line: "Forecast Atlin, BC,  
11 Hydro Load..." Not BC Hydro. It says "Atlin, BC,  
12 Hydro Load."

13 Q. Yeah.

14 A. MR. HALL: Okay. BC Hydro. We've got it,  
15 but, yeah.

16 Q. That's good. Usually it's me who has too many words  
17 and (cross-talk occurs) so thank you for that.

18 So the table, just to make sure we're all in the  
19 same place, the far column is "Water Year," and it's  
20 got from 1963 to 1993.

21 A. MR. OSLER: No. We've got a problem.

22 Q. Okay.

23 A. MR. MOLLARD: On B6? This is Amended EPA  
24 blackline.

25 Q. Yes, the blackline version, B6 --

15:15

15:16

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. MOLLARD: That's at (indiscernible).

2 THE COURT REPORTER: Sorry, I just need people to speak  
3 one at a time, if possible, please.

4 A. MR. OSLER: So I'm looking at the blackline  
5 version now, and you were on page A3 or what?

6 Q. MS. SABO: Hard copy A3, and there's a  
7 table --

8 A. MR. OSLER: Yeah.

9 Q. -- "Forecast Atlin, BC, Hydro"?

10 A. MR. OSLER: Okay. Yeah.

15:16

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

12 A. MR. OSLER: No, this -- this -- this page,  
13 it's got it's own struck through it, so that tells me  
14 this page is supposed to be deleted.

15 Q. Okay. That's -- that's fine. I think in our version  
16 it's got a red line between 1978 and 1979.

17 A. MR. OSLER: Yeah, yeah.

18 Q. Okay.

19 A. MR. OSLER: So that's telling us that that  
20 table is gone by putting the red line on the table.

15:17

21 Q. Okay.

22 A. MR. OSLER: The table that's -- the table  
23 that's retained is on page A2, the page before. So  
24 that's one of my problems with blackline versions,  
25 if -- when they're in black, I can't necessarily tell.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. Yeah, it doesn't necessarily strike out the table, so  
2 if we could go --

3 A. MR. OSLER: Yeah.

4 Q. -- to pdf page 48 for the Board's...

5 A. MR. MOLLARD: That's the one, the replacement --

6 Q. Yeah. Okay --

7 A. MR. OSLER: Yeah.

8 Q. Perfect. So, I guess, can you explain for me, this  
9 table includes -- it starts with 1970, so maybe let's  
10 start out with what years were used in this table and  
11 why this was updated from the table that was deleted.

12 A. MR. OSLER: Okay. So this is a table provided  
13 by THELP based on the work that we just discussed a few  
14 minutes ago by SNC-Lavalin and Knight Piésold. As the  
15 footnote to the table, which is a bit clearer in the  
16 clean version, says: (as read)

17 "THELP is provided by SNC-Lavalin on  
18 April 11th..."

19 And it makes the point that it's a combination of  
20 information sources.

21 So they used the information base that we discussed  
22 a few minutes ago to come up with a forecast now for the  
23 years 1970 through 2020 on a calendar-year-basis month  
24 by month of delivered energy to Jakes Corner. So that's  
25 what those numbers are showing you.

15:18

15:18

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           At the bottom of the table, it shows you a summary  
2 of the minimum number, the average number, and the  
3 maximum number for each month throughout the year.

4           The column called "Mean Annual" is doing exactly  
5 what it says. It's giving you an annual mean number,  
6 average number, and the bottom of the page shows you the  
7 average number for the minimum and the average and the  
8 maximum. But that's all 12 months. That includes  
9 summer.

10 Q. Okay.

15:19

11 A. MR. OSLER:           Okay? So then we go to the  
12 next -- second-last column in the table, and it says  
13 "Winter: September to Mid-May." So you'll see in the  
14 table that the month of May is broken into two columns.

15 Q. Yes.

16 A. MR. OSLER:           May 1st to 15th and May 16th to  
17 31. And so the winter numbers that are being shown in  
18 the second last column are only taking into account the  
19 first part of May, not the rest of May, and they  
20 exclude all of the summer months. Okay?

15:20

21           And then they show you the mean number.

22           And the bottom of the page under the line  
23 "Average," you'll see 34.0 in that column which is the  
24 34 million kilowatt hours that we have used for the  
25 long-term average for the winter period. That's where

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           it came from.

