YUKON UTILITIES BOARD REVIEW IN THE MATTER OF AN ELECTRICITY PURCHASE AGREEMENT BETWEEN YUKON ENERGY CORPORATION AND THE TLINGIT HOMELAND ENERGY LIMITED PARTNERSHIP

FINAL ARGUMENT

YUKON ENERGY CORPORATION

July 28, 2022

TABLE OF CONTENTS

YUKON UTILITIES BOARD REVIEW IN THE MATTER OF AN ELECTRICITY PURCHASE AGREEMENT BETWEEN YUKON ENERGY CORPORATION AND THE TLINGIT HOMELAND ENERGY LIMITED PARTNERSHIP

YUKON ENERGY CORPORATION FINAL ARGUMENT

OVERVIEW

On May 18, 2021, the Minister of Justice provided direction to the Yukon Utilities Board, pursuant to subsection 18(1) of the Public Utilities Act to carry out a public review of Yukon Energy Corporation's Electricity Purchase Agreement ("EPA") with Tlingit Homeland Energy Limited Partnership through its General Partner Tlingit Homeland Energy Limited ("THELP"), owned by the Taku River Tlingit First Nation. The EPA provides for the sale to YEC of energy and capacity from THELP's proposed Atlin Hydro Expansion Project. The Minister attached terms of reference for the Board to review the EPA and report back to the Minister within 180 days of the date upon which the EPA is finalized and provided to the Board.

An EPA was signed on January 14, 2022 and a Submission was provided to the Board on January 20, 2022. YEC notified the Board on April 8, 2022 that THELP's early contractor involvement process resulted in change to the Project design that required amendments to the original EPA. An amended and restated EPA was finalized and signed on April 12, 2022, and an amended Submission was filed with the Board on April 21, 2022. The amended EPA does not change the basic impacts on YEC and ratepayers beyond improving the expected ratepayer benefits.[1]

In summary, the Minister's Terms of Reference (section 3) require the Board to address the necessity for the EPA, its timing, and proposed terms and conditions, with particular regard to:

a. The public need for the Agreement under various reasonable electric load forecasts;

b. The effect of the proposed commitments on the rates of customers and the reliability of electricity service provided to customers;

c. The capability of existing and currently committed and expected generation and transmission facilities including thermal generation facilities to provide reliable electric power generation to meet the forecast load requirements in (a) and the effect of the Agreement on this capability;

d. The risks associated with the Agreement, including its potential impacts on YEC and rates for customers and on the reliability of electricity service provided to customers;

e. Evidence that all reasonable alternative options have been considered, and that proposed spending commitments have been selected on reasonable grounds; and

f. Whether it is prudent to enter into the Agreement as proposed at this time.

[1] Exhibit B-4, page 10. This exhibit summarizes changes in the Amended EPA.

Yukon Energy's Final Argument generally follows the structure of YEC's amended Submission. As in the amended Submission, Sections (a), (c) and (e) of the terms of reference are reviewed together under the heading of "public need for the EPA".

1.0 PUBLIC NEED FOR THE EPA

The following terms of reference are reviewed as part of the consideration of public need:

a. The public need for the Agreement under various reasonable electric load forecasts;

c. The capability of existing and currently committed and expected generation and transmission facilities including thermal generation facilities to provide reliable electric power generation to meet the forecast load requirements in (a) and the effect of the Agreement on this capability; and

e. Evidence that all reasonable alternative options have been considered, and that proposed spending commitments have been selected on reasonable grounds.

Public need under various load forecasts and Yukon Integrated System capabilities are addressed first below, followed by review of alternatives.

1.1 PUBLIC NEED FOR EPA - YIS CAPABILITIES AND EFFECTS OF EPA

The primary need for the Atlin EPA as demonstrated in Section 4.1 of the amended Submission is to help meet YEC's dependable capacity requirements on the Yukon Integrated System over the 40-year EPA term and to displace YIS requirements for thermal generation with a renewable energy source.[2]

The need to address the N-1 dependable capacity shortfall and thermal energy displacement was not challenged in IRs or at the oral hearing. In summary, the following key points are noted regarding the capacity gap and thermal energy displacement requirements and effects of the EPA:

1. YIS Capacity Gap & Thermal Energy Generation under reasonable load scenarios

Section 4.1 of the amended Submission and related IRs summarize the YIS capacity gap and thermal energy generation under reasonable load scenarios, highlighting the following:

a) Measurement of the YIS capacity gap is based on the N-1 reliability criteria; this approach was not challenged during the proceeding.

b) The 10-Year Renewable Electricity Plan shows a growing YIS non-industrial peak load between 2021 and 2030.[3] Thermal energy generation is also forecast to be required to

[2] Section 4.1 of the Submission provides a detailed description of the public need for the EPA under various reasonable electric load forecasts.

[3] Section 4.1 of the Submission notes the single contingency (N-1) dependable capacity criterion requires YEC to have enough dependable capacity to supply the forecast non-industrial peak winter demand under the largest single contingency, equivalent to approximately 37 MW of backup capacity.

meet current and growing firm generation requirements on the YIS at long-term average renewable supplies, and additional renewable generation is needed to meet the Renewable Portfolio Standard of 93% average articulated in Our Clean Energy Future which is expected to be passed into law under the Clean Energy Act.[4] YEC's 10-year Renewable Electricity Plan YIS load forecasts to 2041/42, and other possible forecasts over the EPA 40 year term, were reviewed along with recent load history in responses to JM-YEC-1-6 Revised Amended, JM-YEC-1-14, JM-YEC-1-10 Revised Amended, JM-YEC-1-16 Amended, JM-YEC-1-17, NY-YEC-1-3 and NY-YEC-1-4. These responses confirm that the YEC forecasts used for the EPA are conservative, particularly as regards assuming no industrial load after 2034 and non-industrial winter load growth at only 0.12%/year after 2035.

c) The current N-1 dependable capacity shortfall on the YIS -- absent rental diesel units -- is material with significant and growing requirements for additional diesel rental units over the period to 2035 resulting from peak load growth and the retirement of existing resources.

   i) More specifically, this capacity shortfall for 2021/22 was about 27 MW and without new resources after 2021/22 it is expected to grow to about 66 MW by winter 2030/31 (Submission, Table 4-1).
   ii) This would increase diesel rental requirements from 15 diesel rentals (excluding spares) in 2021/22 to 37 1.8 MW rental diesel units in 2030/31 (see Table 4-1 from the Submission).

d) Planned YIS dependable capacity from the BESS project, DSM and diesel replacements will provide about 26 MW of dependable capacity by winter 2023/24[5], reducing the N-1 dependable capacity shortfall for that winter to 13.9 MW (8 diesel units); by winter 2030/31, the capacity shortfall with these new resources (including ongoing DSM growth) is forecast at 41.5 MW (see Table 4.1 from the Submission).

