Yukon Energy Corporation (YEC)
2023-24 General Rate Application (GRA)

Yukon Utilities Board (Board)
Information Requests (IRs) Round 1 to
Yukon Energy Corporation

YUB-YEC-1-001
Reference: **YEC 2023-24 General Rate Application (Application), PDF page 4**
Issue: **Rental and operation of diesel generators**
Quote: The Yukon's peak demand for electricity has increased by 23% in the last five years [from 2017 to 2022] and this trend is expected to continue with an additional 36% increase in non-industrial peak by 2030. Meeting these peaks demands for power in the short term requires the rental and operation of diesel generators each winter until new sources of dependable capacity can be built or connected to the Yukon grid.

Request:
(a) When did YEC begin using rented diesel generators?

(b) When does YEC expect to cease using rented diesel generators?

(c) Please provide a table showing the following:

i. The number of diesel generators rented, the total rented generator capacity, available generation capacity before rented diesel generators, YEC firm load capacity requirements (actual and then forecast capacity to the year that diesel generators are no longer required) for each year from the start of the use of rented diesel generators to the time that rented diesels generators are no longer required. Please identify by year the number of units considered as spares; and

ii. Add four further columns to the table showing, by year, each of the following for the rented diesel generators: (1) the rental costs; (2) the maintenance costs; (3) the delivery and removal costs; and (4) the connection and disconnection costs.

(d) YEC has previously stated that part of the rental agreement for the diesel generators requires operation on those generators for certain minimum periods. Please provide a table showing the annual generation costs of the rented diesel generators (variable costs such as fuel), the kWhs of electricity generated by each rented diesel generator, the kWhs of non-rented diesel generation displaced by running the rented diesel generators ahead of lower cost generation sources and the variable costs such as fuel of the non-rented diesel generation sources. Please provide this information for each year since the start of the use of rented diesel generators to the year that YEC expects to cease renting diesel generators.

(e) Please provide copies of the rental agreements by year for each year YEC has rented diesel generators.

YUB-YEC-1-002
Reference: Application, PDF page 5
Issue: Revenue shortfall

Request:
(a) Please explain what is meant by YEC's statement that as a factor driving the 2023-24 revenue shortfall, rate increases are needed "To recover the costs of doing business in a better way."

(b) Please provide concrete examples of the costs proposed to be incurred that will result in YEC "doing business in a better way."

YUB-YEC-1-003
Reference: Application, PDF page 5
Issue: Isolated grid
Quote: As the primary generator and transmitter of electricity in Yukon, it is YEC's responsibility to lead these changes. On an isolated grid, these investments are even more paramount. YEC cannot import electricity when needed or export power to other jurisdictions when there is a surplus. For YEC and Yukoners, this means we only have ourselves to rely on to ensure there is enough capacity to reliably generate the electricity Yukoners need now and in the future.

Preamble: Recently, YEC completed a Board proceeding regarding the YEC Tlingit Homeland Energy EPA. The total capital cost for that project providing approximately 8.75 MW of firm capacity is greater than $250 million.

Request:
(a) What analysis has YEC done regarding connecting the Yukon Integrated System (YIS) to another grid such as the BC grid?

(b) Considering the price of more than $250 million for 8.75 MW of capacity, what is the crossover cost point for connecting to another grid versus constructing or contracting for new capacity? Please provide supporting details for the manner in which this crossover point was determined.

YUB-YEC-1-004
Reference: Application, PDF page 7; PDF page 141, Tab 5 tables, Table 5.2, Work in Progress Continuity Schedule – 2021; PDF page 156; PDF pages 184-192, Section 5.1A-14: WH2 Uprate Construction and Engineering (rate base addition of $7.078 million to 2021 GRA approved); and PDF pages 193-197, Section 5.1A-15: WH4 Servomotor Replacement (rate base addition of $0.789 million to 2021 GRA approved)
Issue: Disallowed portion of two capital projects added to rate base resulting in 2023 and 2024 rate increases

Quotes: PDF page 7:

- Capital Cost rate base additions - $7.9 million for WH 2 Uprate and WH4 Servomotor Replacement (the portion previously disallowed by the YUB).

PDF page 156:

- Capital investments on New Supply options to maximize renewable energy generation – Net rate base impact of approximately $7.867 million addition to 2021 approved rate base:

    - WH2 Uprate Construction and Engineering – Actual cost for construction and engineering in 2021 of $12.358 million; and actual construction cost of $0.457 million in 2022. Total in service cost of $12.814 million, of which $5.736 million was approved cost added to rate base following the 2021 GRA[3] – addition of $7.078 million to 2021 rate base is now sought.

    - WH4 Servomotor Replacement – Actual cost of $1.318 million in 2021 and $0.019 million in 2022. Total in service cost of $1.337 million at the end of 2022, of which $0.548 million was approved cost added to rate base following the 2021 GRA[4] – addition of $0.789 million to 2021 rate base is now sought.

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[3] Board Order 2022-03, Appendix A, para 278.
[4] Board Order 2022-03, Appendix A, para 282.

PDF page 184:

Board Order 2022-10 regarding YEC's 2021 GRA disallowed over 50% of YEC's capital costs for the Whitehorse Hydro #2 (WH2) Uprate project, noting (Appendix A, para 277-278) that YEC never discussed the reasons for cost differences between the earlier Hatch study estimates and YEC's actual costs, nor did it adequately explain the reasons the project was the preferred alternative. Board Order 2022-10 (Appendix A, para 38) rejected YEC's application for review and variance of this decision on the WH2 Uprate costs, noting that the Board relied on the evidence and arguments before it in making the findings to reduce the costs, and that generally the Board found that the business case was deficient for this project and that there was a lack of information in the other evidence to justify the significant cost increases and a lack of an adequate justification of costs and benefits.

PDF page 193:

Board Order 2022-10 regarding YEC's 2021 GRA disallowed over 60% of YEC's capital costs for the Whitehorse Hydro #4 (WH4) Servomotor Replacement project, noting (Appendix A, para 281-282) that YEC did not provide an adequate business case or justification that supports the significant cost increase from the original Hatch cost estimate, and that the benefits espoused by YEC do not fully justify the costs that were incurred or forecast for this project.

Board Order 2022-10 (Appendix A, para 38) rejected YEC's application for review and variance of this decision on the WH4 Servomotor Replacement costs, noting that the Board relied on the evidence and arguments before it in making the findings to reduce the costs, and that generally the Board found that the business case was deficient for this project and that there was a lack of information in the other evidence to justify the significant cost increases and a lack of an adequate justification of costs and benefits

Preamble: In Board Order 2022-03, Appendix A, pars. 278 and 282, the Board denied certain of YEC's capital costs for the two referenced projects. YEC's review and variance application was also denied at the phase 1 stage in Board Order 2022-10. The Board seeks to understand how the circumstances of the previous disallowances can be altered by the information now being provided by YEC in the current Application.

Request:

(a) Please explain on what regulatory and/or legal basis YEC is asking the Board to examine the disallowed costs for the WH2 and WH4 assets which YEC has now added to its rate base.

(b) Please provide the date on which the WH2 and WH4 projects resulted in used and useful utility assets.

(c) Please provide the date on which the WH2 and WH4 projects were recorded as capital assets in YEC's accounting records.

(d) Please confirm that, notwithstanding Application, PDF page 141, Tab 5 tables, Table 5.2 – Work in Progress Continuity Schedule – 2021 shows capital additions in the year 2021 appearing to include the disallowed portions of WH2 Uprate and WH4 Servomotor projects, YEC's 2023-24 revenue requirement has not sought any recovery of revenue associated with the disallowed portion of the project costs for the years 2021 or 2022.

(e) Should the requests for costs for these projects from 2021 be considered as retroactive ratemaking? Please explain why or why not.

YUB-YEC-1-005

Reference: **Application, PDF page 23**

Issue: **Non-fuel Operating and Maintenance Expenses (O&M) - FTEs, vacancy rate and salary escalators**

Quote: Rising labour costs

For 2023, labour rates have been escalated by 4 percent, which is consistent with approved increases for Yukon government employees. For 2024, labour rates have been escalated by 3 percent also consistent with approved increases for Yukon government employees.

A vacancy factor of 9 FTEs has been applied to labour expenses for the 2023-2024 test years. This is based on a 5-year historical average. The vacancy factor for the 2021 GRA was 5 FTEs excluding 3 new FTEs the YUB directed to remove from the revenue requirements in its Order 2022-03, Appendix A.

Staff positions
YEC is forecasting an increase of approximately 19 FTEs in 2024 over the approved 2021 FTEs. However, YEC also increased the vacancy factor which reduces the impact on the net labour cost. The details of the 13 FTE additions are provided in Tab 3.

The additional positions, as outlined in Tab 3, are required to plan, permit, execute and deliver YEC's $85 million/year capital budget forecasted in the 2023 and 2024 test years and anticipated future capital requirements as the energy transition continues to unfold. YEC's forecast 2023 and 2024 annual capital programs are nearly double the size they were prior to 2021. Additional staff positions are needed who possess the training and knowledge to build and connect new projects to meet growing demands for electricity; to replace and upgrade assets that are nearing or at end-of-life; and to plan, deliver and oversee more complex projects with multiple groups of rightsholders and stakeholders, both in terms of scope and expenditures.

Preamble: The Board requires further information.

Request:

(a) Please confirm that the referenced labour rate increases approved for "Yukon government employees" have historically been applicable to YEC employees and are inclusive of any collective bargaining agreement process currently in place for YEC employees.

(b) Please clarify whether any portion of the forecast labour rate increase is applicable to inflation on base pay as opposed to increases applicable to YEC employee benefits.

(c) If part (a) is not confirmed, please explain how YEC has forecast labour rate increases in the past. Please include an explanation of whether labour rates are proposed to differentiate between in-scope and out-of-scope employees and whether any collective bargaining agreements remain unresolved for the years 2023 or 2024 for YEC.

(d) Please explain how the need for 19 additional full-time-equivalent (FTE) positions between 2021 approved 100.60 FTEs and 2024 forecast 119.81 FTEs reconciles with the forecast increase in vacancy rate between what was approved for 2021 (five FTE vacancy rate) and what is forecast for 2024 (9 FTE vacancy rate).

(e) Given that the quote above seems to state that the need for 19 additional FTEs is largely related to YEC's forecast capital projects and related expenditures, please explain how these employees would be redeployed should YEC's capital forecasts not be approved by the Board or should the planned project execution of these capital forecasts not be achieved under YEC's proposed timelines.

(f) Please provide the YEC calculation, which was based on a five-year historical average, determining a vacancy rate of nine FTEs for the 2023-24 test period.

YUB-YEC-1-006
Reference: Application, PDF page 28
Issue: Industrial load
Quote: The actual industrial sales for 2021 were 91.1 GWh compared to forecast sales of 102.9 GWh [primarily due to lower VG and Hecla Yukon sales offset partially by higher Minto sales]. The actual industrial sales in 2022 were 95.2 GWh, 4.0 GWh higher than 2021 actuals. The forecast sales for the 2023 test year at 75.0 GWh reflects a decrease of 20.1 GWh from 2022 actuals due to closure of Minto industrial operations after May 2023, and the forecast sales for the 2024 test year is 69.4 GWh, reflecting a decrease of 5.7 GWh from 2023 forecast (reflects impacts of the Minto mine closure in May 2023 – VG and Hecla Yukon sales are forecast to increase in both 2023 and 2024).

Request:
(a) Please provide a table showing industrial sales (MWh) to each industrial customer by year for each of the years 2021 through 2024. In the case of Minto, provide a separate column showing the general service sales (MWh) for each of the years 2021 to 2024.

(b) Are there any sales expected to occur for Minto beyond 2023? Please explain.

YUB-YEC-1-007
Reference: Application, PDF page 29
Issue: Actual generation
Quote: Actual hydro generation in 2021 was 92.5% of grid generation, reflecting higher than LTA water availability.
…

Actual hydro generation in 2022 was 91.6% of grid generation, reflecting higher than LTA water availability.
…

The 2023 and 2024 forecast firm generation, 525.5 GWh and 531.2 GWh respectively, result in forecast hydro generation at LTA supply accounting for 84.7% of grid generation in 2023 and 84.0% in 2024 and related forecast thermal generation accounting for 14.2% of grid generation in 2023 and 12.8% in 2024.

IPP renewable generation is forecast at 1.2% of forecast grid generation in 2023 and 3.2% in 2024.

Request:
(a) Please prepare a table listing the three main generation sources [hydro, thermal, and Independent Power Production (IPP)], and for each of the years 2021 to 2024, list the proportion of each generation source out of the total generation, comparatively showing the forecast versus actual generation outcomes (for 2023 and 2024, show only forecast proportions).

YUB-YEC-1-008

Reference: **Application, PDF page 29**

Issue: **Winter Peak**

Quote: Winter peak generation on the Yukon Integrated System (including industrial load) has continued to increase in recent years, with the 2021 actual peak at 104.4 MW and the 2022 actual peak reaching 114.2 MW. Forecast YIS peak load for the test years is 119.5 MW for 2023 and 123.2 MW for 2024.

Request:

(a) Do winter peaks include industrial sales? Please explain.

(b) When does winter peak occur? Is it in December or in the January-March time frame?

(c) If the winter peak is in the January-March time frame, what was the 2023 winter peak?