2           Q.    Okay.

3           A.    MR. OSLER:                   And I'll stop -- I'll stop there  
4           in terms of -- I won't touch the last column unless you  
5           really have interest in it, but why did we take only  
6           the first part of May -- I assume I should answer, and  
7           the reason -- when YEC's team looked at this, they  
8           wanted to have a long-term average that was relevant to  
9           their planning for the use of the energy on the  
10          Yukon Energy system.

15:21

11                   And the freshet, the spring time period when you  
12           start to get new water coming back into the system and  
13           you stop relying on the reservoir to keep you going,  
14           that's roughly the middle of May. And from a planning  
15           point of view, the team of people who do that in  
16           Yukon Energy did not see value to being required to  
17           purchase the extra water-based energy coming in with  
18           the freshet in the spring. They retained the right to  
19           get it in the EPA, but they did not want to be required  
20           to get it. So they asked that SNC-Lavalin reconstitute  
21           their numbers to break May in half, and that the number  
22           that would be used for the long-term average for the  
23           winter period would be based on the period -- for the  
24           winter period excluding the last half of May. And that  
25           was a conscious request for a revision from Yukon

15:21

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Energy's technical team that the other side agreed to  
2 do because they understood what we were doing.

3 The actual numbers might come out to be a bit  
4 higher if you took in the last part of May, but that  
5 would be water -- that would be energy that wouldn't  
6 necessarily be useful to Yukon Energy. So they  
7 preferred to have it done this way, but they have the  
8 right to call on that period right to the end of May.  
9 The winter period is still defined to the end of May.

10 If you go to the operating rules, you would see  
11 what I'm talking about, which is a schedule to the EPA.  
12 I'll stop there.

15:22

13 Q. Thank you, Mr. Osler. That was very helpful. I'm not  
14 sure I appreciated the distinction within the  
15 inter-month May period, so thank you for that.

16 I guess for more of an administrative question, I  
17 want to make sure that I understand what's on the  
18 record and what isn't. So thank you for referring to  
19 the updated table.

20 I noted in the table on page A3 that the source  
21 was struck out and there was new source information,  
22 two paragraphs on page A3 added. So I guess it begs  
23 the question to me now, is that source information  
24 referring to the new updated table on page A3 or is  
25 that something that should also be struck out on

15:23

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 page A3?

2 A. MR. OSLER: If you look -- that information in  
3 the new text that's at the bottom of what you're  
4 calling page A3 --

5 Q. Right.

6 A. MR. OSLER: -- is the relevant information for  
7 the table that was adopted in the amended submission.  
8 So that tells you what --

9 Q. You said it was relevant or irrelevant? I'm sorry, I  
10 just --

15:23

11 A. MR. OSLER: No, relevant.

12 Q. Okay.

13 A. MR. OSLER: In other words, it's the updated  
14 source information for the amended submission.

15 Q. Okay.

16 A. MR. OSLER: Because in the original  
17 submission, there was nothing to do with Mr. -- with  
18 PSO. The number of years that were looked at were  
19 quite different, et cetera, and the database was quite  
20 different. So that's why it was changed by them.

15:24

21 Q. Fair enough.

22 A. MR. OSLER: Okay.

23 Q. Yeah, fair enough, Mr. Osler. I guess I also had a  
24 question about the second paragraph of that added  
25 source that starts: (as read)

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 "Assumes 9.3 megawatt hours at turbo  
2 (phonetic) and 9.2 megawatt hours after  
3 losses at the Atlin plant.  
4 Approximately 8.7 megawatts delivered at  
5 Jakes Corner at full capacity."

6 And then the paragraph goes on from there to talk about  
7 the 70/30 split. Do you see that?

8 A. MR. OSLER: Yes.

9 Q. Okay. So can you explain how the daily generation  
10 estimate proportions of 70 percent flow from  
11 SNC-modelled series and the 30 percent flow from the  
12 Knight Piésold-modelled series were determined?

15:25

13 A. MR. OSLER: Beyond referring you to the IR  
14 response that I gave you earlier, I cannot give you  
15 more information on that. I think it was 2-26 was the  
16 final one I gave you, is the best explanation that's  
17 available on the record for how they put together the  
18 two things, and that's the explanation they gave YEC.