2. EPA Contribution to Capacity Gap & Thermal Generation Displacement

Section 2.2 of the amended Submission summarizes the EPA capabilities to provide capacity and energy benefits to the YIS.[6]

- The Amended EPA is expected to reduce the dependable capacity shortfall by 8.75 MW, replacing the need for five rental diesel units over most years of the 40-year EPA term in years when Moon Lake Pumped Storage is not available.[7]

- Over its 40-year operating term, the Amended EPA is expected to displace between 24.2 GWh/year (up to the end of 2034) and 17.3 GWh/yr (after 2034) of LTA thermal energy

[4] Section of the Submission (Exhibit B-5, page 22).
[5] Submission Table 4.1, Exhibit B-15 (Opening Statement), page 1. This includes 2.2 MW of DSM in 2021/22.
[6] See also responses to JM-YEC-1-13, UCG-YEC-1-7, CW-YEC-1-1, CW-YEC-1-4 and NY-YEC-1-7 which provide further details on assumed capabilities and the effects of the EPA on YIS capabilities.
[7] See YUB-YEC-1-13(c) Amended and NY-YEC-1-2 Revised Amended (a few years show replacement of only four diesel rental units).

generation otherwise expected to be required on the YIS. Higher thermal displacement due to the EPA will occur after 2034 if there is any industrial load on the YIS.

The reduction in thermal generation requirements provided by the EPA addresses the public need to reduce YIS thermal generation in support of Yukon's climate change objectives in "Our Clean Future" and specifically the 93% Renewable Portfolio Standard in the anticipated Clean Energy Act.

1.2 CONSIDERATION OF ALTERNATIVE OPTIONS

Since 2016, YEC has pursued permanent solution options to address its N-1 dependable capacity shortfall, including pursuit of a 20 MW new diesel plant option, installation of the third LNG unit, the BESS project, dependable capacity DSM, and potential new dependable hydro capacity options.[8]

Inability to supply the non-industrial peak winter demand presents an acute risk to both human health and safety, and public and private infrastructure. Without a permanent solution, YEC will be forced to rely on rented diesel units, which can create risks as to continuing availability, acceptable performance and the ability to connect the growing number of rental units.[9] As noted by the Board in its BESS Report it was "…persuaded that only relying on rented diesel generators would be challenging and would not be a reliable way of closing the capacity shortfall gap".[10]

Yukon Energy is continuing to implement its 10 Year Renewable Electricity Plan – this includes implementation of diesel replacement options at existing diesel plants, renewable capacity alternatives including BESS, dependable capacity DSM, and dependable hydro capacity provided by the Atlin Hydro Expansion project and the Tutshi-Moon Lake Pumped Storage project.[11] The BESS, YEC's planned thermal replacement projects and DSM will together provide 26 MW of dependable capacity by winter 2023/24.

In summary, the amended Submission, IRs and oral testimony demonstrate:

- YEC's 10-Year Renewable Electricity Plan limits new thermal development to the replacement of existing thermal capacity that is retired, in order to pursue development of specified renewable generation options.

[8] Detailed planning assessments and engagement on the 20 MW new diesel plant site options identified stakeholder concerns – as a result of these assessments YEC's Board rejected further consideration of this alternative and directed that new permanent thermal options focus on diesel replacement at existing plants.

[9] Amended Submission, page 19.

[10] Amended Submission, section 4.1.1, page 19. YUB Report to the Yukon Minister of Justice - YEC Application for Energy Project Certificate and Energy Operation Certificate Regarding the Proposed Energy Battery Storage System (BESS) Project, June 30, 2021, page 11. A copy of this report is provided at YUB-YEC-1-32, Attachment 2.

[11] As referenced in YUB-YEC-1-36 in the current proceeding, see 2021 GRA CW-YEC-2-6(a) and (b). These investigations were detailed in the response, with reference to 2021 GRA CW-YEC-1-36(a) Attachment 1 copy of the YEC 10-Year Renewable Electricity Plan completed during 2020. Ms. Milojevic also reviewed the extensive work done by YEC to identify and cost options for the 2016 Resource Plan and the current 10-Year Renewable Electricity Plan, 2021 GRA Transcript pages 458-460.

- Rental diesels are not viewed as a reliable permanent way of reducing the N-1 dependable capacity shortfall, and are considered short-term solutions (i.e., year-by-year) while permanent new facilities or supplies are developed.
- The Amended EPA is the only near-term resource option, other than the BESS, to provide material added renewable dependable capacity benefits providing renewable capacity and energy at prices based on YEC expected costs for thermal generation options.[12]
- The Amended EPA also has a significantly shorter project development timeline when compared to other identified greenfield hydro options. Other projects are in pre-feasibility stages of development, require funding, and have longer development times. Further, uprating existing hydro units has not been deemed to be economical prior to 2030.[13]

YEC Ownership of Hydro Plant

In IRs and at the oral proceeding Yukon Energy was asked about the impact of the alternative of YEC owning the Atlin Expansion Project (or another hydro plant). Specifically, during cross-examination YEC was asked: "assuming that YEC could obtain the same government funding as THELP did… could YEC build and operate a hydro plant to provide the same capacity and energy deliverables as what's done with the Atlin project at a less price".[14] JM-YEC-1-7 Amended also addressed this matter.

In response – Yukon Energy clarified that there is no option for YEC to own the Atlin Expansion Project (or another new hydro plant), and as such it is a purely hypothetical question:[15]

> ……Just to follow up on that, because we're still struggling with this a bit, you have -- basically there could be two options for maintaining energy and maintaining capacity: One is to enter into the EPA, and the other is to own and operate a plant to provide energy and capacity. Are you with me?
>
> A. MR. OSLER: I'm with you in principle, but in practice, the point that YEC keeps trying to make is, in practice, we don't have the option to own the Atlin plant. [Transcript page 198, lines 1-10]

Mr Hall noted further:

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

[12] See amended Submission page 24-25, and response to YUB-YEC-1-7, YUB-YEC-1-57 Amended and YUB-YEC-1-36.
[13] See amended Submission, Section 4.1.2; YUB-YEC-1-57(a) Amended re:2016 Resource Plan options; JM-YEC-1-13(a) re: hydro uprates.
[14] Proceedings Transcript, Volume 1, page 121.
[15] Proceedings Transcript Volume 2, page 198-199.