YUB-YEC-1-009

Reference: **Application, PDF page 30;**
Appendix A to Board Order 2018-10, PDF page 13

Issue: **Wholesale sales**

Quotes: Application, PDF page 30:
The forecasts for 2023 and 2024 are prepared based on multi-variate regression assessments of monthly wholesales changes, the same approach used in the 2021 GRA, at normal weather conditions using the 20-year historical averages. It also reflects forecast micro-generation which reduces forecast wholesales.

Appendix A to Board Order 2018-10, PDF page 13:
Therefore, the Board directs YEC to refine its methodology to ensure its forecasts align closely with AEY's forecasts in future GRA submissions. (Similar direction was given in Appendix A to Board Order 2022-03 at PDF page 12.)

Preamble: For ATCO Electric Yukon's (AEY) 2023-24 GRA, the wholesale purchases are forecast to be 349.6 GWh for 2023 and 362.7 GWh for 2024. YEC's forecast wholesale sales are 351.3 GWh for 2023 and 355.9 GWh for 2024. Although YEC provided some explanation on PDF page 30 of its Application, the reasons for the differences between the two forecasts were not provided.

Request:

(a) Please explain the differences between the AEY and YEC wholesales forecasts.

(b) If the YEC forecast is the preferable forecast for wholesale sales, please explain why it is the superior forecast.

YUB-YEC-1-010

Reference: **Application, PDF page 31**
Issue: **Major industrial customers**
Quote: Minto Mine is included as an industrial customer for January-May 2023; for June-December 2023 and 2024 the load for Minto care and maintenance is included under the general service class.

Request:

(a) Please describe the criteria used to determine the Minto mine as a member of the general service rate class.

(b) What is the forecast Minto mine load for 2024 as a general service customer?

(c) How long does YEC expect the Minto mine to continue as a general service customer?

(d) Does the cessation of the Minto mine operations imply that Rate Schedule 35, Low Grade Ore Processing, is no longer required? Please explain.

YUB-YEC-1-011

Reference: **Application, PDF page 32**
Issue: **Victoria Gold and Hecla Yukon mine loads**
Quote: Victoria Gold has significantly reduced its forecast load from what it forecast in its 2017 Power Purchase Agreement.
…

Based on the information provided by Hecla Yukon, the load forecast for 2023 is 15.1 GWh [including January-May actuals] and 21.8 GWh for 2024 reflecting an increase in mine activities starting from mid-2023.

Request:

(a) Are there any financial implications to Victoria Gold from reducing its forecast load from that in the 2017 Power Purchase Agreement (PPA)? Please explain.

(b) How reliable is the Hecla Yukon industrial forecast? What factors affect the accuracy of the forecast?

YUB-YEC-1-012

Reference: **Application, PDF page 33**
Issue: **General service sales**
Quote: Actual sales to the Faro Mine remediation project were 9.4 GWh in 2021 and 9.7 GWh in 2022, accounting for 32% of all general service sales. The forecasts for 2023 [including January – May actuals] and 2024 is 9.8 GWh are based on actual sales for 2022.

Request:

When does YEC expect the Faro remediation project to end? Please explain.

YUB-YEC-1-013
Reference: **Application, PDF page 34**
Issue: **Line losses**
Quote: Actual losses were 8.4% in 2021 and 9.0% in 2022.

Request:
(a) What factors cause line losses to change from 8.4 percent in 2021 to 9.0 percent in 2022?

(b) Does YEC undertake any analyses to determine why line losses change from year to year? Please explain.

(c) Has YEC undertaken any programs to reduce line losses? Please explain.

YUB-YEC-1-014
Reference: **Application, PDF page 35**
Issue: **Integrated grid hydro generation - IPPs**
Quote: In addition, Table 2.2 shows the forecast LTA IPP generation of 6.1 GWh for 2023 and 16.8 GWh for 2024.

Request:
Please provide the basis for a long-term average (LTA) IPP generation forecast for each of the years 2023 and 2024.

YUB-YEC-1-015
Reference: **Application, PDF page 35**
Issue: **Integrated system operation**

Preamble: Lines 16-21 of PDF page 35 explain the operation of the integrated system under normal operations.

Request:
Where do IPPs place in the stacking order of generation assets? Please explain.

YUB-YEC-1-016
Reference: **Application, PDF page 37**
Issue: **Forecast thermal unit operation for maintenance**
Quote: In addition to the thermal generation forecast to supply required firm loads, YEC is including in its forecast expenses in this Application (see Tab 3) forecast thermal unit operation for maintenance when there is no firm generation load that requires thermal generation.

Request:
(a) Does thermal generation for maintenance purposes displace hydro generation? That is, when thermal units are run for maintenance, how is the energy that is produced used? Please explain.

(b) Does the amount of energy produced referred to in part (a) become part of the thermal energy reported in actual energy produced each year? Please explain.

YUB-YEC-1-017

Reference: **Application, PDF page 39, footnote 17**
Issue: **LOLE**
Quote: The WAF system had substantial hydro generation availability that is directly affected by certain transmission; the WAF system also had been trending to an increasing probability of longer outages as it expanded (particularly with expansion of residential and commercial loads and major reductions in industrial load).

Request:
Please explain the significance of the above-noted footnote, namely the impact of increasing residential and commercial loads versus reductions in industrial loads leading to a probability of longer outages.

YUB-YEC-1-018

Reference: **Application, PDF page 40**
Issue: **Dependable grid capacity**
Quote: Installed YEC and AEY dependable grid capacity for the 2023/24 winter based on existing capacity today and any planned additions/retirements and excluding Fish Lake hydro, is 148.9 MW (71.1 MW of YEC hydro, 12.6 MW YEC LNG, 23.5 MW of YEC diesel (reflects retirement of 2.5 MW FD1 at Faro), 5.6 MW of AEY diesel, 0.1 MW DSM and plus 36 MW diesel from rented diesel units in order to meet the N-1 criterion assessment).

Installed YEC and AEY dependable grid capacity for the 2024/25 winter based on existing capacity today and any planned additions/retirements and excluding Fish Lake hydro, is 151.8 MW (71.1 MW of YEC hydro, 12.6 MW YEC LNG, 26.0 MW of YEC diesel [reflects retirement of 2.5 MW diesel at Dawson in 2024 and 5 MW added diesel replacements in Faro]… (Footnotes omitted.)

Request:
(a) Why is Fish Lake hydro excluded? Please explain.

(b) For each of the years 2023 and 2024, for the retiring units, what considerations has YEC given to replace those units with larger sized units and to have the replacement units in place before retiring any units?

(c) With Minto moving to a general service rate, how does this affect YEC's N-1 calculations?

(d) Does Minto have on-site generation that would mitigate an N-1 condition? Please explain.

YUB-YEC-1-019

Reference: **Application, PDF page 45, footnote 1**

Issue: **WH2 uprate and WH4 servomotor**

Quote: In the 2021 GRA, the expected incremental hydraulic generation from WH2 uprate and WH4 servomotor/uprate projects was 4.2 GW.h based on a half-year impact for 2021 [7.1 GWh/year] and was manually adjusted after the model runs [please see 2021 GRA, Appendix 2.1, Table 2.1-1 note #7]. For 2023/24 GRA, YECSIM model inputs are adjusted to reflect the uprate projects and Tables 2.1-1 and 2.1-2 already reflect the incremental hydro generation. The annual expected incremental hydraulic generation is about 6.3 GW.h at 2024 load levels [overall firm generation load in 2024 is lower compared to the 2021 GRA firm load].

Request:

(a) For WH4, please explain why the incremental generation has been downgraded from 7.1 GWh/year to 6.3 GWh/year.

(b) Do the WH2 and WH4 uprates included in LTA calculations increase the rated capacity for those units? Please explain. If so, have those increases been incorporated in the N-1 calculations?

YUB-YEC-1-020

Reference: **Application, PDF page 53**

Issue: **Forecast delivered process for LNG and diesel fuels**

Quote: Forecast LNG delivered price to Yukon Energy's Whitehorse thermal facility for the 2023 and 2024 test years is $0.4917 per litre.

…

Forecast diesel delivered prices for the 2023 and 2024 test years are $1.1043 per litre for Whitehorse, $1.1415 per litre for Faro, $1.1698 per litre in Dawson and $1.1496 per litre in Mayo, and reflect the most recent diesel prices for YEC as of May 1, 2023.

Request:

(a) How are the forecast fuel prices determined? What source is used to determine the forecast fuel prices?

(b) How are actual fuel prices determined? Is a tender process utilized?

YUB-YEC-1-021
Reference: Application, PDF page 58
Issue: Non-fuel O&M - FTEs and overtime
Quote: … The increase in employee complement has resulted in a significant decrease in forecast overtime costs as a percent of total labour costs for 2023 and 2024 as compared to the overtime for 2021 and 2022 actual years.[2] Increased employee complement is due to an effort, where possible, to do more work internally as opposed to hiring outside consultants and contractors. YEC has made a conscious effort to limit increases only to those areas where required as reviewed below.

[2] The overtime as percentage of total salaries and wages has reduced from 6.14% actual in 2021 to 5.09% actual in 2022, and forecast to reduce to 4.69% in 2023 and 3.93% in 2024 [2021 approved was 4.72%].

Request:
(a) Please provide the dollars attributed to the calculation of overtime as a percentage of total labour costs noted in footnote 2.

(b) Please give specific examples of where an FTE position was filled and thereby replaced the use of an outside consultant or contractor.

(c) Please provide the forecast overtime cost reduction for 2023 and 2024 that is to result from YEC's increase in employee complement.

YUB-YEC-1-022
Reference: No reference
Issue: YEC planning horizon

Request:
(a) From a planning perspective:

i. What time range does YEC define as "short term"?

ii. What time range does YEC define as "long term"?

iii. Does YEC define any time range between long term and short term? Please explain.

YUB-YEC-1-023
Reference: Application, PDF pages 59-63
Issue: Non-fuel O&M - 2023-2024 FTE hiring

Request:
(a) Please confirm whether YEC has commenced the hiring process for the 1.00 FTE position for Government Relations as of the date of filing the response to this IR.

(b) Please confirm if the 0.25 FTE position for Finance, Procurement & Information Technology has been filled as of the date of filing the response to this IR.

(c) Please provide the length of time the term will last for the 1.00 FTE position for Regulatory Projects Financial Analysis which was filled in 2023. How has this length of time been factored into this Application?

(d) Please confirm if the 1.00 FTE position for Junior Project Manager has been filled as of the date of filing the response to this IR.

(e) Please confirm whether YEC has commenced the hiring process for the 1.00 FTE position within Engineering Services for "new full-time positions and new co-op positions" as of the date of filing the response to this IR. Please also clarify how many positions there are and the related FTE allocation to each.

(f) Are the Engineering Services co-op positions referred to in part (e) expected to stay on as permanent full-time employees after the co-op term ends? If so, how has this been factored into this Application?

(g) Please provide a summary of all 2020, 2021, and 2022 actual and 2023 and 2024 forecast co-op positions.

YUB-YEC-1-024

Reference: **Application, PDF page 64**

Issue: **Diesel generator rentals**

Quote: The 2021 GRA forecast requirement for 1.8 MW diesel rental units was 15 units as approved in 2021, excluding spares; the same 15 units was required in 2022 (i.e., winter 2022/23), and 20 units is forecast for both winter 2023/24 and winter 2024/25, excluding spares (see Section 2.4 of Tab 2).

Request:

(a) How many spare rented diesel generation units does YEC forecast it will acquire for each of the test years?

(b) How does YEC account for the costs of any spare diesel rental generation units?

(c) Do the rented diesel generation units remain in locations determined by YEC in Yukon each year until the lease is not renewed, or are they removed from these locations after the winter peak season? Please explain.

(d) Please provide the maintenance costs for the rented diesel generation units that YEC has incurred each year since YEC commenced renting diesel generation units.

(e) Please provide the internal costs YEC has incurred for operating the rented diesel generation units for each year since YEC commenced renting diesel generation units.

(f) Please provide all evidence demonstrating competitive supply for YEC's diesel rental costs — i.e., the process of how the rented diesel generator units were acquired.

YUB-YEC-1-025

Reference: **Application, PDF page 65**

Issue: **Additional dependable capacity**

Quote: Additional dependable capacity is forecast to be commissioned during 2024 (i.e., the Battery Energy Storage System (BESS) project, plus 6.5 MW of new diesel at Dawson) – however, pending confirmation before approximately June 2024 of ability to rely on any such new facilities during all of winter 2024/25, YEC must retain diesel rentals as currently planned. New capital facilities to be commissioned in 2024, such as BESS and Dawson diesel replacement, will be included in the 2023/24 GRA revenue requirement rate base only to the extent that diesel rentals for winter 2023/24 and 2024/25 can be reduced. (Underlining added.)

Request:

(a) Please clarify what YEC means in the above quote, particularly the underlined portion.

(b) The above quote seems to state that YEC will change its revenue requirement after the Board renders its decision on this Application. Please explain if and how YEC intends to change its revenue requirement after the Board has made a decision.