19 Q. Okay. And I think that was 2-29 that you referred me  
20 to?

15:25

21 A. MR. OSLER: Sorry, I accept that, yes.

22 Q. Thank you, sir. I guess what we were trying to get at,  
23 and if you can't answer it, maybe you could take it  
24 back to SNC and Knight Piésold, but we were wondering  
25 why the 70/30 split was optional -- was optimal for the

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 modelling?

2 A. MR. OSLER: The explanation that they  
3 provided --

4 Q. In 2-29?

5 A. MR. OSLER: -- 2-29, they noted at the bottom  
6 of page 3 following over that --

7 Q. I'm there, sir.

8 A. MR. OSLER: (as read)

9 "Since the observed flow along the  
10 Pine Creek and winter flow at some of  
11 the creeks were found to be close to the  
12 results from the SNC model, a higher  
13 proportion of the flow has been  
14 attributed to the results from an SNC  
15 model. The adopted series for energy  
16 generation -- generated with a 70/30  
17 ratio was 70 percent flow being taken  
18 from SNC and 30 percent from KP series."

15:26

19 That's about as good an explanation as they offered as  
20 to why they thought that ratio was appropriate. And I  
21 don't -- we don't really have the ability to get into it  
22 in more detail. We weren't party to the process; we  
23 were just given the results.

15:27

24 Q. Okay. Thank you, sir.

25 A. MR. OSLER: At a very high level, the answer

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 to the very first question you've asked, there have  
2 been different numbers that YEC has seen over the  
3 course of these discussions. And at a very high level,  
4 some of the Morrison Hershfield numbers tended to be on  
5 the high side as reflected on the ten-year renewable  
6 plan -- renewable electricity plan.

7 The SNC-Lavalin numbers we got in -- for the  
8 original EPA seemed to reduce the Morrison Hershfield  
9 numbers for whatever sets of reasons. And then between  
10 SNC and Knight Piésold, there seemed to be some  
11 consensus that perhaps they were being a bit too  
12 conservative and the numbers should go up.

13 It also was affected by the Penn stock in the last  
14 version, which makes the operation a bit more  
15 efficient, so -- and I can't tell you the extent to  
16 which the water data versus the Penn stock contribute  
17 to the final result, but I'm summarizing a bunch of  
18 other IRs in that response if that's helpful.

19 Q. Thank you for that context, Mr. Osler.

20 I'd like to return to the blackline IRs Round 1,  
21 and that's Exhibit B-10 to YUB-YEC-1-14(a). And,  
22 again, it's B-10 and the response to Part A at pdf  
23 page 88. And I'll see if I can get you a hard copy  
24 page number here, too, Mr. Osler. Hard copy page 1 of  
25 2 of IR 1-14(a). Yes?

15:28

15:28

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1       **A. MR. OSLER:**                   **Yes, we have it.**

2       **Q.** Starting at line 27 is: (as read)

3               "Figure 2.4 assumes LTA Atlin deliveries  
4               throughout the model range of YIS water  
5               years. No model development has been  
6               feasible to date to assess potential  
7               correlation of a YIS lower water  
8               sequence with low water conditions at  
9               Atlin and, therefore, no probability  
10              assessment of that possible correlation  
11              can be provided at this time."

15:30

12             Does YEC see that statement results in a potential risk  
13             for the Minister to consider in evaluating the benefits,  
14             costs, risks, and customer impacts as they've specified  
15             in the terms of reference?

16       **A. MR. OSLER:**                   **At a high level, there is some**  
17               **risk involved because you don't have the ability to**  
18               **have correlated the water on the Atlin system in a**  
19               **model with the Yukon Energy YIS data. And there is an**  
20               **answer to a question from Mr. Maissan where there's a**  
21               **graphic, I think it's JM 5 -- 1.5 amended where there's**  
22               **an example of the degree to which at least the**  
23               **Whitehorse station generation has varied over a period**  
24               **of time compared to the Atlin generation that would be**  
25               **delivered varied over a period of time.**

15:30

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           And you can see some places where there's  
2 similarities and there's some places where there's  
3 differences. So it's not one on one, but there's some  
4 degree of overlap.

