Yukon Utilities Board

Board Order 2023-25

Appendix A

December 22, 2023

BACKGROUND

1. The Board received motions for further and better responses from Mr. Nathaniel Yee and the UCG in regard to the information responses received from YEC for its 2023-2024 GRA. The Board set up a process regarding the motions giving YEC the opportunity to respond to the motion and Mr. Yee and the UCG the opportunity to reply to the YEC response. YEC provided its responses and only Mr. Yee replied to the YEC response. Contained within this Appendix A are Board determinations regarding further and better IR responses for questions from the UCG and the Board. Appendix B to Board Order 2023-25 contains the Board determinations with respect to the Motion from Mr. Yee.

UCG IRs

2. YEC provided its response on December 12, 2023, to the motions from Mr. Yee and the UCG for further and better responses. The UCG did not provide a reply to the YEC response. The Board has reviewed the impugned UCG IRs, the original IR response from YEC and the YEC response to the UCG motion. The Board is satisfied with the YEC response to the motion and no further action from YEC is required.

MR. YEE IRS

3. Mr. Yee listed several impugned IR responses. The ruling on Mr. Yee's motion is attached as Appendix B to Board Order 2023-25. From the YEC response to the motion, Mr. Yee replied that he was satisfied with the responses to NY-YEC-1-9 and NY-YEC-1-12. For those two IRs, no further response is required from YEC.

FURTHER AND BETTER RESPONSES TO BOARD IRS

4. The Board is seeking further and better IR responses from YEC to certain Board IRs. Each is discussed below:

YUB-YEC-1-11(a):

5. YEC responded: "Yukon Energy is not aware if reducing its forecast load from that in the 2017 Power Purchase Agreement (PPA) level has any financial implications to Victoria Gold."[1] The Board is seeking clarification as to whether there are any take-or-pay provisions in the PPA between Victoria Gold and YEC. Therefore, YEC is directed to confirm if there are any such provisions in the PPA. If there are such provisions, YEC is directed to explain if there are any financial implications to Victoria Gold from reducing its forecast load from that in the PPA.

[1] YEC Consolidated IR responses, PDF page 246.

YUB-YEC-1-35(e & f)

6. The Board is of the view that YEC was not fully responsive to IR YUB-YEC-35(e & f).

7. In part (e), YEC was asked: “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.”[2]

8. In part (f) YEC was asked to: “Please provide all correspondence with any consultants, any terms of reference, and all products of any analysis regarding the rental of diesel generation units.”[3]

9. YEC’s response to parts (e) and (f) states that the: “… requests are too broad and lack sufficient definition that would allow YEC to gather and produce relevant information in the time available for YEC to respond to the IRs…”.[4] However, the Board notes that YEC had over one month to provide the requested information, but failed to provide any documents. The Board further notes that YEC has cited several IR responses, but did not explain how those references to other IRs directly respond to the questions as asked in the current proceeding.

10. As a result, the Board directs YEC to provide the internal analysis it used in the evaluation of the rented diesel generator option, including the analysis of any and all alternatives. The Board further directs YEC to respond to part (f) of the question and provide the pertinent portions of all correspondence with consultants, terms of reference, and all products of any analysis specific to the rental of diesel generation units.

11. In addition, as YEC stated in its response that the Board questions were too broad, the Board directs YEC to answer the following eight questions in relation to the rented diesel generators to better understand YEC’s on-going reliance on rented diesels and to assess the prudency of using rented diesels for such long periods of time.

Follow-up question 1:

i. Referring to YEC-YUB-1(a), PDF page 215 *(PDF page references are from YEC Consolidated IR Responses, dated November 29, 2023): “YEC started renting diesel units for the 2017/18 winter season with 4 diesel units. YEC

[2] YEC Consolidated IR responses, PDF page 318.
[3] YEC Consolidated IR responses, PDF page 318.
[4] YEC Consolidated IR responses, PDF page 321.

expects the diesel rentals will continue until permanent renewable and/or thermal capacity is developed and in place to displace diesel rentals."