YUB-YEC-1-026

Reference: **Application, PDF page 76; Appendix A to Board Order 2022-03, par. 368**

Issue: **LWRF**

Quotes: Application, PDF page 76:

Board Order 2022-03 (Appendix A, para 368) directed YEC, on a go-forward basis, to treat the balance in the LWRF as an offset to rate base. In support of this change in rate base determination as proposed by YEC based on prior GRA approvals, the Board referenced Board Order 1992-1 directing the treatment of low water reserve funds as an offset to rate base. The net impact of this change increased YEC's 2021 mid-year rate base, and reduced YEC's 2022 mid-year rate base. (Footnote omitted.)

Appendix A to Board Order 2022-03, par. 368:

Given at least one past Board Order directing the treatment of low water reserve funds as an offset to rate base, the Board directs YEC, on a go-forward basis, to treat the balance in the LWRF as an offset to rate base. The Board directs YEC to reflect this change in its compliance filing.

Request:

(a) Please restate YEC's financial schedules to reflect the treatment of the balance in the Low Water Reserve Fund (LWRF) as an offset to rate base as directed in Board Order 2022-03.

(b) Please provide the net change in YEC's requested revenue requirement for each of the test years based on the response to part (a).

YUB-YEC-1-027

Reference: **Application, PDF page 76; Appendix A to Board Order 2022-03, par. 368, PDF page 83**

Issue: **LWRF**

Quotes: Application, PDF page 76:

The LWRF exists solely to minimize the effect on ratepayers "that would otherwise be caused by variation in actual renewal source availability, including the variation caused by drought conditions" (OIC 2021/16 as referenced by Board Order 2022-03, Appendix A, para 365), and was not established to provide any role in financing, or providing offsetting contributions, to YEC's rate base. In this regard, the LWRF deferral account is similar to the Deferral Fuel Price Variance Account (DFPVA), and it is not appropriate for either of these deferral accounts to have any impact on YEC rate base determination.

Appendix A to Board Order 2022-03, PDF page 83, par. 368:

The testimony of YEC in this proceeding stated that YEC expects the LWRF to maintain a positive balance (i.e., collecting funds for future low water events) and that a positive balance is expected to exist in most years.

Request:

(a) Does treating the LWRF as an offset to rate base risk the calculated value of the balance of the LWRF?

(b) Is the calculated balance in the LWRF always available to cover fluctuations in renewal source availability, subject to the minimum and maximum balances of the LWRF?

(c) Are the minimum and maximum balances in the LWRF based on requests by YEC to the Board?

(d) Please explain why an amount that YEC collects from customers which is expected to maintain a positive balance in most years and is for a future event should not be treated as an offset to rate base.

(e) Why is the DFPVA relevant to LWRF calculations?

YUB-YEC-1-028

Reference: **Application, PDF page 76**

Issue: **LWRF**

Quote: The LWRF exists solely to minimize the effect on ratepayers "that would otherwise be caused by variation in actual renewal source availability, including the variation caused by drought conditions" (OIC 2021/16 as referenced by Board Order 2022-03, Appendix A, para 365), and was not established to provide any role in financing, or providing offsetting contributions, to YEC's rate base.

Request:

(a) Please provide any specific reference in OIC 2021/16 that directs the treatment of the LWRF balance.

(b) Please confirm that, under the Board's direction from Board Order 2022-03, the balance in the LWRF remains available for the use for which it was originally intended.

YUB-YEC-1-029
Reference: **Application, PDF page 78**
Issue: **Hearing cost reserve account**
Quote: The Proposed 2024 column does not include 2023/24 GRA hearing related costs as the costs are included in the hearing reserve after approval by the YUB and YEC does not expect the 2023/24 GRA hearing costs will be approved by the end of 2024. YEC will update the account balance based on information available at the time of compliance filing.

Request:
(a) Hearing costs are not considered until 30 days after the issuance of a Board decision. Is YEC providing an estimate at the time of its compliance filing, or is YEC waiting for the Board determination regarding hearing costs?

(b) Please confirm that all costs included in the annual costs row of Table 3.14.1, Hearing Cost Reserve Account Continuity Schedule, have been approved by the Board by way of a cost Board Order. If not confirmed, please explain.

YUB-YEC-1-030
Reference: **Application, PDF page 80**
Issue: **Proposed IPP purchase cost deferral account**
Quote: As noted in Section 3.6.4, based on Order in Council (OIC) 2019/25 YEC has created a deferral account that defers the variances between approved power purchase costs in rates and actual purchase costs [capital related costs are recovered through depreciation expense and rate base].

On a long-term average basis, using the LTA thermal calculation table from the 2021 GRA, YEC estimated the IPP purchases of $0.313 million in 2022 resulted in a $0.286 million reduction of thermal costs [please see Section 3.6.4 for details].

Request:
(a) Please explain how the IPP purchase cost deferral account would operate with numerical examples.

(b) Please explain the necessity of LTA thermal calculations with respect to IPP purchases.

YUB-YEC-1-031
Reference: **Application, PDF pages 81-82Tab 7, Schedule 11**
Issue: **Cost of debt**

Preamble: Schedule 11 provides a listing of YEC's long-term debt instruments.

Request:
Please explain why the debt instruments on lines 4, 6, 9, and 11 do not have declining balances. Do these debt instruments have annual principal payments? If not, please explain why not.

YUB-YEC-1-032

Reference: **Application, PDF page 86**
Issue: **IPP purchase cost deferral account**
Quote: These OIC requirements apply each year, regardless of whether YEC has been able to address specific adjustments needed in rates through a GRA process. Accordingly, a deferral account mechanism is needed to deal with variances that arise between YEC's costs incurred and its ability to recover these costs through rates.

Request:

(a) Does OIC 2019/25 refer to costs only as those invoiced to YEC by the IPP — i.e., a price x volume relationship?

(b) Please explain the necessity of LTA thermal calculations with respect to IPP purchases.

YUB-YEC-1-033

Reference: **Application, PDF page 86**
Issue: **IPP purchase cost deferral account**
Quote: Although the IPP generation is predominantly in summer months, on a long-term average basis there are some benefits from IPPs to reduce thermal generation [accumulation of benefits from drought years]. Therefore, YEC is proposing to include IPP long-term average (LTA) thermal displacement benefits related to the IPP purchase volume variances in the deferral account as an offset to the power purchase cost variance.

Request:

(a) Please explain what is meant by the "accumulation of benefits from drought years" and describe the benefits that are referred to in the quote.

(b) How will YEC prove the LTA thermal displacement benefits?

(c) Does not recognizing IPP costs in the year incurred create intergenerational inequities? Please explain.

(d) Does YEC agree that a GRA is a forecast of utility costs for a specific test period and that those costs should be recovered over that test period, with the exception of deferral accounts and related items? If not, why not?

YUB-YEC-1-034

Reference: **Application, PDF page 87**
Issue: **IPP purchase cost deferral account**
Quote: In contrast to the 2022 situation, the overall IPP LTA thermal displacement benefits for 2023/24 GRA load is 59% of IPP purchases which is the variance of LTA thermal with and without IPPs.

Request:

Please explain how "thermal displacement benefits for 2023/24 GRA load is 59% of IPP purchases" was determined.

YUB-YEC-1-035
Reference: Application, PDF page 89
Issue: Diesel rental business case

Preamble: On PDF page 89, YEC lists three alternatives to the proposed short-term rental of twenty 1.8 MW diesel rental units. The alternatives are the purchase of the diesel rental units, longer term lease of the diesel rental units, and reliance on the addition of new capital facilities that are forecast to be commissioned during the GRA test years.

Request:
(a) Why did YEC not consider the purchase of larger diesel units and subsequent resale of those units when not required?

(b) Why would YEC consider purchasing rental diesel units which YEC has already described as troublesome in past regulatory proceedings?

(c) Why would YEC consider a longer term lease for rental diesel units which YEC has already described as troublesome in past regulatory proceedings?

(d) Has YEC evaluated potentially more efficient and lower-cost alternatives than those referred to above? If not, why not?

(e) Please provide all internal documents and analyses of the rental diesel units, including all presentations to the YEC and YDC boards of directors, any minutes from those meetings or YEC internal meetings where discussion regarding diesel rental units occurred, and any other discussions pertaining to the rental of diesel generation units.

(f) Please provide all correspondence with any consultants, any terms of reference, and all products of any analysis regarding the rental of diesel generation units.

YUB-YEC-1-036
Reference: YEC-Tlingit Homeland Energy LP (THELP) Energy Purchase Agreement (EPA) Proceeding, Report to Yukon Minister of Justice, PDF pages 11 and 37-40; Application, Appendix 3.1, PDF pages 89-95
Issue: Diesel rentals
Quotes: YEC-THELP EPA Proceeding, Report to Yukon Minister of Justice, PDF page 11:

However, YEC has been renting diesels since 2016 and expects to be renting diesels past 2030. Renting for at least 14 years is not a short-term event or solution. YEC has not shown the rentals to be a least-cost solution on a short term or long-term basis. Although these costs were accepted in the 2021 GRA, YEC will need to show the least cost thermal alternative of rentals versus permanent thermal at the time of its next GRA or risk finding that those diesel rental costs were imprudently incurred.

YEC-THELP EPA Proceeding, Report to Yukon Minister of Justice, PDF pages 37-40:

YEC then pursued permanent diesel solutions including a 20 MW diesel plant, which was included in its 2017-18 GRA. Based on the evidence from YEC, it was prepared to proceed with the permanent thermal plant at that time. In the decision to that GRA dated December 27, 2018, the Board noted that YEC supported its case that adding capacity is needed but that YEC did not provide a sufficient business case to support the project. Had YEC done so, the thermal plant could have been in place by 2021 and the well-documented shortcomings of rented diesels would not be a recurring issue in each of YEC's subsequent regulatory proceedings before this Board. As a result of the poor business case, YEC put itself in the position of having no other viable option at the time to obtain capacity other than renting diesel units. (Footnotes omitted.)

The Board notes that instead of resubmitting a proper business case regarding the 20 MW diesel option, YEC, at the direction of its board, went in a different direction, thus cementing its reliance on the diesel rental option. In the Board's opinion, had THELP not approached YEC regarding the Atlin project and potential EPA, YEC would not have had any other options regarding a resolution to its capacity shortfall. In addition, YEC has not set up any RFP for new projects, renewable or otherwise, and has not provided any evidence that it has moved forward on any of the renewable projects it identified in either its 2016 Resource Plan or 10-Year Renewable Electricity Plan.

…

Further, the Board is of the view that YEC's assumption that it would need to buy and sell diesel-generating units on an annual basis is unsupported. YEC could acquire a unit to meet its capacity shortfall requirement until a permanent renewable solution is in place. Then when the unit is not required, YEC can either shift the unit to replace retiring units or sell the unit. Since the unit is intended for capacity purposes, the hours of run time would likely not be significant. To reduce uncertainty, YEC could go to the market to estimate the future value of the diesel unit it wants to sell; such a market exists. The Board noted that, for its initial submission regarding the Minto PPA (Purchase Power Agreement), YEC proposed to purchase the "used" diesel unit that Minto acquired for electricity until the mine was connected to the grid.

Although the Board agreed with the rental of diesel-generation units on an urgent short-term basis for YEC's 2021 GRA, the evidence of YEC in this proceeding is that the diesel rentals are not a good solution and that the need for additional capacity is for more than the near term. The Board does not accept that YEC provided sufficient evaluation or investigated the permanent diesel-generating unit alternative. It appears that since the initial rental agreement and the ensuing problems with the rental diesel units, YEC has not explored any other options to address the shortfall prior to the forecast renewable energy projects being brought on.

Request:
Given the concerns expressed by the Board in the YEC-Tlingit Homeland Energy LP Energy Purchase Agreement Proceeding, Report to Yukon Minister of Justice, how does YEC's business case address those concerns?

YUB-YEC-1-037

Reference: **Application, PDF pages 89 and 157; Appendix A to Board Order 2018-10, PDF page 94**

Issue: **Diesel rental business case and thermal replacement project**

Quotes: Application, PDF page 89:

In considering the short-term rental and longer-term lease or "own/resale" alternatives, it is necessary to distinguish between the need for diesel units to satisfy the N-1 dependable capacity requirement during the 2023/2024 GRA test years, versus YEC's ongoing planning to address future dependable capacity requirements in the longer term. Diesel rentals are proposed to address short-term requirements during the test years, and not as a long-term plan for providing YEC's required dependable capacity.

Appendix A to Board Order 2018-10, PDF page 94:

The Board is of the view that YEC has supported its case that adding capacity is needed to meet system reliability needs under the N-1 criterion and that a greenfield thermal generation plant is one of the preferred methods to add the needed capacity. However, YEC has not provided a business case in support of this project. YEC did not detail the costs and benefits associated with this project. The Board finds that it is not reasonable for YEC to proceed with the project without a detailed business case that considers the alternatives to the project. The Board notes that YEC forecast costs for 2019 and 2020 of $38 million and $20 million respectively. The magnitude of these costs alone is reason for proceeding cautiously. The Board is not persuaded that this project is the only way to address the predicted capacity shortfall and that the forecast costs are reasonable. The Board requires a detailed evaluation of alternatives to this project included in the business case.

Application, PDF page 157:

The Thermal Replacement project will install and commission in 2024 two 2.5 MW US Environmental Protection Agency (EPA) Tier 4 modular diesel units at the Faro diesel plant to replace 2023 retirement of Faro Diesel 1 (FD1) (5.1 MW); this new 5 MW of thermal dependable capacity will displace the need to rent three additional 1.8 MW diesel units for winter 2024/25, and add approximately $18.2 million to YEC's 2024 year-end rate base.