5           Okay. The extent to which that is material,  
6 something that we have asked ourselves, and the answer  
7 to date has been we don't think so, but we can't give  
8 you a modelled result that backs up what I just said.  
9 Okay?

10           But if you're looking at the overall risk in terms  
11 of financial risk, et cetera, in the EPA submission,  
12 the prices that were proposed to be paying to THELP for  
13 energy are affected by the modelling of how much  
14 thermal is displaced, true. But they're also affected  
15 by the assumptions of price for fuel and the  
16 assumptions of load on the system.

17 Q. Right.

18 A. MR. OSLER:           And when I look at that total  
19 picture, there is no question that it's very  
20 conservative because the current price for fossil fuel  
21 is higher than we assumed, and the prospects for  
22 industrial load on the system are there; we just are  
23 saying they're not certain yet, and we've got,  
24 therefore, very severe conservative assumption of no  
25 industrial load on the system starting in 2035.

15:31

15:32

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           So to the extent -- it would have to have a very  
2           significant factor relating to this so-called  
3           correlation of two things to even come close to  
4           offsetting what I've just described.

5           So, overall, YEC has not been concerned about this  
6           particular detail. It's one of many things you can't  
7           solve, but it hasn't given us any nightless sleeps as  
8           to, you know, is there a risk here that we should be  
9           worried about.

10          Q.    Right, because YEC works off of its long-term average  
11                for the --

15:33

12          A.    MR. OSLER:                Yeah.

13          Q.    -- planning?

14          A.    MR. OSLER:                And I know the fact that it's --  
15                there's some low waters at Atlin at the same time  
16                there's some low waters in the YIS will have one effect  
17                and then there's a bunch of other years where Atlin  
18                gives us more water than -- so you have to run a model.

19                But our experience with the model running when you  
20                get to 38 years of the Yukon Integrated System, the  
21                YIS, is that there's probably going to be small changes  
22                but not really big material changes, like the type of  
23                thing we're talking about right now, but I can't prove  
24                that statement.

15:33

25          Q.    Thank you, sir.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           Mr. Hall, do you have anything to add to that  
2           response before I move to my next area?

3       **A. MR. HALL:**                   **No, nothing to add.**

4       **Q.** Thank you, sir.

5           I'd like to talk a little bit about spilling  
6           water, energy price, and water storage savings.

7           If you could turn up Exhibit 10, the blackline  
8           version of Round 1 IRs again to amended YUB-YEC-1-12,  
9           and I've got a pdf page of 81. And it's the first  
10          page of the IR, 1 of 1, that I'm looking at.

15:34

11          In line 17 YEC states in response to the IR:  
12          (as read)

13                 "Yes, YEC will take deliveries under the  
14                 EPA as well as under other IPP  
15                 agreements where there are no LTA  
16                 benefits."

17          Do you see that, Mr. Osler?

18       **A. MR. OSLER:**                   **Sorry, which -- which line were**  
19       **you on again?**

20       **Q.** Line 17 and 18 is where I just quoted from, sir.

15:35

21       **A. MR. OSLER:**                   **Yes, okay. I've got it. Yeah.**

22       **Q.** Okay. If YEC takes deliveries under the EPA when there  
23       are no LTA benefits, does that mean YEC is spilling  
24       water at its own hydro facilities? Like --

25       **A. MR. OSLER:**                   **Yes.**

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. -- will it have to ramp down? Yes. Okay.

2 A. MR. OSLER: Yes. And that's what -- if  
3 there's no benefit at all, it means that it's spilling  
4 water. If it's -- if it's being used to displace  
5 diesel or LNG directly, then it's a direct  
6 displacement. And the third way it can have an effect  
7 is it facilitates more storage of water on the YIS  
8 system that can then use -- be used at another time  
9 period to displace thermal, and that we call a "storage  
10 benefit."