> Q. Yeah.
>
> A. MR. HALL: So it's a hypothetical question, but that's all it is. There was no real option to pursue another hydro project. [Transcript page 198, lines 12-24]

The YEC panel also clarified the reasons why it would cost more if YEC rather than THELP undertook the Project:

> A. MR. OSLER: The short answer, referring to JM-1-7 Amended, is that if you assumed all the same costs were necessary if YEC built it compared to what Atlin would cost if THELP built it, which was the assumption for that answer, YEC's weighted average cost of capital is higher than THELP's in the assumptions that we have used. YEC weighted average cost of capital includes 60 percent debt and 40 percent equity.
>
> ….. We don't have exposure to what THELP's actual planning costs are and their own internal planning, but we have assumed in discussions for the sake of trying to understand things that they had 80 percent debt and 20 percent equity.
>
> And that debt is at the CIB interest rate they hope, which is much lower than the interest rate that YEC would have, and they've got a lot more of that low interest rate in their weighted average cost of capital than YEC has in its, so the result is capital costs more for YEC at the moment than it does for that First Nation at the moment. [Transcript page 279, lines 3-23]

In summary, YEC ownership of the Project is not an option, and there are fundamental differences that would impact project costs between YEC ownership of the Project and an EPA:

- The capital structure and grant funding employed by THELP provides a key advantage which benefits the Project; and
- YEC ownership would entail a large initial capital cost which would be depreciated across the 40-year life of the asset, rather than be paid for over the life of the asset at rates that increase with CPI[16], and YEC would bear all cost escalation risks related to the Project.

2.0 EPA EFFECT ON CONSUMER RATES AND RELIABILITY OF SERVICE

Part 3(b) of the terms of reference require the Board to review and report on "the effect of the proposed commitments on the rates of customers and the reliability of electricity service provided to customers". Section 4.2 of the amended Submission reviews these two separate EPA effects on customers. Each is addressed separately below.

[16] Mr. Osler, Proceedings Transcript, Volume 1, Page 108, line 10 to page 109, line 5.

2.1 EPA PRICING AND EFFECT ON CUSTOMER RATES

In summary, the Submission, IR responses and testimony at the hearing demonstrate that the EPA pricing is designed to mirror or improve upon the forecast cost impacts for the lowest cost alternative for both dependable capacity and delivered energy i.e. a permanent thermal generation plant.[17]

The only additional utility assets being developed by YEC/AEY under the Amended EPA are YIS system upgrades that are to be fully funded by THELP at no cost risk to the utilities and therefore with no impact on customer rates. The only significant unfunded YEC costs related to the EPA are YEC costs for EPA preparation and negotiation and YEC costs for the YUB regulatory review.

EPA pricing and costs and related effects on customer rates are reviewed separately below for Dependable Capacity Payments, Delivered Energy, Other YEC Costs, and Capital Lease.

Dependable Capacity Payment ("DCP")

The DCP included in the EPA is required as an integral and material part of the revenue relied upon by THELP to make this a financeable project. And without the dependable capacity element the Project would not be of interest to YEC.[18]

The Dependable Capacity Payment is required to ensure delivery of dependable capacity under the EPA. The EPA energy price alone does not recognize the implied benefit for capacity cost savings.[19] The dependable capacity committed during each Peak Winter Period (PWP)[20] of the EPA term enables Yukon Energy to displace fixed cost requirements for equivalent new thermal generation capacity that would otherwise be required (a new 8.75 MW permanent diesel generation facility).[21]

The basis for the $200/kW price for the DCP with CPI escalation, why and how it is calculated, and how excess payments are recovered were reviewed in detail in the amended Submission, IR responses and at the oral hearing[22] – and the evidence provided confirms that the payments are reasonable and that ratepayers will benefit.

[17] See Submission, Section 4.2

[18] See YUB-YEC-2-9(e, g and h).

[19] See YUB-YEC-2-9. Capacity cost savings reference savings in thermal capital costs and fixed annual O&M costs.

[20] PWP is period each winter between December 16 and the end of the subsequent February.

[21] EPA provides dependable capacity that displaces need for rented or permanent diesels. See Submission, section 4.1.1 - Figure 4-1, Table 4-1, pages 20-22; see also YUB-YEC-1-13(c) Amended.

[22] See Submission, page 14-15, footnote 16 and YUB-YEC-1-13(a) Amended which note the $200/kW quantum is at the lower end of YEC's levelized cost of capacity for a new diesel generation facility [$175/kW (2019$) or $193/kW (2024$) if located at Takhini without any property taxes and $199.8/kW (2019$) or $220.6/kW (2024$) if located in Whitehorse with related property tax costs (escalation since 2019 at 2%/yr, which is less than actual inflation now being incurred)]; YUB-YEC-1-27 and YUB-YEC-1-24(l to p) Amended provide details on escalation of the DCP by inflation over the life of the EPA to ensure that the present value 40-year cost of YEC owning the equivalent diesel generation asset or business capacity through the IPP remain equal. Exhibit B-16 provides excel spreadsheets for the reference Takhini and Whitehorse 12.5 MW diesel plant LCOC costs per kW (see also Mr. Osler, Proceedings Transcript, Volume 2 pages 182-184 for review of related assumptions). YUB-YEC-1-27 addresses why inflation is being applied.

Dependable Plant Capacity Committed (DPCC) is used to determine DCP amounts for each PWP over the 40 year EPA term. The quantum of the DPCC is confirmed through a capacity test that takes place each December.[23] As discussed in evidence, the use of committed capacity was required to enable all parties to proceed, i.e., THELP required a firm capacity revenue amount each year to assist in securing financing, and YEC needed validation that capacity commitments are achievable and incented under the EPA.[24]

As reviewed in IRs and at the oral hearing, this amount is subject to: (a) the December capacity test that is used to confirm the DPCC for each PWP; and (b) the Dependable Capacity Excess Payment mechanism that is used to address actual dependable capacity shortfalls from DPCC.[25]

It was confirmed in testimony that there was no option to negotiate a deal where YEC only paid for the actual capacity or generation delivered to YEC from the Project; such a structure is not reasonably financeable under normal credit conditions in Canada – however, the risk that there would be a failure to deliver the committed capacity during the PWP after each capacity test was low, particularly with the changes to the Project resulting in the replacement of the power canal with a penstock.[26]

Measures that address YEC risks that the DPCC will vary from what is actually provided during a PWP include:

- The dependable plant capacity test is undertaken annually prior to each PWP. This addresses basic risks related to Seller Plant conditions changing over time.