Request:

(a) Please explain why YEC distinguishes short term from long term for diesel generator rental unit purposes but considers LTA thermal displacement benefits for an IPP deferral account.

(b) Please describe the role that YEC's consultants played in the development of the diesel rental unit business case.

(c) Please provide the rationale in support of YEC's view that the rental of diesel generator units is a short-term option, given that the diesel generation units have been rented at least since 2016 and are forecast to be rented well into the future.

(d) The referenced plant (5 MW – two 2.5 MW units for Faro) has a planned in-service date of winter 2024-25. Please provide a table showing the revenue requirement costs on an annual basis if that plant is put into service by 2024, showing separate columns for: undepreciated capital at the beginning of the year, return, depreciation, undepreciated capital cost at the end of the year, maintenance costs, and any other cost information shown separately and deemed relevant for its planned 40-year service life.

(e) What are the characteristics of a US Environmental Protection Agency (EPA) Tier 4 modular diesel unit? Distinguish the characteristics from those of a Tier 1, 2, 3, or 5 modular unit.

(f) What are the price differences on a per-MW basis between units of each tier?

(g) Do all of the rented diesel generation units used by YEC comply with US EPA Tier 4 modular diesel units standards? Please explain.

(h) How do the diesel rental units compare with the characteristics of a US EPA Tier 4 modular diesel unit?

(i) Are the capital costs for the Faro diesel replacements scalable? That is, for a larger unit, would the capital cost related to the purchase of the unit on a per-MW basis be lower than a 2.5 MW unit? Please explain.

(j) Please explain why YEC did not consider individual 5 MW units for replacement purposes.

(k) If larger diesel units do not provide economies of scale, then why would any utility or location ever acquire a unit above 1.8 to 2.5 MW capacity instead of simply acquiring a series of 1.8 to 2.5 MW units?

(l) In theory, do diesel units provide economies of scale — that is, the larger the unit, the lower the cost per MW should be?

(m) If economies of scale apply for larger thermal units, please provide the same cost information showing annual costs as requested in part (d) but for two 10 MW diesel generation plants with an in-service date commencing January 1, 2025. Clearly state the reference for how the initial capital costs are obtained.

(n) For parts (d) and (e), show the potential sale prices of the diesel units after 10 years of service, 15 years of service, and 20 years of service.

YUB-YEC-1-038
Reference: **Application, PDF page 90**
Issue: **Rented diesels**
Quote: Diesel infrastructure at Whitehorse, Faro and Mayo has been or is being established to accommodate the needed modular diesel units.

Request:
Please provide the annual diesel infrastructure costs and forecast costs by location and by year for each of the years 2014 to 2030.

YUB-YEC-1-039
Reference: **Application, PDF page 91**
Issue: **Rented diesels**
Quote: New capital facilities commissioned in 2024 will be included in the 2023/24 GRA revenue requirement rate base only to the extent that diesel rentals for winter 2023/24 and 2024/25 can be reduced.

Request:
(a) Are the facilities to be commissioned in 2024 referenced above forecast to be part of rate base in 2024 in this Application? Please explain.

(b) If these facilities are not forecast to be part of rate base in this Application, how do they become part of revenue requirement when the decision in this proceeding sets the revenue requirement? Please explain.

(c) Please confirm that the proper test for new facilities to be included in rate base is the completed construction of a "used and useful" utility asset. If not confirmed, please explain.

(d) Generally, are YEC's practices to put assets in rate base compliant with the test described in part (c) above? Please explain.

YUB-YEC-1-040
Reference: **Application, PDF page 91**
Issue: **Rented diesels**
Quote: The purchase option for new diesels is only available subject to the time needed to complete required prudent planning and implementation activities, i.e., YEC is already making maximum use of new purchase diesels to displace the need for rental diesels in the test years.

Request:
Why has YEC delayed the planning or the purchase option until this Application? Please provide a detailed explanation.

YUB-YEC-1-041
Reference: **Application, PDF page 91; YEC BESS Application, PDF page 9**
Issue: **Rented diesels**
Quotes: Application, PDF page 91:
As indicated for the test years, delays in commissioning the BESS and 11.5 MW of new diesels committed at Dawson and Whitehorse have materially increased the 2024 diesel rental requirement.

BESS Application, PDF page 9:
In order to have the Project in service by November 2022 (i.e., available for winter 2022/23), long lead BESS and related equipment need to be ordered by approximately mid-2021 and initial site preparation activities also need to be completed in August 2021.

Request:

(a) Please explain the reason for the delays in commissioning the new diesels at Dawson and Whitehorse.

(b) The Battery Energy Storage System (BESS) project is forecast to be commissioned during 2024, but the expected in-service date was November 2022. Please provide a detailed explanation of the reasons for this delay.

YUB-YEC-1-042

Reference: **Application, PDF page 92**
Issue: **Diesel rental units**
Quote: Furthermore, at time of such purchase, there is no apparent feasible option to lock down a time and acceptable price for future sale of the new unit.

Request:

(a) Does YEC use estimates in any of its GRA forecasts?

(b) How were the costs for the 20 MW thermal units in YEC's 2017 GRA determined?

(c) How were the costs of the BESS project in the BESS project proceeding determined?

(d) What could YEC have done to estimate a future sale price of the diesel units?

YUB-YEC-1-043

Reference: **Application, PDF page 92**
Issue: **Diesel rental units**
Quote: Due to fast-changing environmental regulations focused on net-zero electricity systems and other climate change initiatives, the diesel units purchased today based on an assumed future unconfirmed sale may be very difficult to market in future at any acceptable price.

Request:

(a) Is it the opinion of YEC that there will not be any requirements for firm capacity thermal generation in the future?

(b) Please reconcile the above statement with YEC's forecast need of rental diesel generation units to at least 2035.

YUB-YEC-1-044
Reference: Application, PDF page 93
Issue: Rented diesels
Quote: Dependable capacity shortfalls were forecast in the 2016 Integrated Resource Plan, based on expected future non-industrial peak load growth and the need to replace aging diesel infrastructure. After considerable planning and public review, and based on the Yukon Government's climate change objectives, the option of developing one new large diesel facility was discarded by YEC and replaced by YEC's 10-Year Renewable Electricity Plan (10-Year Plan) that includes new thermal replacements at YEC's different thermal facilities, the Atlin Hydro Expansion project EPA, the BESS project, dependable DSM capacity development, and the review of large renewable dependable capacity and energy options such as Tutshi-Moon Pumped Storage Hydro.

Request:
(a) Please provide a forecast in-service date for each of the following projects:

i. The Atlin hydro expansion project EPA;

ii. The BESS project; and

iii. The Tutshi-Moon Pumped Storage project.

(b) For the projects listed in part (a), please discuss the likelihood of delays and potential that the projects may not be completed before 2030.

(c) For each of the projects listed in part (a), please describe the work completed to date and the hurdles to overcome with respect to those projects.

(d) Please explain whether a large thermal facility produces more emissions than a configuration of rented diesel units of a similar size.

(e) Do new diesel generating units produce less emissions than the diesel units that YEC rents on a per-MWh basis?

(f) For each of the rented diesel units in YEC's forecast for 2023 and 2024, please provide the date that the rental unit was manufactured.

(g) If YEC cannot produce the manufactured date, what is the average age of the rented diesel units?

(h) For each of the projects listed in part (a), list the required stakeholders, their role, and the constituency they represent.

(i) For each of the projects listed in part (a), please list each of the required approvals, both internal and external, for the project to proceed and the current status of each of those approvals.

(j) What are the stop points for each project?

(k) Are there any monetary thresholds that could represent a stop point for any of the projects? Please explain.

(l) Please provide any and all letters of intent with respect to each of the listed projects.

YUB-YEC-1-045

Reference: **Application, PDF page 93**
Issue: **Ongoing YEC dependable capacity planning**
Quote: … the Atlin Hydro Expansion EPA (amendments to the EPA have extended condition precedent timelines to October 31, 2023 to facilitate funding discussions) …

Request:
Please provide the amended EPA with revised costs and details on what was provided to remove each of the conditions precedent.

YUB-YEC-1-046

Reference: **Application, PDF pages 94-95**
Issue: **Ongoing YEC dependable capacity planning**
Quote: YEC is currently completing a review and update of the 10-Year Renewable Electricity Plan to take into account ongoing changes, including delays expected in development of the Atlin Hydro Expansion EPA and the Tutshi-Moon Pumped Storage Hydro project. Sensitivities will examine options to address those delays as well as options to address higher-than-expected growth in peak demand over the next decade.

In the longer-term context, YEC will continue to evaluate the relative cost of diesel rentals versus purchase of new thermal capacity taking into account options to sell purchased new diesels when they are no longer required on a long-term basis, e.g., when new dependable capacity is added to the grid as a result of the development of the Tutshi-Moon Pumped Storage Hydro project. However, based on currently available information, there are significant potential risks involved in purchasing versus renting diesels for capacity that is no longer expected to be needed after 10 years of operation:

Request:
(a) Since YEC is expecting delays with respect to the Atlin Hydro Expansion EPA and the Tutshi-Moon Pumped Storage Hydro project and is forecasting continued load growth, how valid is the statement "based on currently available information, there are significant potential risks involved in purchasing versus renting diesels for capacity that is no longer expected to be needed after 10 years of operation"? Please explain.

(b) Please explain why it has taken at least seven years for YEC to determine that: "In the longer-term context, YEC will continue to evaluate the relative cost of diesel rentals versus purchase of new thermal capacity taking into account options to sell purchased new diesels when they are no longer required on a long-term basis".

(c) Please provide a complete list of all parties that have expressed an interest in the Tutshi-Moon Pumped Storage Hydro or Moon Lake Pump Storage Phase 1 and Phase 2. Please identify all necessary consents and approvals that are required for the project to be viable to proceed.

YUB-YEC-1-047
Reference: **Application, PDF page 95**
Issue: **Diesel rentals**
Quote: In the longer-term context, YEC will continue to evaluate the relative cost of diesel rentals versus purchase of new thermal capacity taking into account options to sell purchased new diesels when they are no longer required on a long-term basis, e.g., when new dependable capacity is added to the grid as a result of the development of the Tutshi-Moon Pumped Storage Hydro project. However, based on currently available information, there are significant potential risks involved in purchasing versus renting diesels for capacity that is no longer expected to be needed after 10 years of operation…

Request:
As YEC is currently into its seventh year of rented diesels, please explain why YEC delayed consideration of the longer term context.

YUB-YEC-1-048
Reference: **Application, PDF page 95**
Issue: **Rented diesels**
Quote: As noted above, the LCOC for Faro rented diesels over a 10-year period with 4% annual price inflation equals $239/kW-yr.

In contrast, using new purchase costs for the 5 MW of Faro units in service in 2024 at $3.66 million/MW, the LCOC for new units sold in the 11th year after commissioning can only compete with the rental option at unrealistically high sales prices. For example, an unrealistic 10-year sales price equal to 75% of original cost (reflecting the remaining three-quarters of the original expected life) yields an LCOC for the purchase option of $278/kW-yr which remains much higher than the LCOC for the rental option in these specific circumstances.

Request:
(a) Please provide an Excel spreadsheet, with formulae intact, showing the revenue requirement costs for 5 MW Faro units on an annual basis for years 1 to 15, with separate columns for: undepreciated capital at the beginning of the year, return, depreciation, undepreciated capital cost at the end of the year, maintenance costs, and any other cost information shown separately and deemed relevant. Do not include capital costs for system upgrades to connect the Faro units.

(b) Please provide a separate Excel spreadsheet, with formulae intact, showing the revenue requirement costs on an annual basis for years 1 to 15 for the rental of 5 MW (three rental units) of generation capacity, with separate columns for: rental costs, cost of running the units ahead of lower cost generation sources, annual delivery and removal costs of the units, annual connection and disconnection costs of the units, maintenance costs, and any other cost information deemed relevant shown separately. Do not include capital costs for system upgrades to connect the rented diesel units.

(c) Please provide the capital expenditure for the purchase of the 5 MW diesel unit at Faro.

(d) Please provide the detailed economic analysis in spreadsheet format for the following: "… using new purchase costs for the 5 MW of Faro units in service in 2024 at $3.66 million/MW, the LCOC for new units sold in the eleventh year after commissioning can only compete with the rental option at unrealistically high sales prices. For example, an unrealistic 10-year sales price equal to 75 percent of original cost (reflecting the remaining three-quarters of the original expected life) yields an LCOC for the purchase option of $278/kW-yr which remains much higher than the LCOC for the rental option in these specific circumstances."

(e) Please provide a table individually listing all thermal units utilized by YEC, separating the rental units from YEC-owned units. For each of the units, provide the actual generation in kWh, the efficiency, hours of operation, generation required for maintenance runs, fuel consumed per unit, and all-in costs to operate by month and by year for the years 2021 and 2022.

(f) For the diesel rental units, please explain which party bears the risks if the units fail to operate as planned.