15:36

11 Q. Okay. The response in that IR references the previous  
12 IR, YUB-YEC-1-11. And if you can go back one page from  
13 where we were, I'm looking at pdf page 80. In  
14 YUB-YEC-1-11 Amended on that page in the last bullet  
15 on line 12 -- and you might see it -- there, sir.  
16 Line 12 it says: (as read)

17 "Using the 19 cents per kilowatt hour in  
18 2024 dollars as the expected cost  
19 savings for displaced thermal, the  
20 24.2 gigawatt hours per year of expected  
21 thermal displacement benefit from the  
22 YPA winter deliveries were therefore  
23 estimated to provide YEC cost savings of  
24 approximately 4.59 million per year in  
25 2024 dollars."

15:36

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Do you see that?

2 A. MR. OSLER: Yes.

3 Q. Okay. If the incremental cost of thermal generation is  
4 19 cents per kilowatt hour and the cost of thermally  
5 displaced energy is 19 cents per kilowatt hour, can you  
6 explain what the cost savings are?

7 A. MR. OSLER: The explanation in terms of a  
8 table is in the submission Table A3.

9 Q. Okay.

10 A. MR. OSLER: So if you want the most exhaustive  
11 calculation of it, that's where you find it.

15:37

12 Q. Okay.

13 A. MR. OSLER: Okay? And it compares the  
14 original EPA with the amended EPA for 2024 and 2035.

15 Essentially, it involves an estimate of how much  
16 thermal displacement occurs in 2024 versus 2035. So in  
17 the Table A3, at line 5, which is -- they're numbered  
18 in the middle of the page, it says, under the amended  
19 EPA for 2024, the second column: (as read)

20 "24.181 gigawatt hours, million kilowatt  
21 hours, is estimated to be displaced by  
22 the delivery long-term average of  
23 34 million kilowatt hours..."

15:38

24 Line 1.

25 Q. Correct.

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 A. MR. OSLER: Okay? And then you go over to  
2 2035, last column, and you see in the same two rows the  
3 displacement of 17.289 thermal on line 5 for the same  
4 34 gigawatt hours of delivered energy at Jakes Corner.  
5 Okay?

6 Q. I see that, sir.

7 A. MR. OSLER: And then you go to the bottom of  
8 that same table, and it says, okay, if that's what  
9 you're going to displace and if the price of 2024  
10 dollars is 19 cents in line 8, multiply 19 cents times  
11 that displaced volume, and you'll get \$4,000,594 in  
12 2024 dollars, line 9, of displaced thermal costs, fuel.  
13 And you'll get another number of 3,000,285 for 2035 for  
14 the cost of displaced fuel for thermal generation.

15 If you divide those numbers, each of them by  
16 34 million kilowatt hours, your delivered energy at  
17 Jakes Corner, you'll end up with a price of 13.5 cents  
18 in 2024 and 9.7 cents in 2035.

19 The IR you were quoting from, Number 11,  
20 YUB-1-11 Amended, was relying on that table for the  
21 numbers it was using.

22 Q. Oh, great. Thank you for that linkage, sir. And I'm  
23 going to stay with that same IR response, and I'm going  
24 to go to the next bullet --

25 A. MR. OSLER: Okay.

15:39

15:40

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Q. -- after "The using..." the next bullet is: (as read)  
2 "The resulting EPA energy price payable  
3 for these winter deliveries was set to  
4 equal the expected thermal displacement  
5 cost savings for YEC."

6 And then it goes on from there.

7 Did the setting of an EPA price drive the numbers  
8 expected for thermal displacement cost savings, or was  
9 it the other way around? Vice versa?

10 A. MR. OSLER: The price is a result of an  
11 estimate of thermal displaced generation multiplied by  
12 19 cents. So the price comes out of that calculation.  
13 It wasn't assumed before we could do the calculation,  
14 and it changed between the original EPA and the amended  
15 EPA only because we changed some of the assumptions.  
16 We didn't change the 19 cents, but we -- and we didn't  
17 change the load assumptions on the YIS. All that we  
18 changed was the fact that we now are getting  
19 34 million kilowatt hours of delivered energy rather  
20 than 30.8.

21 And through a lot of work by YEC and everybody  
22 else, they came up with a better displacement  
23 capability than we had assumed in the original EPA,  
24 because we had the penstock and because, in Table A2 of  
25 the submission, YEC 's team took the numbers of

15:40

15:41

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 SNC-Lavalin and did a dispatchable option that they  
2 controlled to allocate it between the months. And  
3 based on that, they were confident of this type of  
4 displacement of thermal for the 34 gigawatt hours for  
5 the two different time periods.