  DPCC for a PWP can be reduced below 8,500 kW, potentially to zero, as a result of this test. For example, Section 5.5(b) provides that, absent results to the contrary, the dependable plant capacity test each December is deemed to show zero DPCC.[27]

  At the oral hearing Mr. Hall noted:

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

[23] Details on this test reviewed by Mr. Osler, Proceedings Transcript Volumes 1 and 2, pages 73-75 and pages 234-236.
[24] See YUB-YEC-2-12(a), YUB-YEC-1-24(I to p) Amended; Mr Hall & Mr. Osler, Proceedings Transcript, Volume 1, pages 56-60.
[25] See YUB-YEC-2-12(a) and YUB-YEC-1-24 Amended.
[26] See discussion in Proceedings Transcript, Volume 1, pages 58-60.
[27] See JM-YEC-1-28(b) Amended.

> So, you know, I think our feeling is that, you know, the test is important; and once they establish that, yeah, there's 8.7 -- 8.75 megawatts available at Jakes Corner, that the probability of them then subsequently failing to deliver that through the peak winter period is low, and that's based on our experience running our own hydro units. [Transcript p. 57-58]

- Review of available water (see Submission, Table A1) and the amended EPA Operating Rules confirm expected ability under all likely water conditions to secure the Delivered Energy needed for DPCC as required during each PWP.

    - Assuming the same 14 GWh minimum Delivered Energy capability during each PWP, the 8.75 MW can be provided for over 85% of the PWP days.[28] This is well above the 27% of PWP days (20 days or less per winter) since 1991 that minus 30 degrees or lower average daily temperature was recorded in Whitehorse (approximately 8 MW of N-1 dependable capacity requirements occur when the Whitehorse temperature is below minus 30 degrees).[29]

    - The amended EPA also provides enhanced reliability to deliver dependable capacity during the PWP due to the penstock replacement of the power canal and the resulting removal of ice condition issues and risks affecting PWP generation plant operation.[30]

- Any disruptions affecting THELP's Plant after a December DPCC test are expected to be brief and are not expected to occur on a frequent basis, i.e., the risks of excess DCPs is minimized both in terms of frequency and magnitude.[31]

The amended EPA also includes the DCEP mechanism to recover excess DCPs due to shortfalls in actual dependable capacity delivered each PWP. Recovery of excess DCPs are contingent on THELP being eligible for additional payments in future years (reductions in future amounts that YEC would otherwise be required to pay to THELP over and above winter energy payments). Specific elements of the DCEP mechanism were reviewed in IRs and the hearing:

- DCEP determined for each PWP, resulting in adjustments to the DCEP Account balance.[32]

- YEC recoveries from the DCEP Account are to occur before any additional payments would be made to THELP for higher-than-forecast loads after 2034 (Additional Payments) or any carbon tax charges applicable to YEC (Carbon Charge Saving Payment); YEC recoveries also provided from up to 50% of Summer Delivered Energy Payment to

[28] See JM-YEC-2-1(a) and (c), and YUB-YEC-2-25(b).
[29] See amended Submission page B-3.
[30] See YUB-YEC-2-25(b).
[31] Proceedings Transcript, Volume 2, pages 237-240 - review of potential PWP capacity disruptions, adequacy of available water.
[32] DCEP mechanism in Section 8.3 of EPA. See Proceedings Transcript, Volume 2, pages 241-242 for review of annual determination; JM-YEC-1-28(a)Amended reviews that an annual capacity shortfall is subject to a cap at 50% of DPCC. Transcript pages 247-249 for how a positive balance could occur in the DCEP Account.

THELP. Especially with the penstock replacing the power canal, YEC does see a big risk of not being able to secure any DCEP shortfalls during the EPA term. [33]

Delivered Energy

As outlined in the amended Submission, IRs and oral testimony, the long term average EPA energy delivery impacts on Yukon customer rates are expected to be approximately the same, or lower, than would occur without the EPA (based on expected displacement of LTA thermal generation that would otherwise be required). The material on the record also demonstrates that the impact on customer rates will be materially lower than the option of equivalent SOP IPP renewable supplies.[34]

EPA Winter Energy Price

The EPA Winter Energy Price per kWh is fixed in 2024$ for 2024-2034, and then adjusted to a lower fixed price in 2024$ for 2035 and all subsequent years of the EPA term. This price is based on a conservative forecast of LTA thermal displacement fuel cost savings from EPA winter energy deliveries, assuming YEC thermal blend fuel cost of $0.19/kWh in 2024$.

The following is specifically noted regarding the overall determination of this EPA energy price:

- OIC 2021/16 mandates YEC's forecast fuel costs be based on LTA renewable generation when setting YEC rates.

- The Winter Energy Price is set at $0.135/kWh from 2024-2035 in (2024$) and increased annually at 50% of the inflation rate (CPI). It will be lowered to $0.097/kWh from 2035 onwards (in 2024$) and will continue to be escalated at 50% of CPI. This EPA energy price is lower than the equivalent price for renewable generation delivered to the YIS by SOP IPPs which is locked in at signing at 100% of the last Board approved blend fuel price (e.g., $0.1838/kWh as approved in YEC 2021 GRA) and then escalated at 50% of CPI; further, the EPA energy price only applies during the Winter Period (i.e., January-May, and September-December each year), while the SOP IPP energy price applies to all deliveries throughout all months of the year (including summer months when no LTA thermal displacement is expected to result).

- The Winter Energy Price is derived as a percentage of the forecast combined thermal fuel cost (per kWh) – see calculation provided in Table A3 of the amended Submission.