YUB-YEC-1-049

Reference: **Application PDF pages 65 and 94, footnote 2**

Issue: **Rented diesels**

Quotes: PDF page 65:

Forecast mobile diesel costs are based on negotiated contracts with the vendor and reflect both the increased number of rental units (which have increased from 15 to 20 units as of winter 2023/24) as well as the increase in rental unit costs (average cost per rental unit has increased from $0.233 million/unit as approved in 2021 to $0.338 million/unit in 2024).

…

PDF page 94, footnote 2:

LCOC for all 2024 diesel rental costs is $216 to $252 per kW-yr assuming $186.02 average YEC rental cost per kW in year 1 with escalation in range of 3% to 4%/yr …

Request:

How valid is the assumption of three-percent to four-percent inflation for the diesel rental units when actual diesel rental costs increased by 45 percent[1] from 2021 to 2024?

[1] ($0.338 million - $0.233 million)/$0.233 million = 45 percent.

YUB-YEC-1-050

Reference: **Application, PDF pages 67-68**

Issue: **Non-fuel O&M - Transmission and Distribution – Brushing and Other Non-Labour Costs**

Quote: Total brushing costs are forecast to decrease by $0.020 million in 2023 and 2024 from 2021 approved. Brushing activities are based on Yukon Energy's brushing policy and brushing plans. Yukon Energy has had success since establishing a regular cycle as per the policy, with an overall decrease in the number of tree caused outages and an increasingly competitive bid process. Tender packages offer much higher quality information and, along with an increase in contractor familiarity with the geography and conditions of YEC lines, has resulted in positive tender results. Significant work has also been done in developing brushing specifications to be followed by contractors as well as a guideline for brushing tender evaluation.

Preamble: The Board wants to understand if YEC's brushing policy and plans have resulted in better forecasting of costs.

Request:

(a) In light of the positive outcomes YEC submits to have obtained since establishing a brushing policy and regular cycle of brushing, please explain why 2022 actual brushing costs were approximately 10 percent[2] less than those incurred in 2021.

(b) Based on the 2022 actual brushing activities and related costs, on what basis does YEC consider that it will be able to increase its brushing activities and related costs by approximately 16 percent in the year 2023?[3]

(c) Please explain in more detail how the "allocation of labour costs and other non-labour costs between transmission and distribution is impacted by the allocation of the department's administrative costs", as noted on PDF page 67.

(d) Considering the response to part (c), please explain why both transmission and distribution of? other non-labour costs increased in 2022 actual costs as compared to 2021 actual costs.

YUB-YEC-1-051

Reference: **Application, PDF page 69**

Issue: **Non-fuel O&M – General Operating and Maintenance costs**

Request:

(a) Please provide a variance explanation for the increase in 2022 actual transportation costs of $0.630 million compared to 2021 actual transportation costs of $0.521 million.

(b) Are the reasons provided in response to part (a) expected to continue into 2023 and 2024? If not, please explain.

[2] Calculated as ($1.313 million (2021) less $1.180 million (2022)) divided by $1.313 million.

[3] Calculated as $1.368 million (2023) less $1.180 million (2022) divided by $1.180 million.

(c) Please explain why the costs for maintenance of company-owned properties is forecast to decrease in the years 2023 ($0.569 million) and 2024 ($0.466 million) compared to 2022 actual costs of $0.630 million.

(d) Please provide a variance explanation for the decrease in 2022 actual SCADA communication costs of $0.082 million compared to 2021 actual SCADA communication costs of $0.167 million.

(e) Are the reasons provided in response to part (d) expected to continue into 2023 and 2024? If not, please explain.

YUB-YEC-1-052
Reference: Application, PDF pages 69-71
Issue: Non-fuel O&M – Administration

Request:

(a) Please explain why 2021 actual Environmental Management costs of $0.392 million were less than 2021 approved costs of $0.535 million and continued to be less in 2022 with actual costs of $0.329 million, notwithstanding that Environmental Management costs were "forecast to increase by $0.297 million (124%) in 2021 over 2018 approved due to increased environmental monitoring activities associated with the new three-year water license of the Aishihik Generating Station"[4] in this Application.

(b) Considering the response to part (a) and YEC's forecast increases for the 2023 and 2024 test years — $0.819 million and $0.798 million respectively — being due to "increased environmental monitoring activities primarily associated with the renewal of the water licence for the Aishihik Generating Station," please explain the basis on which the forecast increases, which are similar to the increases forecast previously, will come to fruition in 2023 and 2024.

(c) For Recruitment costs, please provide variance explanations for the lower 2021 actual costs of $0.149 million compared to 2022 actual costs of $0.554 million.

(d) Please explain the increase in forecast 2023 Contracting costs of $0.058 million in comparison to 2022 actual of $0.008 million and 2024 forecast of $0.018 million.

YUB-YEC-1-053
Reference: Application, PDF pages 71-74
Issue: Non-fuel O&M - Insurance and Reserve for Injuries and Damages

Request:

(a) Please provide any analysis or evidence to support YEC's statement that "the market rate increases experienced by YEC as part of the 2023 renewals are consistent with peer utilities in Canada." In the response, please identify the peer utilities being used in the analysis provided.

(b) Please explain what the reduced "participation rate of an insurer on our property program" is in reference to.

[4] YEC 2021 GRA, PDF page 64

(c) Please identify the dollar value change in "deductible on our property policy to limit the rate increase caused by market conditions and recent claims" and the savings that resulted.

(d) Referring to Table 3.11: RFID Annual Charges Ten Year History, please explain why the actual annual charges identified on that schedule for the years 2021 and 2022 do not correspond to the annual costs shown on Table 3.11.1: RFID Continuity Schedule for those same years.

(e) Please provide details of the actual annual charges for the years 2021 and 2022 as shown on Table 3.11.1: RFID Continuity Schedule.

YUB-YEC-1-054

Reference: **Application PDF page 77, Table 3.14; PDF pages 500-501, Tab 7, Schedule 3B, pages 7-11 and 7-12**

Issue: **Amortization of deferred charges**

Quotes: Application, PDF page 77:

Forecast amortization of deferred charges is $3.657 million in 2023 and $5.594 million in 2024, compared to $5.608 million for 2021 approved. This 2024 amount includes amortization of feasibility and relicensing costs ($3.195 million) amortization of regulatory costs ($0.846 million, including $0.250 million hearing reserve annual appropriation), intangibles ($1.281 million), dam safety costs ($0.051 million) and amortization of vegetation management deferral costs ($0.222 million).

Preamble: The Board requires further clarification of the components of the total amortization of deferred charges in Table 3.14 for the years 2021 to 2024 and an explanation of YEC's method for the calculation of contribution amortization.

Request:

(a) Please provide a list, including subtotals where required, to illustrate the 2021-22 actual and 2023-24 forecast amortization of deferred charges by cost category.

(b) For the years 2023 and 2024, please ensure that the list provided in response to part (a) reflects the amounts calculated as amortization expense for deferred costs and intangibles as summarized on Tab 7, Schedule 3B (page 7-11 for 2023 and 7-12 for 2024). Otherwise, provide a reconciliation between the cost categories used in the Table 3.14 amounts and the Schedule 3B amounts.

(c) Please provide a reference to where the amortization of contributions shown on Table 3.14 for the years 2021 to 2024 is determined in this Application. Otherwise, provide an explanation and the calculation in response to this IR.

YUB-YEC-1-055

Reference: **Application, PDF pages 79 and 80, Table 3.14-4**

Issue: **Defined Pension Deferral Account**

Quote: Board Order 2022-03 approved Defined Pension Deferral Account to defer any variances between approved defined benefit pension plan expense in the test year and actuals. Table 3.14.4 provides a continuity schedule for this deferral account. The addition of $0.047 million and -$0.109 million reflect the variances between the approved amount of $0.720 million included in the 2021 labour cost and actual amounts of $0.767 million for 2021 and $0.611 million for 2022. YEC is not proposing amortization of the deferral account balance at this time as the balance is not significant.

Preamble: The Board requires further clarification.

Request:

(a) Please clarify if YEC is required to either obtain or submit an actuarial valuation of its defined pension deferral account on a regular basis to the Board.

(b) If confirmed, please provide the details of the last actuarial valuation provided, as required.

YUB-YEC-1-056

Reference: **Application, PDF page 100**

Issue: **Rate Schedule 35**

Quote: Accordingly, this rate schedule was never implemented. As Minto mine ceased its mining operations, as discussed in Tab 2, this rate schedule is no longer required.

Request:

Please confirm that YEC is asking for Rate Schedule 35 to be removed. If not confirmed, please explain why.

YUB-YEC-1-057

Reference: **Application, PDF page 107; Appendix A to Board Order 2018-10, par. 342; OIC 2021/16, Section 3, subsections 2-7**

Issue: **Wholesale rates**

Quotes: Application, PDF page 107:

… and an Energy Reconciliation Adjustment provision which is intended to adjust charges to AEY that are attributable to AEY's wholesale purchases that vary from the wholesale forecast approved for YEC's last GRA. (Application, PDF page 107)

Appendix A to Board Order 2018-10, par. 342:

To be clear, ERA billing or refund amounts will be based on a consistent definition of costs. In this decision, the Board has clarified that actual costs for both the LWRF and the ERA are those costs related to actual thermal generation and not forecast thermal generation. Further, if significant industrial load enters or

leaves the Yukon Integrated System or there are material changes in generation assets where either or both of these factors change the baseload generation mix, YEC can propose changes as to how the LWRF and the ERA operate at that time.

Request:

(a) Please explain whether, in YEC's view, OIC 2021/16 supersedes par. 342 of Appendix A to Board Order 2018-10.

(b) If affirmative, please explain and cite which sections/subsections of OIC 2021/16 support YEC's view.

YUB-YEC-1-058

Reference: Application, PDF pages 141-148, Tables 5.2-5.5
Issue: General Plant

Preamble: The Board seeks further information on items included in General Plant.

Request:

Please provide a single table including all General Plant projects broken down by year, with additional columns showing the capital costs and any applicable AFUDC, showing AFUDC separately from the capital costs. If a row is described as "Other Projects", then provide a breakdown of those other projects with separate capital and AFUDC costs. Add two further columns to the table, one cross-referencing any applicable business cases for those items; if there is no business case, insert "N/A" into that column. In the second additional column, indicate whether the item is new or a replacement.

YUB-YEC-1-059

Reference: Application, PDF pages 141-148, Tables 5.2-5.5
Issue: Intangible assets

Preamble: The Board seeks further information on items included in intangible assets.

Request:

Please provide a single table including all intangible asset projects broken down by year, with additional columns showing the capital costs and any applicable AFUDC, showing AFUDC separately from the capital costs.

YUB-YEC-1-060

Reference: **Application, PDF pages 63, 142, 144, 146 and 148, Tables 5.2 to 5.5**

Issue: **Non-fuel O&M - Capital / Maintenance forecast allocation of labour expense**

Quote: In addition to the factors affecting labour listed above, the capital/maintenance forecast allocation also impacts the forecast labour expenses. YEC estimates the percentage of time each position will spend on capital and non-capital works. This assessment is based on past experience as well as expectations for the coming year. This allocation directly impacts the revenue requirement in any given year as maintenance charges are directly expensed while capital labour is reflected in expenses such as depreciation after the project is completed and placed into service. The 2021 approved revenue requirement forecasts included an allocation set at 17.2% capital and 82.8% maintenance. For the 2023 test year the forecast allocation is 17.9% capital and 82.1% maintenance and for the 2024 test year the forecast allocation is 18.4% capital and 78.6% maintenance. The ratio is based on YEC's best estimates for each employee's time to perform their job based on corporate goals and expectations and an overall increase in capital projects volumes.

Preamble: On Tables 5-2 to 5-5, YEC provided its capital expenditure amounts for 2021-2024 as follows: $22.2 million (2021 actual); $27.5 million (2022 actual); $58.9 million (2023 forecast) and $30.8 million (2024 forecast).

Request:

(a) Given the significant capital forecast for the years 2023 and 2024, please explain why YEC's forecast labour allocation between capital and maintenance costs has changed only minimally.

(b) What were the actual 2021 and 2022 capital/maintenance allocations of labour expense on a dollar basis and percentage basis?

YUB-YEC-1-061

Reference: **Application PDF pages 141-148, Table 5.2 to Table 5.5 (years 2021- 2024, respectively); PDF pages 231-235, Section 5.2A-1: Aishihik Generating Station Five-Year Licence Renewal (Additions to Rate Base of $3.903 million in 2022 and $0.575 million in 2023)**

Issue: **Work-in-progress continuity schedules - Aishihik license renewal**

Quote: **Process leading to 5-Year Renewal**

Following a multi-party planning process, Yukon Energy submitted a YESAA Project Proposal for a 25-year licence renewal to the Haines Junction Designated Office (DO) of the Yukon Environmental and Socio-Economic Assessment Board (YESAB) on July 10, 2020. An application for a 25-year licence renewal was subsequently filed with the Yukon Water Board (YWB) on May 31, 2021.

The Designated Office Evaluation Report was issued on June 18, 2021. In that report, the Haines Junction Designated Office declined to assess the proposed licence renewal for the 25-year period requested by Yukon Energy, and instead decided to confine the temporal scope of the assessment to 5 years. A Decision Document for a 5-year renewal term was subsequently issued on October 21, 2021 by the Government of Yukon and Fisheries and Oceans Canada. As a result of these regulatory decisions, the YWB's jurisdiction to renew the AGS water licence was confined to the 5-year period assessed by the Designated Office, from January 1, 2023 to December 31, 2027 (pursuant to section 86 of YESAA), and Yukon Energy had no feasible option other than to revise its Water Use Licence Renewal application to be limited to that 5-year period.

