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June 30, 2026

Ms. Lesley McCullough, Chair
Yukon Utilities Board
Box 31728, Whitehorse, YT Y1A 6L3

Dear Ms. McCullough:

Re: Reconsideration of Forecast Costs of Rental Diesel Units Without Air Emission Permits in Yukon Energy's 2023/24 GRA – IR responses

Please see attached responses to Information Requests (IR) concerning Reconsideration of Forecast Costs of Rental Diesel Units Without Air Emission Permits in Yukon Energy's 2023/24 GRA.

Yukon Energy is filing a consolidated package, including the pdf pages noted in the upper centre of the pages for ease of reference.

Yours truly,

Jason Epp,
Vice President, Finance and CFO

YUKON ENERGY CORPORATION

RECONSIDERATION OF FORECAST
COSTS OF RENTAL DIESEL UNITS WITHOUT
AIR EMISSION PERMITS IN YUKON ENERGY'S
2023/24 GENERAL RATE APPLICATION

June 30, 2026

NATHANIEL YEE
(NY)

ISSUE: **Mayo Secondary Thermal Generation / Mayo Rentals:**

PREAMBLE: 4.9 MW – Maximum operating / production capacity submitted to YESAB for assessment in 2023. This was the capacity of the project presented to YESAB, the First Nation of Na-Cho Nyäk Dun (FNNND), Mayo and the general public.

7.2 MW – This was the capacity presented to the Board in the 2023-24 GRA proceeding. Customers were charged for this capacity.

9.0 MW – This was the capacity actually installed, five 1.8 MW rental diesel generators, for total nameplate capacity of 9.0 MW. This full capacity was installed in 2023 and permitted as two projects, 4.9 MW in 2023 and 4.1 MW in 2024-25.

QUESTION:

a) Why did YEC tell the First Nation of Na-Cho Nyäk Dun that this was a 4.9 MW project, while informing the Board it was a 7.2 MW project?

b) The First Nation asked for clarity about generation capacity in the 2023 YESAB as follows:

> "Through response to an information request, it is understood that while the total generation capacity of the generators to be installed will be well over 5MW, they will never be run to exceed 4.9MW. FNNND expects this output limitation to be binding through regulatory requirements. The context of thorough energy planning within a timeframe is necessary here to ensure we do not approach a situation where more than 4.9MW is required from this backup system without effects having been assessed and regulated at that scale beforehand."

Yukon Energy Response on August 28, 2023:

> "Yukon Energy fully expects that the requested maximum operating capacity of 4.9 MW will be prescribed and enforceable under the Air Emissions Permit that is issued for the project."[1]

In its response, YEC confirms that permit will be for 4.9 MW, but seems careful not answer the First Nation's concern that "they will never be run to exceed 4.9 MW." Is it intentional that YEC did not mention that this same project is being presented as 7.2 MW project in the GRA, regardless of the 4.9 MW permit? In not mentioning the 7.2 MW capacity, is YEC providing clear and correct information in response to FNNND's concerns about maximum output of the project, or could this answer be misleading?

c) Please explain how assessing and permitting what is called a 7.2 MW project in the GRA as a 4.9 MW project supports the objectives and principles of YESAA and the Environment Act.

d) YEC explains how and why it split the full 9.0 MW capacity into two separate assessments as follows:

> "Yukon Energy initially decided to assess the Mayo Secondary site for 4.9 MW of capacity, so that the assessment could be completed by the Mayo Designated Office of YESAA and an Air Emissions Permit could be issued as soon as possible without the need for an Executive Committee level screening."[2]
>
> and
>
> "After the initial permit was issued for 4.9 MW of permitted operating capacity at Mayo Secondary, Yukon Energy began work to pursue further assessment and permitting in order to expand the site's permitted capacity by another 4.1 MW, from 4.9 MW to 9.0 MW, through the Mayo Secondary Thermal Capacity Expansion Project (2024-0177)."[3]

[1] YEC Evidence Attachment 35-50, pdf p. 9-10.

[2] YEC Reconsideration Evidence PDF p.39.

[3] YEC Reconsideration Evidence PDF p.41. The same splitting plan is also described in the middle paragraph of PDF p. 29 starting with "Mayo Secondary would become the new generation facility..."

As YEC notes, the project was split to avoid a more time consuming Executive Committee level screening required at 5.0 MW and above. How does project splitting in this manner support the purposes and intentions of YESAA and the Environment Act?

e) Given YEC's statement that 4.9 MW was chosen to avoid an Executive Committee screening, was the project ever intended to be limited to just 4.9 MW?

f) Should YEC have been open with the First Nation about the reasoning behind a 4.9 MW assessment being immediately followed by a 4.1 MW assessment for the same project?

g) Please explain why the project was presented to YESAB, FNNND, the Village of Mayo, and Environment as a 4.9 MW operating-capacity project, while it was presented to the Board as a 7.2 MW project, where YEC sought cost recovery for 7.2 MW.

h) Provide the dollar amount included in 2023 and 2024 revenue requirement for Mayo Secondary capacity, and show how this dollar amount corresponds to rental charges stated in the GRA.

i) Please provide the dollar amount included in 2023 and 2024 revenue requirement for Mayo Secondary capacity exceeding 4.9 MW.

j) In YESAB 2023-0090 concerning the first 4.9 MW of the split project, a YESAB IR (IR1.3) asked YEC to "...please confirm that the operation of the Project will not exceed 4.9 MW at any time, even during emergencies."[4]

YEC Response:

> "As outlined in the response to IR1.1a, Yukon Energy is seeking authorization from the Yukon Government to operate up to 4.9 MW of fossil fuel-fired electrical generating equipment at any one time at the Project site. As with all Yukon Energy thermal generating stations, any use of the installed Capacity higher than the Air Emissions Permit Operating Capacity threshold would require approval by the authority having jurisdiction, in this case the Yukon Government Environment Department. If ever required,

[4] EX8 Intervenor Evidence PDF p.38 / Attachment D.