    - The forecasted fuel cost used for calculating the EPA Winter Energy Price as developed in late 2021 of $0.19/kWh in (2024$) is based on the expected YEC

[33] Proceedings Transcript, Volume 2, pages 242-246 - review of calculation of excess payment recovery mechanisms, and why ratepayer cost risks reasonable. YUB-YEC-2-12(b) notes the risk of YEC and ratepayers losing the time value of money to the extent that DCEP amounts occur.

[34] Amended Submission, Section 4.2 at page 27; UCG-YEC-1-10(a) Amended; Proceedings Transcript, Volume 1, pages 33-35.

thermal blend of fuel.[35] This is below the actual average YEC blend fuel cost in 2022 up until May 31 of $0.22/kWh.[36]

- LTA thermal displacement benefits from the EPA are based on the average of forecast thermal displacement under varying YIS water conditions over 38 water years, modeled using YECSIM.

  By forecasting future YIS conditions, LTA thermal displacement benefits are forecast to be 24.2 GWh/yr (71.2% of LTA deliveries) in 2024. These 2024 load LTA thermal displacement forecasts reflect a range from 1.6 GWh per year average for the 2013-2018 high water sequence to 41.1 GWh per year average for the 1994-1999 low water sequence (Figure 2.2-1 of Submission). The LTA thermal displacement benefits forecast is lowered to 17.3 GWh/yr (50.9% of LTA deliveries) in 2035 for the balance of the EPA term reflecting the forecast loss of industrial loads. As reviewed in Section 1.1 of this Argument, the load forecast starting in 2035 and extending to the end of the EPA term is conservative.

The thermal generation displacement percentage calculated in Table A3 of the Submission to determine the Winter Energy Price is the forecast proportion of purchased EPA deliveries over the Winter Period that will provide LTA thermal displacement. Therefore, YEC will pay the Winter Energy Price for all energy delivered over the entire Winter Period, including payments for any energy being delivered that does not provide LTA displacement benefits. However, it is important to emphasize that this is fully factored into the Winter Energy Price (i.e. to reflect this point, the Winter Energy Price is materially lower than the assumed $0.19/kWh 2024$ fuel cost for alternative thermal generation).[37]

In this regard the following points are noted regarding Table A3 determinations affecting the Winter Energy Price:

- Forecast LTA thermal displacement benefits from EPA deliveries in Table A3 are reduced by the extent to which there is a LTA expected need to spill water on the YIS due to LTA deliveries at Jakes Corner.

- Forecast LTA thermal displacement benefits from EPA deliveries (Table A3) are enhanced by the extent to which the LTA EPA deliveries enable additional hydro storage that is subsequently used to displace thermal generation, known as Water Storage Savings.

- LTA thermal displacement benefits reflect LTA assessments, i.e., the resulting LTA thermal displacement kWh/winter number is an average of weekly results over 38 YIS simulated water years. As shown in the Submission (Figure 2.2-2), during the 38 YIS water years the kWh/winter thermal displacement number varies considerably depending on YIS water conditions.

[35] See YUB-YEC-1-13(a) Amended provides details.
[36] See JM-YEC-2-3(a).
[37] See YUB-YEC-1-1-12(a) Amended, YUB-YEC-2-11, YUB-YEC-1-30(b). Transcript pages 193-197, 205-217, 219-221, 231-234.

- LTA thermal displacement during winter in response to LTA EPA deliveries is sensitive to variations in assumed YIS loads and the level of other YIS renewable generation as well as to the level of LTA EPA energy deliveries at Jakes Corner.[38]

Setting the Winter Energy Price in this manner reconciles -- in a reasonable way -- two stated EPA commercial principles (Submission, Section 3.4.1)[39]:

- The principle that YEC will only pay prices for winter delivered energy determined based on expected displacement of YEC's forecast thermal fuel generation costs at forecast LTA renewable sources for the YIS and Atlin; and

- The principle that YEC will take delivery each winter season (September to May) of all available energy that THELP provides.

CPI Escalation of Winter Energy Price

Inflating the specified Winter Energy Price at a fixed escalation rate of 50% of CPI is necessary in order to provide THELP with reasonable price certainty over the EPA term, and is consistent with current Yukon policy for SOP IPP annual price adjustments.

- Financing requirements for a capital-intensive hydro project such as the Atlin Project cannot accept the risk of material reductions in future thermal fuel prices, i.e., locking the price to actual YEC blend fuel prices as they vary throughout the EPA term is not acceptable to IPP suppliers, and is not consistent with SOP IPP pricing policy. The EPA, however, does use the actual YUB Price (as last approved by YUB) for additional energy price payments provided above the winter energy price (see Table 3-1 of Submission).

- Utilizing an escalation rate which is half of CPI is consistent with existing YEC SOP IPP pricing policy and provides a benefit to ratepayers in the form of added fuel cost savings if fuel prices escalate faster than 50% of CPI.

- The 50% CPI escalation was agreed upon by THELP and YEC at an early stage of the negotiations, based on then available information. THELP did not provide YEC with the Pine Creek EPA between Taku Land Corporation and BC Hydro. After the original EPA relating to the energy price was substantially drafted and agreed to by the parties, YEC on its own secured a copy of the Pine Creek EPA from the BCUC proceeding records, i.e., this document was not considered as part of the EPA negotiations.[40]

[38] Table A3 in amended Submission shows impact of YIS load change from 2024 (thermal displacement at 71.2%) to lower 2035 forecast (50.9%); JM-YEC-2-3(d) shows thermal displacement at 94.1% reflecting (among other factors) much lower IPP generation. See also Transcript pages 229-234.

[39] See also JM-YEC-1-9(a), YUB-YEC-1-24 Amended.

[40] YEC provided a copy in YUB-YEC-1-8. This was discussed during the oral hearing, see Proceedings Transcript, Volumes 1 and 2, pages 128-130, and pages 251-254. It was stated that Pine Creek EPA provides 12.5% of CPI for escalation – review of the document indicates that EPA pricing is subject to a lot of complexities not included in the Atlin EPA.

Other Winter Period Payment Provisions

EPA winter deliveries are subject to additional payments for Carbon Charge Saving Payment, Additional Payments, and Monthly Constraint Energy.