Preamble: The Board requires further clarification of the costs related to the Aishihik license renewal.

Request:

(a) Referring to PDF page 144, Table 5.3 (2022) note, please confirm that the Notes quoted as: "** Reflects $1.3 million spending in 2022 and $5.7 million transfer to long-term relicensing project [25-year license]" is in reference to the line identified as "*** Aishihik 5-Year License Renewal" on Table 5.3 (2022) and the line identified as "Aishihik 25-Year License Renewal" on PDF page 151, Table 5-7.

(b) Referring to PDF page 144, Table 5.3 (2022), please explain the negative capital expenditure in the amount $4,421.50 thousand shown at the line identified as "*** Aishihik 5-Year License Renewal".

(c) If the response to part (b) is that the negative capital expenditure of $4,421.50 thousand is related to the Aishihik 25-Year License Renewal, please indicate where the transfer of that amount between projects is indicated on Table 5.3 (2022) as a positive capital expenditure of $4,421.50 thousand.

(d) Referring to the above quote, on what basis should YEC be including the costs for requesting an Aishihik 25-year License Renewal as a potential future capital asset as opposed to expensing those costs in the year 2022? Provide support for the response, including a reference to any business case prepared that contemplated an Aishihik 25-year License Renewal.

(e) Please confirm that the costs respecting YEC's most recent Aishihik 3-year license renewal (January 1, 2020 to December 31, 2022) were in the amount of $1.004 million on an actual basis. If not confirmed, please explain.

(f) Please confirm that costs respecting YEC's most recent Aishihik 5-year license renewal (January 1, 2023 to December 31, 2027) were in the amount of $4.478 million ($3.903 million in 2022 actuals and $0.575 million in 2023 forecast costs). If not confirmed, please explain.

(g) Please confirm that costs respecting YEC's proposed Aishihik 25-year license renewal are in the amount of $7.2 million ($5.7 million in actual costs to 2022 and $1.1 million in forecast 2023 costs and $0.400 million in forecast 2024 costs). If not confirmed, please explain.

(h) Please provide detail in support of YEC forecasts of additional costs in 2023 ($1.1 million) and 2024 ($0.4 million) for the Aishihik 25-year License Renewal, including an explanation in support of the viability of this project.

(i) Please confirm that YEC's 2023-24 forecast reflects the inclusion of AFUDC on its proposed Aishihik 25-year license renewal.

(j) Referring to the responses to parts (f), (g), and (h), please provide an explanation for what appear to be exponential increases in the cost of renewing the license on a three-year, five-year, and 25-year basis.

YUB-YEC-1-062

Reference: **Application, PDF pages 151-152, Table 5.7, 2021-2024, Energy Storage System**

Issue: **Work-in-progress continuity schedules – Battery Energy Storage System and related Contribution**

Quote: PDF pages 151-152, [excerpt of] Energy Storage System financial information:

YUKON ENERGY CORPORATION 2023/24 GRA								Table 5.7
WORK IN PROGRESS CONTINUITY SCHEDULE - Projects Not impacting Rate Base								August 2023
($000S)								
	2021				2022			
	WIP Opening Balance	Expenditures	Adjustments	WIP Closing Balance	WIP Opening Balance	Expenditures	Adjustments	WIP Closing Balance
Capital Projects – Major projects > $1 million – Not impacting Rate Base								
Energy Storage System	517.4	854.5	-219.5	1,152.4	1,152.4	8,848.3	0.0	10,000.7
Energy Storage System Contributions	-316.2	-581.3	0.0	-897.5	-897.5	-6,128.6	0.0	-7,026.1

	2023				2024			
	WIP Opening Balance	Expenditures	Adjustments	WIP Closing Balance	WIP Opening Balance	Expenditures	Adjustments	WIP Closing Balance
Capital Projects – Major projects > $1 million – Not impacting Rate Base								
Energy Storage System	10,000.7	19,950.0	0.0	29,950.7	29,950.7	1,000.0	0.0	30,950.7
Energy Storage System Contributions	-7,026.1	-9,473.9	0.0	-16,500.0	-16,500.0	0.0	0.0	-16,500.0

Preamble: The Board requires an update of the BESS project.

Request:

(a) Please provide an update of the current status of the BESS project including any changes in: project scope, forecast, or actual costs incurred to date, anticipated in-service dates, or other pertinent details since YEC's last GRA.

(b) Please prepare a table comprised of major cost components with totals to each closing work-in-progress (WIP) balance noted in the quote above for each of the years 2021 through 2024.

(c) Please clarify whether the contribution amount is expected to change in step with the forecast capital costs. Why or why not?

YUB-YEC-1-063
Reference: Application, PDF page 149, Table 5.6, Summary of Completed Projects for 2021-2024 Years
Issue: Deferred project costs
Quote:

YUKON ENERGY CORPORATION 2023/24 GRA					Table 5.6
SUMMARY OF COMPLETED PROJECTS FOR 2021-2024 YEARS					August 2023
($000S)					
	Completed Projects ($000)				
	2021	2022	2023	2024	Total
Deferred Costs – Major projects > $1 million – Rate Base Additions					
DSM Program Development	10.4	1,430.8	-	-	1,441.2
DSM Program Development Contributions	-	(1,141.6)	(21.6)	-	(1,163.3)
DSM Program 2022-2030	-	64.2	1,271.6	1,160.0	2,495.9
Southern Lakes Storage	-	-	8,784.2	-	8,784.2
Aishihik 5-Year License Renewal	-	3,903.4	575.4	-	4,478.8
Subtotal	**10.4**	**4,256.8**	**10,609.5**	**1,160.0**	**16,036.7**
Deferred Costs – Projects $100,000 to $1 million - Rate Base Additions					
IPP Standing Offer Program Implementation	326.0	-	70.3	-	396.3
Dam Safety Review	254.5	-	-	-	254.5
Atlin EPA Section 18 Proceeding (Hearing Reserve Acct)	-	-	385.6	-	385.6
Mayo Civil Infrastructure Refurbishment Planning	-	-	168.4	-	168.4
System Wide Arc Flash Study	-	-	197.7	-	197.7
Whitehorse Post-Flood Assessment	-	115.2	-	-	115.2
WRGS Thermal Assessment & Permitting	-	-	-	413.0	413.0
Public Safety Plans	-	-	225.0	-	225.0
System Wide Stability Study	-	-	200.0	-	200.0
Digital Strategy and Policy Development	-	-	120.0	-	120.0
Privacy Management Program	-	-	100.0	-	100.0
Vegetation Management Plan Update	-	-	225.0	-	225.0
Cyber Security Framework	-	-	-	140.0	140.0
Transmission Line Detailed Inspection Program	-	-	-	250.0	250.0
Gates/TIV's Certification Assessment System Wide	-	-	-	200.0	200.0
Digital Reporting Review	-	-	-	125.0	125.0
Records Policy Planning and Program Development	-	-	-	100.0	100.0
Breaker Condition Assessment	-	-	-	100.0	100.0
Other Projects with <$100k Spending	262.8	172.6	342.2	(10.0)	767.6
Subtotal	**843.3**	**287.9**	**2,034.2**	**1,318.0**	**4,483.3**

Preamble: YEC's Application separates deferred project costs into two categories: Major projects > $1 million and Projects $100,000 to $1 million.

Request:

(a) Please provide references to past YEC decisions indicating the Board's preference for the capitalization of the various studies, assessments, reviews, and similar as opposed to expensing them in the year the expenses are incurred.

(b) Does YEC recover AFUDC on the various studies, assessments, reviews, and similar during the time they remain in CWIP as deferred costs?

(c) Does YEC recover a return on rate base on the unamortized portion of the various studies, assessments, reviews, and similar?

(d) How and when is the decision made by YEC to "capitalize" the deferred costs into rate base either on a stand-alone basis or as part of the costs of a larger project?

(e) How does the capitalization of the various studies, assessments, reviews, and similar meet YEC's test for capitalization under YEC's capitalization policy?

(f) Please provide a copy of YEC's capitalization policy as support for its response to part (e).

(g) Please prepare a table of all deferred project costs from 2021 to 2024 as identified in the quote above and add a column explaining how each of the projects met or will meet YEC's test for capitalization under YEC's capitalization policy.

YUB-YEC-1-064

Reference: **Application PDF pages 496-499, Schedule 3A-2023 and Schedule 3A-2024; PDF pages 145-148, Table 5.4-2023 and Table 5.5-2024; PDF pages 151-152, Table 5-7**

Issue: **Capital related schedules**

Preamble: The Board seeks to understand the relationships between the various schedules provided by YEC.

Request:

(a) With respect to capital additions for each of 2023 and 2024, please reconcile the capital additions on PDF pages 496-497, Schedule 3A-2023, and PDF pages 498-499, Schedule 3A--2024, with the capital additions for completed projects on PDF pages 145-146, Table 5.4 2023 and PDF pages 147-148, Table 5.5-2024.

(b) Please explain the difference between closing CWIP shown on PDF pages 145-146, Table 5.4-2023, and PDF pages 147-148, Table 5.5-2024, and the closing CWIP shown on PDF pages 151-152, Table 5-7.

(c) Please explain why YEC appears to have separated closing CWIP where there are rate base additions from closing CWIP where there are no rate base additions notwithstanding, in YEC's 2021 GRA, in response to YEC-YUB-2-16, there was a single combined document provided.[5]

(d) Please identify the tables in Tab 5 that YEC considers responsive to the Board direction at par. 242 of Appendix A to Board Order 2022-03.

(e) Referring to Schedule 3A-2023 as an example, please provide a reason for the lines noted as "Depreciation Study Differences."

(f) Referring to Schedule 3A-2023 as an example, how does YEC distinguish between the Land account identified as "Rights" which is amortized over 50 years from the account identified

[5] Appendix A to Board Order 2022-03 stated the following at par. 242: "Due to these concerns, the Board directs YEC to present cost breakdowns for its capital projects in a uniform manner in future GRA proceedings. The Board further directs YEC to provide schedules for all capital projects in the CWIP continuity format — the template for which was provided in information request YUB-YEC-2-16 — in future GRA proceedings. In order to ensure a fair and efficient process for future GRAs, if YEC does not comply with this direction, the Board may request YEC to update and refile its application or may deny the application."

as "Right of Use Assets" which appears to have no period of amortization in years but reflects the amount of $0.113 million of forecast amortization expense for 2023?

YUB-YEC-1-065
Reference: Application, PDF pages 129-132
Issue: Major Projects > $1 Million – Rate Base Additions

Request:

(a) Referring to the project Thermal Replacement (16.5 MW), please confirm that the 2024 Closing CWIP amount of $29.771 million as shown on PDF page 147, page 5-21, Table 5.5 reflects that the capitalization of the 5 MW diesel replacement at Faro in 2024 has occurred. If confirmed, please provide a table with a column illustrating, by major project cost component, the expenditures comprising the 2024 Closing CWIP amount of $29.771 million and a column illustrating the expenditures comprising the remaining work to be completed.

(b) Referring to the response to part (a), please identify on PDF page 152, Page 5-26, Table 5-7, where the $29.771 million in 2024 Closing CWIP can be found.

(c) For the Major Projects > $1 Million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in--service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

(d) For the Major Projects > $1 Million that are forecast to be completed and in service in 2024, please provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

YUB-YEC-1-066
Reference: Application, PDF pages 132-135
Issue: Projects $100,000 to $1 Million

Request:

(a) For all Projects $100,000 to $1 million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is an expected change in project scope or cost.

(b) For all Projects $100,000 to $1 million that are forecast to be completed and in service in 2024, please provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is an expected change in project scope or cost.

(c) Referring to the distribution project IPP Connections (page 5-8), please explain why contributions of $6.401 million exceed the project costs of $5.205 million.

YUB-YEC-1-067
Reference: Application, PDF page 136
Issue: Major Deferred Projects > $1 Million – Rate Base Additions

Request:
(a) For the Major Deferred Projects > $1 Million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

(b) For the Major Deferred Projects > $1 Million that are forecast to be completed and in service in 2024, please provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

YUB-YEC-1-068
Reference: Application, PDF pages 137-138
Issue: Deferred Projects between $100,000 and $1 Million – Rate Base Additions

Request:
(a) For the Deferred Projects $100,000 to $1 million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

(b) For the Deferred Projects $100,000 to $1 million that are forecast to be completed and in service in 2024, please provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

YUB-YEC-1-069
Reference: Application, PDF pages 138-139
Issue: Intangible Assets, Major Projects > $1 Million – Rate Base Additions

Request:
For the Major Projects > $1 million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

YUB-YEC-1-070
Reference: Application, PDF page 139, page 5-13
Issue: Intangible Projects between $100,000 and $1 Million – Rate Base Additions

Request:
(a) For the Intangible Projects between $100,000 to $1 million that are forecast to be completed and in service in 2023, please confirm that the assets are currently in service or provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

(b) For the Intangible Projects between $100,000 to $1 million that are forecast to be completed and in service in 2024, please provide an update on the expected in-service date as of the date of filing the response to this IR. For any change to the expected in-service year, please provide reasons and whether there is a change in project scope or cost.