6 But, essentially, the approach taken did not  
7 change as we went from the original EPA to the final,  
8 just some information changed.

9 Q. Thank you. If I can now take you to amended  
10 YUB-YEC-1-48 at pdf page 116. And that's in the same  
11 exhibit there, sir. Hard copy is page 1 of 1 of that  
12 response.

15:42

13 A. MR. OSLER: Yes.

14 Q. Okay. Line 16 YEC states: (as read)

15 "Water storage savings represent the  
16 value of thermal displacement avoided  
17 due to EPA deliveries enabling added  
18 hydro storage on the Yukon Integrated  
19 System. This distinguished from thermal  
20 displacement that occurs directly due to  
21 EPA deliveries."

15:43

22 Are energy purchases from Atlin that are used as water  
23 storage treated as thermal displacement or future  
24 thermal displacement for accounting purposes?

25 A. MR. OSLER: Well, they're -- the model that

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 Yukon Energy uses takes into account the extent to  
2 which the purchases from Atlin allow enhanced water  
3 storage on the YIS. Obviously the enhanced water  
4 storage occurs following the delivery of certain  
5 amounts of energy. Look, model takes into account  
6 which -- you know, how that -- how that storage is used  
7 in each year of the simulation, the 38 years, and then  
8 the average for each month, et cetera takes into  
9 account the simulation's assessment over all the  
10 38 water years and all the different runs of the  
11 simulation.

15:44

12 So it's attempting to take into account when that  
13 storage would tend to be used on a long-term average  
14 basis in terms of month by month or week by week.

15 Q. Thank you. Just one moment, Mr. Osler. I'm going to  
16 digest some of that this evening, Mr. Osler. I might  
17 have some more questions on modelling tomorrow.

18 But I do want to move to hydrogeneration and  
19 thermal alternatives, given the time we've got till  
20 4:00 here.

15:45

21 YEC panel, I'm going to put some statements  
22 forward to you and then ask some open-ended questions.

23 In rates, when there are similar capacities and  
24 energy outputs for generation, the initial capital  
25 costs for thermal over hydrogeneration are lower but

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 the operating costs are higher. Would you generally  
2 agree with that statement?

3 A. MR. OSLER: It's late in the day, so could you  
4 repeat it again?

5 Q. Certainly. In rates, when there are similar capacities  
6 and energy outputs for generation, the initial capital  
7 cost for thermal over hydrogeneration are lower but the  
8 operating costs are generally higher. Yes?

9 A. MR. OSLER: Thank you very much. When you go  
10 slowly, I've got it. Yes.

15:46

11 A. MR. HALL: That's true.

12 Q. Perfect. And for a thermal plant, it comparatively has  
13 a shorter asset life than a hydrogeneration facility.  
14 We talked about that earlier today. Generally.

15 A. MR. OSLER: Yeah, generally, yes, subject to  
16 the things we talked about earlier, but yes. Even --  
17 hydro plants are typically talked about as having a  
18 longer life than thermal plants.

19 Q. Thank you. And, similarly, for a hydrogeneration  
20 plant, it has higher initial capital costs  
21 comparatively, a longer asset life, and lower operating  
22 costs. Right?

15:46

23 A. MR. OSLER: A hydro facility is a  
24 capital-intensive resource option that has higher  
25 capital costs and lower operating costs for each unit

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 of generation that it provides.

2 Q. Right.

3 A. MR. OSLER: It may have some pretty fixed  
4 costs that have got to be paid even if it's not doing  
5 much generation each year operating -- you know, fixed  
6 operating costs. But once you start generating it, it  
7 doesn't really incur much extra cost. For every -- for  
8 every kilowatt hour you generate from a thermal plant,  
9 you've got to use some LNG or you've got to use some  
10 diesel, in the case of Yukon, so it costs you a fair  
11 amount of money.

15:47

12 Q. Right. Thank you. So given that groundwork we just  
13 went through, Mr. Osler, will there be a crossover  
14 point whereby the hydrogeneration costs for the Atlin  
15 expansion project will be less than what would be  
16 expected for a thermal generation plant?