"YEC is developing an Electricity Supply Plan to identify the resource options that can be implemented in the next 5-10 years to increase the supply of dependable capacity and energy during the winter months and reduce the use of rental diesels."[5]

The Board requires YEC to explain the reasons why it took over 7 years to determine that it may need a longer-term solution to diesel rentals.

Follow-up question 2:

ii. All things being equal, YEC indicates a need for diesel rentals at least until the 2028/29 winter season and likely beyond that time. The units are required mostly for N-1 dependable capacity shortfall purposes. YEC stated "YEC is not able to provide useful forecasts on this matter beyond winter 2028/29."[6]

However, as part of YEC's 2017-2018 GRA, YEC included its 2016 Resource Plan: Part 1. Included in that submission, on PDF page 13, is Figure 1: Comparison of Energy Forecast for All Major Industrial Activity Scenarios and Existing System Firm Energy. On PDF page 14 is Figure 2: Comparison of Non-Industrial Peak Demand Forecast for All Major Industrial Activity Scenarios and System Dependable Capacity under single contingency (N-1) criterion. Both figures forecast out to 2035.

Given the above-noted forecast in YEC's 2017-2018 GRA, why is YEC now unable to provide useful forecasts beyond 2028/29?

Follow-up question 3:

iii. For YEC's 2021 GRA, regarding production expense – diesel rentals, the Board stated:

> Even if some of the generation at issue did not receive a YESAB assessment, as YEC pointed out, Section 49 of the *Yukon Environmental and Socio-economic Assessment Act* provides that no assessment of an activity is required in certain emergency conditions. Subsection 49(1) states:
>
> > Notwithstanding sections 47 [regulations identifying activities] and 48 [declarations], no assessment is required of an activity that is undertaken in response to a national emergency for which special temporary measures are being taken under the *Emergencies Act*, or in response to an emergency when it is in the interest of public welfare, health or safety or of protecting property or the environment that the activity be undertaken immediately.
>
> The Board finds that N-1 emergency conditions described by YEC appear on their face to be consistent with Subsection 49(1) of the *Yukon Environmental and Socio-economic*

[5] YEC Consolidated IR responses, PDF page 215.
[6] YEC Consolidated IR responses, PDF page 215.

> *Assessment Act* and with responding to an emergency that is in the interest of public welfare, health, or safety. The Board considers that its own mandate is to ensure just and reasonable rates, as well as ensuring safe and reliable electricity service in Yukon. (Appendix A to Board Order 2022-03, PDF pages 26-27)

Given the above-noted finding, are the rented diesels exempt from an assessment pursuant to section 49 of the *Yukon Environmental and Socio-economic Assessment Act* because they fall within an activity that is required in certain emergency conditions? If yes, what are the on-going emergency conditions and what YEC as done to resolve the emergency? If no, then please explain YEC's position on this issue.

Follow-up question 4:

iv. YEC BESS project Transcript Volume 1, PDF page 96, starting at line 23, to PDF page 97, ending at line 12. In response to a question from UCG: "And I know that you spoke on this with Mr. Maissan earlier, but I'm wondering why Yukon Energy wouldn't consider replacing the rental diesel units with new diesel engines as part of this plant replacement plan." YEC responded in part:

> The focus of our board of directors -- and this flows directly from the policy direction that the federal government and the territorial government have taken -- is to, where possible, focus on renewable sources of supply.
>
> So, for example, we're working on the Atlin --sourcing power from the Atlin Hydro expansion project, and then the big future project that would ultimately close the capacity gap is the Moon Lake pump storage project.
>
> So we have a portfolio that's intended to address the capacity gap, and if you look at the needs over the next 10 to 15 years, you know, rental thermal makes sense if you're working on these other permanent solutions.

Does the above quote encapsulate YEC's reasoning for pursuing the diesel rentals, that is, that it was seen as a short-term solution with renewable projects expected to replace the rented diesels within 10 to 15 years? If it was seen as a short-term solution, why didn't YEC pursue a permanent diesel solution?