YUB-YEC-1-071
Reference: Application, PDF pages 155-156
Issue: Changes for projects reviewed and approved in 2021 GRA

Preamble: YEC explains that there has been a "total adjustment of $2.728 million added to the rate base previously approved in 2021 GRA"; however, the numbers provided for the Mayo-McQuesten Transmission Line Upgrade project (a reduction of $0.507 million to rate base) and Replace P125 WH2 Head Gate project (an addition to rate base of $2.221 million) do not total $2.728 million.

Request:
(a) Please confirm whether there is a mathematical error as noted in the preamble.

(b) If part (a) is confirmed, please verify that the rate base additions have been recorded correctly.

YUB-YEC-1-072
Reference: Application, PDF pages 170-171
Issue: Capital project: Transmission Line Replacement L178
Quote:

Table 5.1A-4.1: Summary of Scope of Transmission Line Refurbishment Work (L178) – Number of Structures

Work Description	Assessment 2018	Completed Through 2022	Planned 2023-2027
Full structure replacement	144	52	92
Cross arm replacement	102	38	64
Insulator replacement	549	162	387
Total structures replacement	**795**	**252**	**543**
No maintenance required	39	-	-
Total structures	**834**	**252**	**543**

…

This total project cost has increased substantially from the 2021 GRA estimate of $8.3 million for a number of reasons.

- L178 is the only line in the WAF system that required significant rock blasting in order to replace certain structures.
- Further, the terrain in the area is much less accessible, requiring specialized equipment and increased installation time for each structure. Inflationary pressures have driven both contractor rates and material costs higher than anticipated over the last few years.
- Additionally, the cost to permit and build access roads to the structure locations has been included in the cost of this project (this was planned to be done separately as of the last GRA, similar to the other transmission lines).

Preamble: On PDF page 171, Table 5.1A-4.1, Summary of Scope of Transmission Line Refurbishment Work (L178), indicates that there are 543 structures forecast to be replaced between the years 2023 to 2027, with the work to be completed in 2023-2024 costing approximately $6.00 million. The table currently consists of three columns.

Request:

(a) Please replace the planned 2023-2027 work column (the third column) currently in Table 5.1A-4.1, Summary of Scope of Transmission Line Refurbishment Work (L178), with four columns to provide information respecting: (i) Actual 2023 to Date, (ii) Remaining Planned 2023, (iii) Planned 2024, and (iv) Planned 2025-2027. At the bottom of each of the (now six)[6] columns, please include a row detailing "the cost to permit and build access roads

[6] The six columns are: Assessment 2018, Completed through 2022, Actual 2023 to Date, Remaining Planned 2023, Planned 2024, and Planned 2025-2027.

to the structure locations," a row of the remaining actual or forecast costs, and a row totalling all actual or forecast costs.

(b) In table form, please identify (by area) where the 2022 actual to date and forecast 2023 and 2024 replacements will occur and the number of poles to be replaced in each of those areas.

(c) Given that this project is replacing or refurbishing existing transmission line structures, please explain why the conditions noted by YEC in the above quote were not factored into the original project budget.

(d) Please fully explain whether the transmission line refurbishment work on L178 is being done by YEC or YEC contractors.

YUB-YEC-1-073
Reference: **Application, PDF page 173**
Issue: **Capital project: S250 Callison Protection, Control and SCADA Upgrade**
Quote: Due to the extensive work required, Dawson City will need to be islanded on diesel for as long as one month, with the Callison Substation in a full outage for several weeks.

Request:
Please explain if either of the events (islanded and full outage) identified in the quote have occurred as of the date of filing the response to this IR.

YUB-YEC-1-074
Reference: **Application, PDF page 177**
Issue: **Capital project: Wareham Spillway Concrete Repair**

Preamble: In its business case, YEC describes frequent and ongoing concrete repairs for the Wareham spillway at the Mayo Generating Station.

Request:
(a) Please explain why the repairs identified in the business case should not be considered a repair and maintenance expense rather than a capital addition given their frequency and ongoing nature.

(b) In capitalizing the frequent and ongoing concrete repairs for the Wareham spillway at the Mayo Generating Station, can YEC confirm that the expenditures have extended the useful service life of the Wareham Spillway?

YUB-YEC-1-075
Reference: **Application, Section 5.1A-9, PDF pages 178-179**
Issue: **Stoplog Crane Replacement**
Quote: The EPC contract was publicly tendered. Project costs are summarized in the table below.

Request:

(a) How many vendors did YEC solicit for the tendering process?

(b) How many quotes were received as a result of the public tender process?

(c) What was price range of the quotes received?

(d) Did YEC or an outside party administer the public tender process? Please explain.

(e) What is the current status of the project?

(f) What are the costs to date for this project? Please provide a breakdown similar to the table provided on PDF page 179.

YUB-YEC-1-076

Reference: **Application, Section 5.1B-4, PDF page 216**
Issue: **Vehicle purchases**

Preamble: The Board seeks further information.

Request:

Please provide a single table showing each vehicle purchased or forecast to be purchased broken down by year for 2021 to 2024, with additional columns showing the actual or forecast capital costs and any applicable AFUDC, showing AFUDC separately from the capital costs.

YUB-YEC-1-077

Reference: **Application, PDF page 183**
Issue: **Capital project: Lewes River Boat Lock Road Access Rebuild**
Quote: There are two options for restoring access to the east side of Lewes:

1. Restore the original access; or
2. Upgrade the temporary access and have a disposition so that YEC has permanent access.

Leaving the damaged road in its current condition is not an option as proper access is required for rebuilding the damaged boat lock and long-term inspection work.

A request for proposal for a design engineer is being completed in 2023, and design should be ready by year-end.

As part of this contract, the two options will be assessed and determined which one will be the most cost effective to both restore/upgrade and maintain.

The construction will be completed during the 2024 construction season in order have the road ready for 2025 repair of the boat lock.

Preamble: YEC has forecast a rate base addition of $1.2 million in 2024 for this project; however, it is not clear what the costs are comprised of or if any additional costs are forecast to be incurred in 2025.

Request:

(a) Please identify the specific costs YEC is proposing to capitalize in 2024 given that it appears the repair is intended to be completed in 2025.

(b) If the response to part (a) is that the $1.2 million is costs for the "design", please explain why these costs should be capitalized in advance of any other work to be completed subsequent to the year 2024.

YUB-YEC-1-078

Reference: **Application, PDF page 209**
Issue: **Capital project: Transmission Line Test and Treat Program**
Quote: The program treats ant colonies with insecticide, treats poles with fumigant to slow decay, treats external damage with preservative, and performs internal inspection of the pole to measures shell thickness to assess the pole condition.

Request:

Please explain why costs associated with the test and treat program are not considered a repair and maintenance expense.

YUB-YEC-1-079

Reference: **Application, Section 5.1B-4, PDF page 216**
Issue: **New Mobile Office Unit - IT**

Preamble: The Board is seeking further information.

Request:

(a) Existing IT trailer:

i. When was it acquired?
ii. What is its square footage?
iii. What were the initial costs, including all site preparation costs?
iv. Provide the annual maintenance costs for this trailer by year since acquisition.
v. How was the trailer deemed to be at the end of its life and by whom?
vi. What are the ongoing indoor air quality issues, and what is the source of those issues?

(b) Proposed IT trailer:

i. What is the current status of the project?
ii. What are the costs to date?
iii. What is its square footage?
iv. Please provide a breakdown of the forecast costs.
v. Has this project been publicly tendered?
vi. If publicly tendered, who administered the tendering process?

vii. If publicly tendered, how many vendors responded and what was the price range?
viii. If not publicly tendered, please explain how the vendor was selected.
ix. If not publicly tendered, how can YEC ensure competitive pricing?
x. What is the expected life of the replacement trailer?

YUB-YEC-1-080

Reference: **Application, PDF pages 138-139, 389-474; Appendix A to Board Order 2022-03, PDF page 76, pars. 332 and 333**

Issue: **Intangible assets – EAM & PAMMS**

Quotes: Application, PDF page 390:

In GRA 2021, the YUB disallowed YEC's costs on the EAM based on concerns about the adequacy of the evidence presented by YEC in that application to support it (Board Order 2022-03, Appendix A, paras 332-333). Given the importance and the essential need for the EAM and related AM activities YEC has taken the necessary steps in its present 2023 GRA application to address the concerns identified by the YUB so that previously disallowed expenditures can now be properly included in rate base.

Appendix A to Board Order 2022-03, PDF page 76:

332. The Board accepts that there is a requirement to keep asset management practices aligned with industry standards such as ISO 55000. However, the Board is concerned with the EAM project as proposed in this Application. YEC justified the tangible benefits related to productivity gains by referencing the results of a case study by Booz & Company and the anticipated savings from better inventory management by providing a BC Hydro document; it cited non-YEC specific case studies to determine the reductions in long-term asset costs. None of this evidence was prepared based on project-specific information, which in the Board's view limits the evidence's persuasiveness. As an example, YEC mentioned that organizations with EAM have reported reductions in long-term asset costs of up to five percent but could not provide any organizations that showed reductions in long-term asset costs. Thus, the Board finds it was not reasonable for YEC to proceed with the project given that the benefits lacked project-specific evidence.

333. Additionally, YEC stated that it explored other software alternatives but did not provide any details on these alternatives and why they were ruled out in favour of the EAM project. Regarding the chosen vendor for the software solution, YEC stated it scored higher on technical merits compared to the lowest bidder. However, YEC did not provide any details on these technical merits. Accordingly, the Board does not have sufficient evidence to assure itself that the EAM project was a reasonable alternative for YEC to pursue with regard to asset management. For these reasons, the Board finds the costs associated with this project are not reasonable and denies inclusion of the costs for this project in the 2021 rate base. The Board directs YEC to reflect the denial in the compliance filing to this Board Order. (Footnotes omitted.)

Preamble: In Board Order 2022-03, Appendix A, pars. 332 and 333, the Board denied certain of YEC's capital costs for the two intangible asset projects. The Board seeks to understand on what basis the previous disallowances may be altered by the information now being provided by YEC in the current Application.

Request:

(a) Please explain on what regulatory and/or legal basis YEC is asking the Board to examine the disallowed costs for the EAM and PAMMS intangible assets which YEC has now added to its rate base.

(b) Please provide the date on which the EAM and PAMMS projects resulted in used and useful utility assets.

(c) Please provide the date on which the EAM and PAMMS projects were recorded as capital assets in YEC's accounting records.

(d) Please confirm — notwithstanding that the Application, PDF page 142, Table 5.2, Work in Progress Continuity Schedule – 2021, shows capital additions in the year 2021 that appear to include the disallowed portions of EAM and PAMMS — that YEC's 2023-24 revenue requirement has not sought any recovery of revenue associated with the disallowed portion of the project costs for the years 2021 or 2022.

(e) Should the requests for costs for these projects from 2021 be considered as retroactive ratemaking? If not, please explain.

YUB-YEC-1-081

Reference: **Application, PDF pages 236 and 277**

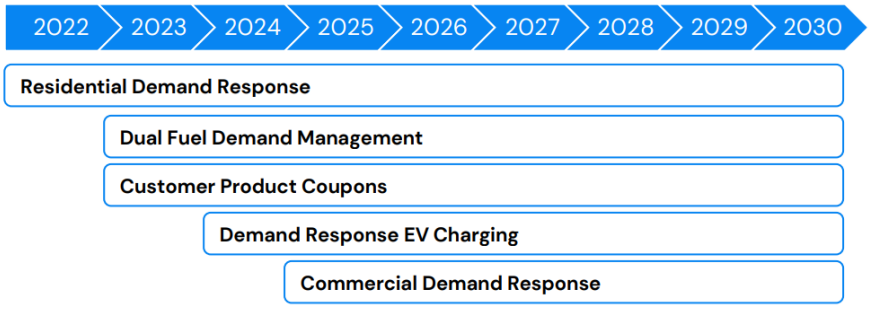
Issue: **Demand Side Management (DSM) programs**

Quote: Application, PDF page 236:

SECTION 5.2A-2: DEMAND SIDE MANAGEMENT (DSM) PROGRAM DEVELOPMENT AND DSM PROGRAM 2022-2030 (ADDITIONS TO RATE BASE [NET OF CONTRIBUTIONS] OF $0.010 MILLION IN 2021, $0.353 MILLION IN 2022, $1.250 MILLION IN 2023, AND $1.160 MILLION IN 2024)

PDF page 277:

Exhibit 3: Proposed Program Staggering



Preamble: It is not clear which programs comprise the total forecast costs for each test years' costs on an actual or forecast basis.

Request:
Using the years and headings provided on PDF page 277 as quoted above and adding the year 2021, please prepare a table by year and DSM program that shows the capital expenditures forecast or actually incurred over those years for each proposed program. Please include a line for each DSM program providing any anticipated contributions from any entity.

YUB-YEC-1-082

Reference: **Application, PDF pages 61-62 and 291-293, Demand Side Management [DSM] Program designed for YEC**

Issue: **DSM program - Dual Fuel Demand Management**

Quote: Application, PDF page 291:

3.3.1 Program Description

With growing emphasis on electrification of home heating systems to reach Yukon and federal decarbonization targets, residents are being encouraged to upgrade their home heating systems with cold-climate heat pumps. The Energy Branch is offering rebates of 40% of eligible heat pump costs up to a maximum of $8,000 and has a target to replace 1,300 residential fossil fuel heating systems with "smart electric heating systems" by 2030.[8] While heat pumps are a highly efficient means to heat and cool homes, when the outside temperature dips below its operating threshold the heat pump relies on an auxiliary heating system – typically in-duct electric coils. This would create significant additional demand during the peak period.