17 A. MR. OSLER: There are scenarios where the  
18 Atlin project would be providing costs at considerably  
19 less than if you would have to develop your own thermal  
20 plant, and there are other scenarios where it could be  
21 the reverse depending on how all of the assumptions  
22 work over 40 years. So we could start from there, if  
23 you'd like.

15:48

24 Q. Yeah. That's fine, sir. I guess, you know, my lawyer  
25 brain wants to know what all those scenarios are, but I

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 will --

2 A. MR. OSLER: Now --

3 Q. Go ahead.

4 A. MR. OSLER: Essentially, one of the things you  
5 can figure out right away is if the cost of fuel  
6 differs a great deal from the 19 cents that we assumed,  
7 we have the price locked in for the EPA, but if you  
8 were running your own thermal plant, you would pay  
9 whatever cost. So if -- that's one example.

10 The other example that's very typical in Yukon --  
11 in my lifetime, I've seen a fair number of times -- is  
12 coming and going of industrial customers. So if  
13 there's a lot of industrial customer load that  
14 continues after 2035, the Yukon ratepayers do very well  
15 under this deal. They don't have a big downside risk  
16 because we've assumed no industrial. If we had no  
17 industrial in 2028 or 2030, then there would be some  
18 risk for Yukoners because the load that we've assumed  
19 isn't there.

20 So those are probably the two biggest examples of  
21 what I was talking about. I also mentioned IPPs.  
22 We've assumed 48 million kilowatt hours of IPP energy  
23 by 2024. To the extent that doesn't occur, this  
24 project will generate better benefits than we're  
25 showing. To the extent somebody increases that amount,

15:49

15:49

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1           it could be argued -- I'm not sure I would agree with  
2           it -- that this project is showing less benefit. But,  
3           you know, if you're doing analysis of the type I'm  
4           talking about, you should keep in mind when a decision  
5           is made -- if this decision is made, then the next  
6           projects that get made later have to assess themselves  
7           against this decision being locked in.

8           Somebody expands the number of IPPs ten years from  
9           now, that's not -- doesn't challenge the integrity of  
10          this decision at all. It questions -- should be  
11          examined carefully at that time as to the benefits and  
12          costs of that decision ten years from now.

15:50

13        Q. Thank you. We can't know what we don't know,  
14        Mr. Osler.

15        A. **MR. OSLER:**                That's very important, yes.

16        Q. Thank you. I'd like you -- to move you to the Round 1  
17        IRs, the consolidated version. It's the lengthy  
18        document at Exhibit B-8. And I've got a pdf page to  
19        turn up here, which is 742. And the IR is YUB-YEC-1-36  
20        so you're looking for it in the hard copy. But it's  
21        about 200 pages from the end of that document,  
22        Mr. Osler. That's IR 36, and I want to look at Part C.

15:51

23        A. **MR. OSLER:**                Okay.

24        Q. Okay. In that Part C IR, the Board asked: (as read)  
25                "Disclose all documents in YEC's

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 control, both public and internal,  
2 relating to comparative benefits and  
3 disadvantages of thermal greenfield" --  
4 or, sorry, rather -- "thermal generation  
5 options, including rental diesel  
6 generators, some portable diesel  
7 generators, and constructing a large,  
8 i.e., 20-megawatt permanent diesel  
9 generator. Include all comparative  
10 financial benefits and disadvantages of  
11 each option."

15:52

12 And then I'm going to move you to Part D as well, where  
13 the question was posed: (as read)

14 "Referring to the final paragraph of  
15 4.2, how many stakeholders were opposed  
16 to the permanent generator option and  
17 what specific interests did these  
18 stakeholders represent?"

19 So our follow-up in the IR and to those questions were,  
20 were these stakeholders informed of other options such  
21 as continuing use of rental diesel generators?

15:53

22 **A. MR. MOLLARD:** Ms. Sabo, we're going to have to  
23 take an undertaking on that. We're at a bit of a loss  
24 to remember what exactly what said. We'll take that  
25 away and figure out what was -- what was said in that

A. HALL, E. MOLLARD, C. OSLER

Questioned by Ms. Sabo

1 context.