Did YEC do any analysis showing that, for a 10-to-15-year period, diesel rentals were the most cost-effective route to follow? If so, who undertook that analysis? At a high level, what were the terms of reference for that analysis?

Follow-up question 5:

v. In the BESS proceeding and in reference to IR YUB-YEC-1-43 (a-c), from transcript volume 2, YEC was asked about the general feedback of the public and the limited social license for a greenfield diesel project. YEC's response, in part, stated:

> And I think, as outlined in the IR response, the feedback we received was pretty negative in the sense that people, you know, in general did not support us spending a substantial amount of money on a new 20-megawatt permanent diesel plant.

> <u>You know, I think that general sentiment has been echoed in a number of subsequent surveys that we've done, where the public in general is very strongly in support of investment in renewable supply options</u>. And, really, that then gets reflected in policy that has been rolled out, subsequently both at the federal level, as I referred to yesterday, and also the territorial through Yukon government's Our Clean Future.
>
> So, really, you know, the feedback we got was there was likely to be a lot of resistance and opposition to construction of a 20-megawatt greenfield diesel plant.
>
> I would also point out that, you know, the conversations with the First Nations probably, you know, led to similar conclusions. You know, they were not in favour of diesel plants necessarily. Their citizens had a number of similar concerns.
>
> So, you know, I think the -- we looked at that situation. And then subsequently what was unfolding from a policy perspective and our board really through the 10-year renewable plan articulated a very different direction in terms of pursuing renewable options; namely Atlin and Moon Lake, and the battery for that matter, as capacity solutions going forward. (BESS transcript Vol 2, PDF page 11, line 11 to PDF page 12, line 15)

Later in reference to public feedback, YEC was asked what reasons its Board of Directors gave YEC to not seek a permanent thermal solution to its capacity shortfall. YEC stated:

> Okay. I'd say there was a couple of reasons. The first was the -- you know, in making that decision the board was taking into account the public and First Nation feedback that we had received. Right?
>
> So they were taking a look at that – that information and considering what the implications of that would be if and when we went to the assessment and permitting phase of that permanent diesel project. So that was the first factor.
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> And I would imagine their conclusion was, you know, that there was likely to be significant public opposition during the regulatory phase, which would increase the risk of securing the required approvals for the project from the permitting agencies and YESA [verbatim]. So that would be the first one.
>
> The second one was they, at that time, were beginning to formulate the strategy around the focus on renewable options. In particular, as I said in the transcript, you know, shows the focus on Atlin and Moon Lake. And so the conclusion was, well, if you're -- if you've got a plan that's going to deliver a large step increase in capacity from, say, Moon Lake, that really erodes the justification of building a 20-megawatt diesel plant. There's just no point. Because if Moon Lake is coming along in 10 years, it would essentially make the diesel plant, in some respect, obsolete. (BESS transcript Vol 2, PDF page 16, line 15, to PDF page 17, line 17)

Regarding public feedback, the Board seeks clarification about the responses YEC received regarding a permanent thermal solution and whether these responses were representative of Yukon as a whole? Were all First Nations opposed to a permanent diesel supply option?

The underlined portion above refers to public surveys. How many surveys were undertaken? How were the participants selected? Did any of the surveys include questions along the lines of: Is there an economic point where you consider thermal energy to be viable?

Follow-up question 6:

vi. For YEC's 2023-2024 GRA, YEC recently determined that Moon Lake would not be moving forward in the foreseeable timeframe. As such, is YEC re-evaluating its capacity options?