- The Carbon Charge Saving Payment and Additional Payments reflect sharing of reduced ratepayer costs relative to thermal generation costs required without the EPA. The Winter Energy Price does not include any carbon charge cost savings related to displaced thermal generation.
    - The Carbon Charge Saving Payment equals up to 50 per cent of the carbon tax cost per kWh of estimated displacement.
    - Additional Payments can begin after 2034 if there is additional thermal displacement from added load in the winter months above the EPA forecast level. The payment is equal to approximately 65 per cent of the added savings from LTA thermal displacement based on the YUB Price (i.e., YEC blended fuel price per kWh as last approved by the Board).
- Monthly Constraint Energy payments are those made when YEC (or AEY) is responsible for a Non-Permitted System Constraint that prevents THELP from providing Delivered Energy during the winter. These payments are consistent with OIC 2019/25, which informs comparable compensation provisions for SOP IPPs.

Summer Delivered Energy

Summer Delivered Energy will only occur under the EPA in situations where YEC and ratepayers realize a cost saving from displacing thermal generation.[41]

Summer energy deliveries must be requested by YEC and will be paid based on a Summer Delivered Energy Payment, equal to Delivered Energy times 50% of the then current YUB approved blended fuel thermal price for YEC generation on the YIS. This usage of the then current YUB approved blended fuel thermal price for YEC generation on the YIS is consistent with Section 3(2) of OIC 2019/25 for setting the price for an IPP under an on-grid electricity purchase agreement.

EPA Pricing Not Based on Levelized Cost

Finally, it is important to note that EPA energy pricing is not based on a levelized cost (LCOE), but on LTA thermal displacement benefits as determined in Table A3 of the Submission.

[41] No summer deliveries are planned due to forecast summer YIS renewable energy surpluses resulting in no LTA thermal displacement benefits; if surplus summer energy was no longer available, and EPA summer deliveries were required to displace thermal generation, YEC and ratepayers would secure cost savings (YUB-YEC-2-1(b)).

Levelized cost assessments are normally based on a project's total capital and O&M costs and its total annual energy generation capability (i.e., all months) over its life. EPA pricing for the Atlin Hydro Expansion Project, however, is not based on THELP costs for the Project, using instead estimated costs of displaced LTA thermal fuel applied against project energy deliveries during only the defined winter period.

Other YEC Costs

As reviewed in detail below, the EPA provides for all required YEC/AEY studies and YEC/AEY system upgrade costs to be fully funded in advance by THELP at no cost risk to the utilities or Yukon ratepayers. Further, YEC and AEY transmission related O&M costs are likely to be reduced due to the System Upgrade improvements and YEC non-fuel variable thermal generation costs are likely to be reduced due to the displaced thermal generation.

Accordingly, the only other significant YEC or AEY costs related to the EPA are YEC costs for EPA preparation and negotiation, and YEC costs for the current YUB regulatory review of the EPA.

Planning & Construction Costs (including System Upgrades)

All costs related to planning and construction of the Atlin Project, including costs related to YEC and AEY system upgrades (including related studies to satisfy conditions precedent), are the responsibility of THELP and will not affect YEC or AEY revenue requirement costs. System Upgrade costs will be addressed as part of the Interconnection Agreement and recovered from THELP.[42]

The control that YEC/AEY has over costs and the specific system upgrades required was discussed at the hearing as follows[43]:

> Q…. In terms of this control over what system upgrade costs are required for the purposes of this project, who has control of that?
>
> A. MR. HALL: Well, it's the utilities. So as part of the exercise, both ATCO and ourselves studied what the impact of all this power coming through the system would be. We commissioned our other independent work, so ATCO did their study, we did ours. And based on those results, the system impact costs estimates were developed.
>
> I think it's also important just to remember that THELP will end up paying actuals, so we have estimates right now we'll incur -- we'll do the work, and then whatever actual costs are in fact incurred, that those are what -- be what THELP will pay.

[42] See amended Submission, Section 3.3; UCG-YEC-2-2(b).
[43] See Proceedings Transcript, pages 276 to 278.

> Q. Thank you. Because that was sort of my follow-up question. But just to go back to the previous about the control over system upgrades, does THELP have any control over determining what system upgrades are needed by either ATCO or by YEC?
>
> A. MR. HALL: No. I mean, there's certainly communication. We've reviewed the outcome with them, and we've had some conversations, for example, at the Jakes Corner substation about how that substation might be configured to reduce those costs. But, ultimately, it's the utilities that make the final call.

Transmission and Substation Asset Operation and Maintenance

THELP is responsible for the operating and maintenance costs of transmission and substation assets at Atlin, from Atlin to Jakes Corner and at the Interconnection Substation at Jakes Corner, and of any additional metering requirements.

Although YEC and AEY will incur operating and maintenance costs in the future related to the new YIS system upgrades as well existing YIS transmission assets YEC does not have estimates for such costs. However, they are likely to be lower than would have otherwise been required to maintain equipment in place prior to the upgrades. [UCG-YEC-2-2(c) and (d)]

- **YEC Thermal Generation Assets** – There is no impact of the EPA on YEC return or depreciation expenses of permanent thermal generation assets, and existing YEC thermal assets that will have energy generation displaced by the EPA will not result in any stranded YEC thermal assets. [CW-YEC-1]

- **Other YEC Operations and Billing** - Added activities due to the EPA related to other operations for YEC and billing work for YEC and AEY are not expected to generate significant costs (e.g., any change can be managed within the existing labour complement). [UCG-YEC-2-2(c) and (d)]

- **EPA Preparation and Negotiation** - YEC costs for EPA preparation and negotiation are approximately $1.182 million to date (with about $0.175 million recoverable from THELP) – the $1.182 million cost will result in the YEC revenue requirement being increased over the 40 year EPA term by approximately $0.060 million/year (higher in initial years and lower in later years) [UCG-YEC-2-2(b)]

- **YUB Regulatory Review -** YEC costs for the YUB regulatory review are currently estimated at $0.086 million [UCG-YEC-2-3] and will be recovered through the Hearing Reserve deferral account following YUB review and approval of costs.

Capital Lease

While there is uncertainty regarding the final determination by YEC's auditor, YEC's assessment is that the EPA does not meet the requirements to be considered a capital lease (see YUB-YEC-1-48(a)) and therefore this will not affect rate base and therefore rates to customers.

YEC recognizes the risk that their auditors may not agree with this assessment. In order to address this risk, YEC proposes to adopt an approach whereby the impact on rates will be neutral regardless of whether the EPA is on or off the balance sheet. As reviewed in YUB-YEC-2-18(a), YEC's proposed approach is similar to that confirmed to be used by BC Hydro for its few IPPs that have been determined to be capital leases. Mr. Mollard reviewed the proposed approach with Board counsel during the proceeding (Transcript, pages 76-79).