ICF recommends a dual fuel program modeled after the long-standing program offered by Hydro Quebec, called Rate DT.[9] Participants receive a direct-installed dual fuel demand management switch to automatically switch from the heat pump to the fuel-burning forced-air system, when the outdoor air temperature drops below a threshold. Instead of a modified rate (as provided by Hydro Quebec in Rate DT), ICF recommends offering an on-bill performance incentive to participants for reducing their electricity consumption during peak periods. Initial sign-on incentives should also cover the cost of any upgrades required to the fossil fuel heating system (e.g. new heating oil tank) to ensure that the system is safe to continue operating.

YEC will need to collaborate with the Energy Branch, such that participants in the Good Energy Heating System Rebate program are advised to keep their fossil fuel heating system and coordinate their heat pump installation with their enrollment in the Dual Fuel Demand Management program.

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[8] Government of Yukon, *Our Clean Future*, 2020
https://yukon.ca/sites/yukon.ca/files/env/env-our-cleanfuture.pdf

[9] Hydro Quebec, Rate DT – Dual Energy
https://www.hydroquebec.com/residential/customerspace/rates/rate-dt.html

Preamble: The Board wants to understand the relationship between YEC's proposal and the Energy Branch requirements for a rebate for heat pump installation.

Request:

(a) Please clarify if the Yukon Government consulted with YEC in relation to either the Government of Yukon's *Our Clean Future* document or "electrification and a transition to a net zero carbon economy policy."

(b) Please explain how YEC's DSM program promoting the electrification of homes through the installation of cold-climate heat pumps while advising participant customers to keep their fossil fuel heating system and coordinate their heat pump installation with their enrollment in the Dual Fuel Demand Management program will meet the Energy Branch's target of replacing 1,300 residential fossil fuel heating systems with "smart electric heating systems."

(c) Please explain how participant customers will be able to qualify for the Energy Branch's rebates if they are not able to or have not replaced a fossil fuel heating system with a non--fossil fuel heating system because they will have been "advised to keep their fossil fuel heating system and coordinate their heat pump installation with their enrollment in the Dual Fuel Demand Management program." As part of the response, please provide a quote of the specific Energy Branch language confirming that participating customers will qualify for a rebate under the conditions proposed by YEC's dual fuel management system.

(d) Please discuss how the elasticity of the price of electricity in relation to YEC's proposed DSM programs would impact sales.

(e) Please provide an estimate of the reduction of electrical energy consumption by the various classes of customers facing each of the 10-percent and 20-percent rate increase. Please include all applicable references in support of the estimates.

YUB-YEC-1-083

Reference: **YEC 2021 GRA, Response to YUB--YEC-1-93, PDF pages 451-454; Application, PDF pages 256 and 259-261**

Issue: **Capital project: Southern Lakes Storage (Marsh Lake Storage Enhancement Project)**

Quotes: YEC 2021 GRA, PDF page 180:
4. Southern Lakes Storage (Marsh Lake Storage Enhancement Project) – (forecast WIP cost of approximately $9.379 million by end of 2021 - project subject to ongoing review, potential in-service by 2023).

YEC 2021 GRA, PDF pages 182-183:
Yukon Energy completed an additional round of engagement in 2019 to confirm the level of support for the project. This included engagement with local residents in the Southern Lakes area, and Yukoners generally; as well as a further round of First Nations engagement to confirm the position of the affected First Nations (Carcross/Tagish First Nation, Kwanlin Dun First Nation and Ta'an Kwach'an

Council). Prior to the end of 2020, Yukon Energy will make a determination regarding whether to advance the project to the YESAA assessment phase.

The deferred costs forecast in the Application assumes that the project continues, with spending in WIP increasing from $7.319 million at the end of 2018 to $9.379 million by the end of 2021. Potential in service for the Project is 2023. (Footnote omitted.)

YEC 2021 GRA, Response to YUB-YEC-1-93(a), PDF page 452:
In 2019 and early 2020 YEC conducted a final round of public engagement regarding the project. Based on the results of this engagement and the estimated economics of the project, YEC's Board of Directors decided to advance the project into the next stage: preparing a proposal to submission to the YESAA Designated Office.

YEC 2021 GRA, Response to YUB-YEC-1-93(b)(iv), PDF page 454:
YEC is working to confirm mitigation plans for impacted properties and refine estimates to ensure costs are fully understood before moving forward with the project. Using a stagegate approach to assess a "go" or "no go" decision after more information is known from the results of the YESAA assessment will enable a decision to be made regarding the project with refined information on the economics.

Application, PDF pages 256 and 259-261:
In November 2022, the Carcross/Tagish First Nation (CTFN) notified YEC that it would not support completion of the SLESP. As a result, YEC concluded that the project would no longer offers a net economic benefit to ratepayers as there is no reasonable probability that the project will proceed. As directed by the Board in Order 2013-01 (para 337 of Appendix A), YEC was therefore required to cease work on the SLESP project. Based on YEC's decision not to proceed further with the project, feasibility study costs to date of approximately $8.784 million will be amortized over 10 years, starting in 2023.
…

In Appendix A to Order 2018-10, the Board stated concern with the amount of time and expenditures to date with little apparent progress, and reminded YEC that if it chooses to keep developing the project that it will have the onus to demonstrate the prudence of all expenditures related to the project.
…

Based on YEC's decision not to proceed further with the SLESP project, feasibility study costs to date of approximately $8.784 million will be amortized over 10 years, starting in 2023. The table below shows costs incurred by cost element and time period, including costs accounted for by YEC's internal interest cost (AFUDC, or allowance for funds used during construction) applicable to all WIP costs.

Costs ($000's)	Inception to 2013	2014-2018	2019-2021	2022	Total	AFUDC % of Total
Third-party engineering	111	14	8	3	135	25.0%
Environmental assessment	3,974	1,973	400	131	6,478	22.1%
Project management	417	53	30	10	510	26.8%
Public consultation	125	148	320	14	607	13.5%
YEC costs	302	202	35	11	550	21.9%
Stagegate 3	-	-	388	116	504	3.2%
Total	4,928	2,391	1,181	284	8,784	20.7%
AFUDC included in Total	383	749	508	180	1,820	
AFUDC as % of Total	7.8%	31.3%	43.0%	63.4%	20.7%	

Note: "AFUDC"(Allowance for Funds Used During Construction) is YEC's internal interest cost.

Approximately $7.3 million, representing 83% of total project costs, were incurred between inception and the end of 2018, and related mostly (87%) to environmental assessment studies, engineering, and public consultation activities plus related AFUDC interest costs. These costs were reviewed at a high level in the 2012/13 and 2017/18 GRAs.

The 2019-2021 costs were not reviewed in the 2021 GRA decision. Appendix A to Board Order 2022-03 concluded that given that the costs for the projects in WIP do not affect the test year rate base or revenue requirement, the Board made no findings regarding these projects at that time.

The 2019-2021 costs of $1.181 million consisted primarily of AFUDC interest costs on earlier environmental assessment and other costs plus some additional public consultation and the commencement of stagegate 3. Excluding related AFUDC costs, new expenditures focused on efforts to advance filing of a YESAB submission and consisted primarily of stagegate 3 costs of $0.384 million and public consultation costs of $0.286 million. YEC's internal AFUDC interest cost of $0.508 million accounted for 99% of the remaining $0.511 million costs.

The 2022 costs of $0.284 million consisted of AFUDC costs of $0.180 million and stagegate 3 costs (excluding related AFUDC) of $0.104 million incurred prior to receipt of the CTFN November letter.

Request:

(a) Please explain why YEC's board of directors chose to continue with the Southern Lakes Storage project despite strong indications as recent as early 2020 that it was not likely to proceed.

(b) Please confirm that the Board asked YEC in YUB-YEC-1-93 about the status of the Southern Lakes Storage project in the 2021 GRA.

(c) Please confirm that YEC responded in YUB-YEC-1-93 that YEC's board of directors decided to advance the project into the next stage: preparing a proposal to submission to the YESAB Designated Office. If confirmed, please provide the date the submission was made to the YESAB Designated Office and the date upon which a response was provided by the YESAB Designated Office.

(d) Does YEC consider it reasonable to add AFUDC to the Southern Lakes Storage costs given that there has been no physical asset constructed?

(e) Does YEC expect to earn a return on some unamortized net rate base amount related to the Southern Lakes Storage costs for 10 years notwithstanding that there has been no physical asset constructed? If so, please explain why it would be reasonable to do so.

(f) When did the Kwanlin Dün First Nation and Ta'an Kwach'an Council most recently indicate and provide YEC with their respective level of support for the Southern Lakes Storage project? Were there agreements in place that indicated their level of support? Please explain fully and provide any agreement or similar substantiation of the support given.

YUB-YEC-1-084

Reference: **Application, PDF page 513**
Issue: **Return on Investment (ROE)**
Quote: A final decision is expected regarding the GCOC proceeding before the completion of Yukon Energy's GRA Application proceeding. YEC proposes that the benchmark ROE be adjusted to align with the final BCUC decision for the benchmark utility.

Request:

(a) If a decision is rendered for the BC Utilities Commission (BCUC) GCOC proceeding before the close of the oral hearing for this Application, does YEC intend to amend the ROE portion of its Application based on that decision? Please explain.

(b) Does YEC commit to placing a copy of the relevant BCUC decision on the record of this proceeding if YEC amends its Application?

YUB-YEC-1-085

Reference: **Application, PDF page 514**
Issue: **ROE**
Quote: AEY has recently filed its GRA and has applied for a risk premium of 75 basis points, versus the 25 basis points AEY risk premium last approved by the YUB. YEC's risk has historically been consistently assessed to be higher than AEY's – and there is no evidence of any change to their relative risk profiles that would suggest this would not be the case today. Accordingly, YEC's risk premium will need to continue to be higher for the test years than the final risk premium approved for AEY.

Request:

(a) Please confirm that, subject to the BCUC GCOC finding for the benchmark utility, YEC submits that a fair return for it is the ROE for that BCUC benchmark utility plus 45 basis points risk premium (before OIC 1995/90) as long as the risk premium for YEC is higher than the risk premium awarded to AEY in its 2023-24 GRA proceeding currently before the Board.

(b) Please confirm that when YEC refers to the BCUC GCOC benchmark utility, YEC is referring to Fortis Energy Inc. If not confirmed, please explain.

YUB-YEC-1-086

Reference: **Application, PDF page 516**
Issue: **ROE**
Quote: In summary, the information in Tables 8.1 and 8.2 reflects the continuing applicability of setting the YEC risk premium relative to the BCUC ROE benchmark at 45 basis points based on a fair analysis of risks and comparative utilities review confirming that YEC's overall risk is still greater than FortisBC (Electric) as well as AEY.

Request:
Did the information referred to in the summary or similar information — for example, a previous year — exist at the time of YEC's 2021 GRA? Please explain.

YUB-YEC-1-087

Reference: **Application, PDF pages 110 and 516**
Issue: **ROE**
Quotes: Application, PDF page 516:
In 2022, FortisBC 1 (Electric) operations had approximately 148,861 customers, approximately $1,583 million in rate base, and a 60/40 debt/equity ratio. This is compared to YEC's 2,341 customer base and $303 million rate base. While Yukon Energy's financial structure is the same as FortisBC (Electric), the customer count was at approximately 1.6% of FortisBC (Electric); and its rate base was approximately 20% that of FortisBC (Electric). This is similar to the comparison provided in 2021.

On the other hand, information relating to AEY indicates that it has approximately 20,308 customers and rate base of $115.0 million and a 60/40 debt/equity ratio as at 2022. This indicates that YEC has just about 11% of AEY's customer base while they maintain same capital structure.
Application, PDF page 110:
AVAILABLE: To all electric service throughout the Yukon Territory.
…

RATE: Rider J at 39.64% applicable to the base rates of the following rate classes to recover of a portion of the 2023/24 revenue shortfall. All ATCO Electric Yukon recoveries from this rider to flow through to the Yukon Energy Corporation.

Request:

(a) As YEC collects a portion of its rates from customers across Yukon, as shown for Rider J, does this mitigate some of the risks of YEC's 2,341-customer base?

(b) With wholesales to AEY being YEC's largest customer, does this mean that, for comparison purposes, YEC's customer base should be amended to reflect AEY customers on the YIS? Please explain.

YUB-YEC-1-088

Reference: **Board Order 2023-24, PDF page 2**

Issue: **Hyperlinks**

Quote: In respect of the hyperlinks contained in the Application and in some of its IR Responses, AEY is to file by October 24, 2023, a separate document referencing the location (PDF page number) of the hyperlink in the Application or the IR number and PDF page number in the IR Responses.

Preamble: The Board does not accept documents containing hyperlinks. YEC's Application contains hyperlinks.

Request:

For all references to hyperlinks in the Application, please file separate PDF documents of each hyperlinked document. In those PDF documents, include references to the PDF page number of the Application where the hyperlink reference was originally made.