Follow-up question 7:

vii. In the BESS proceeding YEC was asked how it evaluates renewable projects versus the economical basis for thermal projects and stated:

> So what you see there is an assessment of a range of different supply options. And, you know, the left hand -- and so what's presented is the technical attributes. So their capacity, for example, their annual energy production. But the whole right-hand side of the table is very much around costs, not only in terms of upfront capital, operating and maintenance costs. And then two key sort of metrics that we then distill down, which is your levelized cost of energy and levelized cost of capacity.
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> So, you know, the intent is very much to ground the analysis in economics and, you know, in terms of specifically targeting the renewable options. And I think in particular about Atlin and Moon Lake and the battery, is that there was a recognition that significant federal funding was required to bring the costs of those renewable options in line with thermal alternatives. And so that's -- we were very transparent and clear that we would only move forward with these projects if federal funding was indeed secured. (BESS proceeding, Transcript Volume 2, PDF page 13, line 20, to PDF page 14, line 15.)

What makes the levelized cost of capacity (LCOC) and the levelized cost of energy (LCOE) appropriate metrics rather than the net present value in evaluating the economics of different generation capacity options?

Understanding that government funding is an important component, how does YEC determine which individual renewal projects should proceed and at which time? What other criteria does YEC look at in the selection process?

Later in the BESS proceeding YEC stated:

> Yeah. I think it's important to realize that these plans are -- do evolve over time, no doubt. And, yes. I mean, if circumstances were to change and we were simply not able to secure the required amount of federal funding for Moon Lake, for example, then we may well have no real other option but to reconsider a 20-megawatt diesel plant. (BESS Proceeding, Transcript Volume 2, PDF page 18, lines 6-12.)

Given that the Moon Lake project is on hold, please explain why a larger thermal plant, such as the 20-megawatt plant discussed in the BESS proceeding, was not one of the options considered in YEC's business case in Appendix 3.1 of YEC's 2023-2024 GRA?

Follow-up question 8:

viii. YEC has noted direction from its Board of Directors regarding renewable generation projects. If YEC's Board gives direction not to pursue the least cost alternative, does that mean its Board, rather than ratepayers, will pay for any incremental costs above the least cost generation alternative?

12. The Board requires YEC to provide additional information to clarify the following IR response:

YUB-YEC-2-001

Reference: **YEC response to YUB-YEC-01-004 and YUB-YEC-01-080, PDF pages 225-229 and 552-556**

Issue: **Disallowed portion of capital projects added to rate base resulting in 2023 and 2024 rate increases: WH2 Uprate Construction and Engineering (WH2) (rate base addition of $7.078 million to 2021 GRA approved); WH4 Servomotor Replacement (WH4) (rate base addition of $0.789 million to 2021 GRA approved) and Enterprise Asset Management System Purchase and Implementation Project (EAM) projects**

Quote: YUB-YEC-01-004, PDF page 228:

"The mere fact the Board may have concluded in a previous GRA Application that there was insufficient evidence in that proceeding to support including the costs of certain assets in YEC's rate base for a previous test year does not displace the Board's statutory obligation to include costs in YEC's rate base for the current test years that are supported by sufficient evidence in the current proceeding.

In the specific instance of disallowed capital costs in Board Orders 2022-03 and 2022-10 for the WH2 and WH4 assets, the Board did not disagree with YEC's assertion that the assets were used and useful. The sole basis provided by the Board for disallowing some of the incurred or forecast costs was that the Board relied on the evidence and arguments then before it, and that generally the Board found that the business case then before it for each of these projects was deficient and that there was a lack of information in the other evidence then before it to justify the significant cost increases and a lack of an adequate justification of costs and benefits.

The WH2 and WH4 assets continue to be used and useful in the 2023 and 2024 test years for the current Application, and YEC has provided additional information and clarifications on the relevant costs for these assets in order to address the information deficiency issues raised by the Board in its earlier Orders related to the prior 2021 YEC GRA."

<u>YUB-YEC-01-080, PDF pages 554-555:</u>

"The fact the Board may have concluded in a previous GRA Application that there was insufficient evidence in that proceeding to support including the costs of certain assets in YEC's rate base for a previous test year does not displace the Board's statutory obligation to include costs in YEC's rate base for the current test years that are supported by sufficient evidence in the current proceeding.