2.2 EPA EFFECT ON RELIABILITY OF SERVICE

The Amended EPA is expected to enhance the current reliability of service to Yukon utility customers. This reflects the EPA reliance on hydro generation, the provision of this generation to the southern YIS (which currently has its closest electricity supply at Whitehorse) and the expected positive impacts from system upgrades to the southern YIS transmission.

The following key points are noted:

- **Reliability of Hydro Resource Generation Option**: The Project is a reliable service option for the YIS as it involves hydro resource generation that expands on existing operations, and has appropriate storage and a water year record.[44] Provision of Dependable Capacity is expected to be highly reliable, given a number of features including:
    - An expected unplanned downtime of 2%;
    - The utilization of mature hydro generation technology;
    - The availability of Surprise Lake storage;
    - The long-term evidence which shows adequate water availability to provide PWP full dependable capacity well beyond required expected days with -30 degrees Celsius or lower temperature;
    - Materially enhanced dispatchability with the revised design of the amended EPA and Penstock; and
    - Operating Rules provisions for YEC's dispatch of delivered energy during each PWP.
- **Minimal Impact to YIS of Generator Trip**: A trip of the 9.2 MW Atlin generator during PWP when delivering 8.75 MW to the YIS at Jakes Corner poses minimal impact for customers on the YIS, as the BESS by Q3 2023 will be providing spinning reserve and

[44] See amended Submission, Section 4.2 page 25.

will respond to frequency deviations resulting from the generator trip. Voltage support will be required and provided at Teslin as part of the system upgrade for the THELP interconnection.[45]

- **Impact of System Upgrades on Outage Events** - System upgrades that are required by the EPA to ensure that increased power flows on portions of YIS transmission (AEY and YEC) are not expected to increase transmission line outages on the YIS. When Atlin generation is added to the YIS system the AEY 6L 11 power line (S150 to Teslin) will be removed from the under-frequency system load shedding scheme (which accounts for many outage events on this line) and therefore is expected to see less outage events.[46]

- **YEC N-1 Capacity Backup** – The EPA is expected to provide reliable N-1 dependable capacity to the YIS. Back-up capability with diesel rentals remains available to address delays in EPA COD, or if THELP during operations provides notice under EPA Section 6.2 by June of an inability to provide 100% of the expected dependable plant capacity. If disruptions affect THELP's plant during operations, based on YEC's hydro plant experience they are expected to be of short duration, not to occur on a frequent basis, and be unlikely to affect overall YIS service reliability unless concurrent with an N-1 event during a cold winter period.[47]

3.0 RISKS

Part 3(d) of the terms of reference require the Board to review and report on "the risks associated with the Agreement, including its potential impacts on YEC and rates for customers and on the reliability of electricity service provided to customers".

As outlined in Section 4.3 of the amended Submission, response to IRs and testimony, the risks relating to rates and reliability of service to customers are not material prior to the start of Project operations, and are reasonable and minimal during operation of the Project.

Condition Precedent, Construction and Commissioning Cost Risk

All risks related to Project development (other than YEC securing any approvals of the EPA it may require), including permitting, securing necessary grant funding, capital costs to complete the Project and schedule (including completing all conditions precedent needed for the EPA to come fully into force for development of the Project) are held by THELP.[48]

YEC's payment obligations under the EPA for energy and capacity have no legal force until the various Conditions Precedent (CP) provisions in Section 2.1(d) are completed to the mutual satisfaction of YEC and THELP.[49] The CP provisions largely limit risks to YEC from the EPA. The EPA CPs identify initial risks associated with bringing the EPA into legal force. These risks have

[45] See JM-YEC-2-8.
[46] See YUB-YEC-2-3, JM-YEC-1-1.
[47] See Section 4.3 of Submission, and YUB-YEC-1-13(b) Amended.
[48] See YUB-YEC-1-1 Amended.
[49] Amended Submission Section 3.2, page 10.

minimal impact on YEC, on the rates for customers or on the prudence of proceeding with the EPA at this time. The only risk that YEC has prior to the EPA coming into force relates to costs incurred for the negotiation of the EPA and the YUB hearing process.[50]

Updated dates for the CPs were provided in YUB-YEC-2-10.[51] YUB-YEC-2-27 and YUB-YEC-2-28 review the status for specific CPs and consequences of updated dates for the amended EPA.[52] The fact that CPs remain unresolved does not preclude the Board from assessing the EPA based on available information provided by YEC in its submission.[53]

YIS Service Reliability Risk related to Project COD

If the EPA is unable to proceed or is delayed, the EPA retains YEC's ability to sustain reliable service without any cost penalties using existing YIS resources plus rented diesel units as required for dependable capacity requirements.[54]

Delivered Energy Cost and Service Reliability Risk

Cost and service reliability risks for YEC and customers regarding EPA Delivered Energy during PWP operations are reasonable and minimal in the context of YIS resource planning.

YEC costs, customer rates and service reliability are not likely to be materially impacted if actual Winter Delivered Energy differs from long term average deliveries assumed to establish EPA energy prices.

- Any risks regarding EPA Summer Delivered Energy only affect a potential cost saving benefit, and have no added YEC cost or service reliability risks.

- The cost risk for EPA energy deliveries, equivalent to EPA purchase costs compared to EPA related thermal fuel cost savings, will be positive or negative depending primarily on how EPA fuel prices compare to actual YEC fuel prices; and how YIS industrial loads and YIS other renewable resources compare to forecasts used to set EPA energy prices; and whether carbon taxes become part of utility rate revenue requirements in Yukon.[55] EPA forecasts and assumptions for key cost factors are conservative, and cost risk to YEC and customers is reasonable and minimal in the context of YIS resource planning:

[50] These costs to date were detailed in UCG-YEC-2-3, UCG-YEC-2-2(b).
[51] Attachment 1 to this response provides a copy of YEC's June 10, 2022 letter to the Board regarding the last amended CP dates.
[52] See also JM-YEC-2-5; JM-YEC-2-6; UCG-YEC-2-1; UCG-YEC-2-4.
[53] See YUB-YEC-1-1 Amended.
[54] See YUB-YEC-1-1 Amended. See also amended Submission, Section 4.3, and Table 4-1 re rental diesel requirements; YUB-YEC-1-13(b) Amended, and YUB-YEC-1-22. YEC will be able to accommodate at its existing Whitehorse and Faro thermal facilities the up to 5 units (1.8 MW each) of added rented diesels if so required (in-service of 7.2 MW BESS dependable capacity and 12.5 MW Diesel Replacement are planned before the end of 2023, reducing diesel rental requirements without Atlin Project to less than the 2021/22 winter requirements until winter 2027/28).
[55] Amended Submission, Section 4.3.