2 Q. Thank you, Mr. Mollard, for doing that.

3 UNDERTAKING - TO ADVISE WHAT DISCLOSURE  
4 WAS MADE TO STAKEHOLDERS OF AVAILABLE  
5 OPTIONS TO THE 20-MEGAWATT PLANT,  
6 INCLUDING WHETHER ONE OPTION WAS THE  
7 CONTINUING USE OF RENTAL DIESEL  
8 GENERATORS

9 MS. SABO: I think that's all I have for  
10 today. Gentlemen, I will probably have half an hour to  
11 an hour of questioning for you for tomorrow, but that's  
12 a good stopping point for where we're at today.

15:54

13 So, Mr. Chairman, I'm not sure if anybody else in  
14 the room has anything before we close today, if they  
15 want to raise that now or if we can end.

16 A. MR. MOLLARD: Ms. Sabo, if I could just clarify  
17 that undertaking, was you want to know what disclosure  
18 we made to stakeholders of available options to the  
19 20-megawatt plant; is that correct?

20 Q. Correct. Including whether one option was the  
21 continuing use of rental diesel generators.

15:54

22 A. MR. MOLLARD: Got it, thank you.

23 Q. Thank you, sir.

24 MS. SABO: I'm not sure if Mr. Landry has  
25 anything else before we close.

1 MR. LANDRY: Ms. Sabo, I think I just missed a  
2 comment you made. Do I understand that you'll have a  
3 half an hour to an hour further questioning?

4 MS. SABO: That's right. Tomorrow morning,  
5 sir, and then my questions will be complete.

6 MR. LANDRY: And then we'll go over to the  
7 Board, I assume, Mr. Chair, after that?

8 THE CHAIR: Yes.

9 MR. LANDRY: Okay. Thank you. That's all I  
10 have, sorry.

15:55

11 MS. SABO: Thank you for the clarification,  
12 Mr. Landry.

13 Mr. Buchan, I'm at your pleasure.

14 THE CHAIR: I think we can then release  
15 everyone to the remainder of their afternoon, and we'll  
16 reconvene tomorrow at 9:00.

17 (PROCEEDINGS ADJOURNED AT 3:55 P.M.)

18

19 PROCEEDINGS ADJOURNED TO 9:00 A.M., JULY 20, 2022

20

21

22

23

24

25

1     Certificate of Transcript

2

3     We, the undersigned, hereby certify that the foregoing  
4     pages 1 to 173 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 19, 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)

18

Official Court Reporter

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21

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24

25



1	UNDERTAKING - TO EXPLAIN THE SECONDARY SALES	28
2	FIGURE THAT IS LISTED AS NEGATIVE 0.46 GIGAWATT	
3	HOURS REFERENCED IN TABLE 1 TITLED "2017 TO 2021	
4	YEC ACTUAL GENERATION,"PAGE 5 OF 6	
5		
6	UNDERTAKING - TO PROVIDE THE CALCULATION OF THE	103
7	DEPENDABLE CAPACITY PRICE IN THE NEXT CELL	
8	WORKBOOK WITH ALL FORMULAS INTACT AND INCLUDING	
9	THE ASSUMPTIONS OF HOW THE \$200 PER KILOWATT HOUR	
10	PER YEAR WAS DETERMINED; I.E., TO CALCULATE HOW	
11	THE 2024 NUMBERS OF 193 AND 220.6 WERE CALCULATED	
12		
13	UNDERTAKING - TO CONFIRM THAT THE 51 MODELLED	145
14	YEARS ARE BASED ON FOUR YEARS OF ACTUAL FLOW DATA,	
15	INCLUDING ANY EXPLANATION, ASSUMPTIONS OR SUPPORT,	
16	OR, IF THE ABOVE IS NOT CORRECT, TO ADVISE WHAT IS	
17	CORRECT	
18		
19	UNDERTAKING - TO ADVISE WHAT DISCLOSURE WAS MADE	171
20	TO STAKEHOLDERS OF AVAILABLE OPTIONS TO THE	
21	20-MEGAWATT PLANT, INCLUDING WHETHER ONE OPTION	
22	WAS THE CONTINUING USE OF RENTAL DIESEL GENERATORS	
23		
24		
25		

## YEC-THELP EPA, Volume 1, July 19, 2022

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