…

As reviewed in the above quotes in this IR from Appendix A to Board Order 2022-03, the Board disallowed-denied inclusion of all EAM capital costs in rate base for the 2021 GRA based on concerns about the adequacy of the evidence presented by YEC in the 2021 GRA (i.e., based on a lack of project-specific evidence of the EAM's expected benefits, or the technical merits of the selected software solution). However, the Board specifically acknowledged in its decision that alignment of asset management practices with recognized standards (i.e., ISO 55000) is appropriate."

Preamble: Further to the above-noted responses on the three capital projects referenced, in which YEC has stated that in the current application it has now addressed the lack of information or deficiencies in the evidence presented by YEC in its 2021 GRA, the Board needs further clarification. This is because in its IR responses to YUB-YEC-01-004 and YUB-YEC-01-080, YEC purports that it has addressed all previous shortcomings of the evidence before the Board at that time which are summarized as follows:

<u>Board Findings WH2 Uprate Project - Board Order 2022-03, paragraphs 277-278:</u>

i) YEC's business plan for this project did not adequately justify the costs and benefits of this project,
ii) YEC did not discuss the WH2 alternative, its costs and the reasons for dismissing this alternative,
iii) YEC did not adequately explain the reasons the WH2 was the preferred alternative,
iv) Board concerns with the reasonableness of the WH2 costs,
v) Board concerns with the recommendations in the Hatch report, and,
vi) Board concerns with the deficiencies in the WH2 business case.

<u>Board Findings WH4 Uprate Servomotor Replacement Project – Board Order 2022-03, paragraphs 281-282:</u>

i) YEC did not explain why the costs for the WH4 project increased from the original Hatch cost estimate,
ii) YEC did not provide an adequate justification that supported the significant cost increase for the WH4 from the original Hatch estimate,
iii) Board concerns that the WH4 benefits espoused by YEC did not fully justify the costs that were incurred or forecast for this project,
iv) Board concerns with the reasonableness of the WH4 costs,
v) Board concerns with the lack of a business case for the WH4 project, and,
vi) Board concerns with the lack of support for the magnitude of costs of the project when compared to the expected benefits of the project

<u>Board Findings Enterprise Asset Management System Purchase and Implementation Project (EAM) – Board Order 2022-03, paragraphs 332-333:</u>

i) Board concerns with the lack of project-specific evidence pertaining to expected benefits from the EAM project,
ii) Board concerns that no details respecting other software alternatives were provided nor why the alternatives were ruled out in favour of the EAM project,
iii) Board concerns with the lack of details respecting the technical merits of the EAM project in comparison to other bidders,
iv) Board concerns with a lack of information to justify the significant cost increases in the EAM project

Request:

(a) In the tabular format provided below, for each project and issue identified in the Board Findings in Board Order 2022-03, please provide reference to and compare the information that was provided by YEC in its 2021 GRA with the information that YEC has provided in the current GRA. Please include an explanation of how YEC has addressed in the current Application the concerns expressed in Board Findings cited above. Do not combine any of the issues identified in the preamble above.

Issue identified in Board Findings in Board Order 2022-03	**Summary of information provided in 2021 GRA including Exhibit reference**	**Summary of information provided in 2023-2024 GRA including Exhibit reference**	**Explanation of how the new information addresses the concerns expressed in Board Findings in Board Order 2022-03**
WH2 (i) YEC's business plan for this project did not adequately justify the costs and benefits of this project			
WH2 (ii) YEC did not discuss the WH2 alternative, its costs and the reasons for dismissing this alternative			
…			
WH2 (vi) Board concerns with the deficiencies in the WH2 business case			
WH4 (i) YEC did not explain why the costs for the WH4 project increased from the original Hatch cost estimate			

…			
EAM (i) Board concerns with the lack of project-specific evidence pertaining to expected benefits from the EAM project			
…			

13. Pursuant to the foregoing, the Board directs YEC to fully respond to YUB-YEC-1-11(a) and YUB-YEC-1-35(e & f); provide the responses to the eight follow-up questions; and respond to YUB-YEC-2-001 by January 18, 2024.