- First, the EPA fuel price (2024$) at $0.19 c/kW is less than recent 2022 YEC fuel prices at $0.22 c/kWh.[56]
- Second, industrial load forecasts over the 40-year EPA term are conservative. Higher-than-expected industrial loads will enhance net benefits for YEC costs and customer rates related to the amended EPA, and reverse any possible impact that would arise from lower-than-expected industrial loads. After 2034, the Amended EPA prices assume no industrial load – thereby minimizing risks to YEC and to customer rates. If industrial loads occur during this period, Additional Payment provisions for Added Load starting in 2035 ensures that there will be net benefits for YEC and for customer rates.[57]
- Third, EPA capacity prices (2024$) are based on 2019 cost estimates with 2 %/year inflation. Recent surges in CPI suggest that these costs estimates are likely to be conservative.

- YEC costs, customer rates and service reliability are not likely to be materially impacted if actual Winter Delivered Energy differs from long-term average (LTA) deliveries assumed to establish EPA energy prices.
  - Alternate thermal energy is available at similar incremental cost to accommodate lower EPA annual or LTA deliveries – there is no risk to energy service reliability.
  - Customer rates are set based on LTA renewable resource availability, and not actual annual volumes.
  - EPA winter prices assume forecast LTA winter deliveries. LTA actual winter deliveries below forecast LTA levels would enhance customer net benefits per kWh (the reverse would occur if LTA actual winter deliveries rise above forecast LTA levels). YEC bears risks related to annual EPA delivered energy variances from LTA forecasts used to set rates.

- Risks related to Monthly Constraint Energy costs (payments to THELP) for Non-Permitted System Constraints are controlled by YEC and AEY and are minimal in terms of likely impacts on YEC costs or customer rates. YEC will seek to recover from AEY any such costs due to events on the AEY System. The Amended EPA has reduced ratepayer risks related to such payments.[58]

Dependable Capacity Cost and Service Reliability Risk

Cost and service reliability risks for YEC and customers regarding EPA Dependable Capacity during PWP operations of the Atlin project are reasonable and minimal in the context of YIS resource planning.

[56] See YUB-YEC-1-13 Amended, JM-YEC-2-3 (a-b).

[57] See NY-YEC-1-13, NY-YEC-1-4, JM-YEC-1-10 Revised Amended, JM-YEC-1-16 Amended. Growth of non-industrial loads beyond EPA forecasts will yield similar ratepayer benefits.

[58] Submission, Section 4.3; YUB-YEC-2-20, YUB-YEC-1-25 Amended, YUB-YEC-1-52, UCG-YEC-1-12.

- The cost risk that THELP will underdeliver on the amount of dependable capacity it provides is addressed through the December Dependable Plant Capacity test and Dependable Capacity Excess Payment (DCEP) mechanism.
    - The December Dependable Plant Capacity Test will set the amount of Dependable Plant Capacity Committed that is used in the calculation of Dependable Capacity Payments (DCPs) for each PWP.
    - The DCEP mechanism provides for the recovery of excess DCPs compared to the actual Dependable Capacity which is delivered during the year, with minimal risk of a potential non-recovery subject to likely losing time value of money. The DCEP mechanism can also be used in situations where the Seller has delivered more dependable capacity than what the Buyer has paid for with its DCP.

- Operational risks related to any PWP disruptions affecting THELP's plant when required for dependable capacity after a December test are expected to be brief, are not expected to occur on a frequent basis, and would be unlikely to affect YIS service reliability unless concurrent with an N-1 event during a cold weather period.

- In the event of a dependable capacity shortfall, due to the Seller Commercial Operation Date (COD) being cancelled or delayed, the resulting loss of capacity will be made up for with rented diesel units while other permanent renewable options are reviewed and developed. If the Seller Commercial Operation Date (COD) is cancelled or delayed, the EPA retains YEC's ability to sustain reliable service without any cost penalties.

- Section 6.2 of the EPA also requires THELP to notify YEC as soon as practicable during the Term if it becomes aware that it will not be able to provide 100% of the Dependable Plant Capacity Committed for the following PWP due to factors other than water availability at Surprise Lake. If such notice is provided with sufficient time YEC expects to be able to secure rental diesel capacity as required.

- Finally, while it is possible that disruptions affecting THELP's Plant or transmission lines may result in short disruptions to the delivery of dependable capacity, an equivalent risk exists with all of YEC's facilities and will not become material unless an N-1 event occurs during a cold weather period during the affected PWP.

4.0 PRUDENCE OF ENTERING INTO THE AGREEMENT AT THIS TIME

Part 3(f) of the Terms of Reference require the Board to review and report on "whether it is prudent to enter into the Agreement as proposed at this time."

As summarized in the proceeding sections – it is prudent to enter into the EPA as proposed at this time for the following reasons:

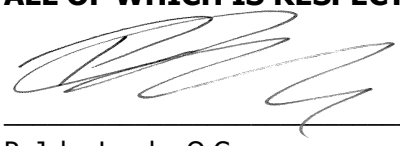
- The EPA is the only cost effective resource option opportunity today to provide dependable renewable capacity and energy required for the YIS, displacing the need for up to five rental diesel units;

- The EPA has minimal and reasonable risk impacts on YEC, on rates for customers, and on reliability of service to customers;

- In particular, the EPA Conditions Precedent provisions manage initial risks to be resolved before the Project proceeds. Resolution of the Condition Precedents - either allowing the Project to proceed on a timeline acceptable to YEC, or terminating the Project - has minimal if any potential impact on YEC costs, on customer rates, or on reliability of service to customers; and

- Entering into the EPA as proposed at this time therefore enables THELP to proceed to work with supporting government funding agencies and other parties to resolve the Conditions Precedent requirements that will allow development of this attractive resource option opportunity for YIS customers.

ALL OF WHICH IS RESPECTFULLY SUBMITTED



P. John Landry Q.C.
Counsel for Yukon Energy Corporation

July 28, 2022