> such approval might be granted in an emergency and would be subject to the provisions of YESAA in this regard (i.e., Section 49(1) and 49(2)).”[5]

Has Yukon Energy ever requested or received the required approval from Environment to exceed assessed and permitted capacities? If an approval to exceed assessed and permitted capacities was ever issued, did it reference YESAA 49(1)?

k) In its cost claim, YEC appears to reference “potential significance of IR response provided to YESAB in June 2023, and correspondence with Mr. Osler and Mr. Landry regarding same;”[6]

From the cost claim:

> to NY’s evidence, and potential significance of IR response provided to YESAB in June 2023, and correspondence with Mr. Osler and Mr. Landry regarding same;

Please confirm that the IR response mentioned refers to IR1.3 above, and please describe potential significance and provide any non-privileged correspondence referenced. If this item in the cost claim refers to a different IR response provided to YESAB in June 2023 (though no other assessments had IRs in that timeframe) please provide that IR and response, and any non-privileged correspondence.

l) YEC’s proposal for YESAB 2023-0090 for the first 4.9 MW states the following:

> “Operation: Operation of EPA Approved Tier 2 Caterpillar 3516C Diesel Generators up to a maximum operating capacity of 4.9 MW, during peak demand (winter) and during emergencies to complement hydro power and other thermal resources on the Yukon’s electrical grid, also known as the Yukon Integrated System (YIS).”

This text was carried through to the Decision Document: “Maximum operating (production) capacity of 4.9 MW during peak demand (winter) and during N-1 emergencies”.

[5] IR1.3 in from YESAB 2023-0090, also in EX8 NY Evidence PDF p. 38.

[6] YEC Cost Claim Application 2023-24 GRA PDF p. 47.

Please identify the legal authority, permit condition, Decision Document, written approval, or other authorization that YEC relies on for including 7.2 MW of Mayo Secondary rental diesel capacity in the 2023/24 GRA revenue requirement.

m) In response to NY-YEC-1-17 in the 2023-24 GRA, YEC states the following:

> "Consistent with the YESAB proposal, the 2023/24 GRA includes five rental units in Mayo, including one spare unit based on forecast peak demand and available dependable capacity for 2023/24 and 2024/25 winter. YEC will operate up to 4.9 MW capacity at any one time, including during winter peak hours while the remaining capacity is available during emergencies such as N-1 events."

Please explain how saying "the remaining capacity is available during emergencies such as N-1 events." is "consistent" with "Maximum operating (production) capacity of 4.9 MW during peak demand (winter) and during N-1 emergencies". Where does the Decision Document or YESAB 2023-0090 allow "remaining capacity" to be available in emergencies?

n) How is the "five rental units in Mayo, including one spare unit" described in the GRA and in the IR response actually consistent with YESAB 2023-0090? Where in the Decision Document or in YESAB 2023-0090 is the "one spare unit" mentioned? Where in the YESAB proceeding is this configuration described, and how does this configuration correspond to either a 4.9 MW or a 7.2 MW capacity?

ANSWER:

(a)

As explained in response to YUB-YEC-1-6 (a), Yukon Energy clearly indicated in the Project Proposal it filed with the Mayo Designated Office in May 2023 (Additional Evidence, Attachment 32, PDF p. 43) that it was planning to install and commission up to five rental diesel units at the Mayo Secondary site at 1.8 MW per unit (totaling 9.0 MW) while only seeking approval for a maximum operating capacity of 4.9 MW. The information shared with the public, including FNNND, at that time also explained YEC's plan to install five rental diesels at the Mayo Secondary site (Additional Evidence, Attachment 35, PDF p. 1).

In accordance with the Project Proposal, the 4.9 MW figure referenced in this question represents the maximum operating capacity that was assessed by YESAB for the Mayo Secondary Thermal Generation Project in 2023 (YESAB File No. 2023-0090), and that was specified in the Air Emissions Permit for the Mayo Secondary site issued by Environment Yukon on November 21, 2023. As elaborated in Yukon Energy's Additional Evidence and explained further in response to YUB-YEC-1-6 (a) and (d), Yukon Energy decided to assess the Mayo Secondary site for 4.9 MW of operating capacity so that the assessment could be completed as expeditiously as possible by the Mayo Designated Office without triggering an Executive Committee level screening assessment, which Yukon Energy did not expect it would be possible to complete in time for winter 2023/24. It was Yukon Energy's understanding that an Executive Committee process could be expected to take up to two years to complete.

Yukon Energy's primary consideration when submitting the Project Proposal in May 2023 was to ensure that the new Mayo Secondary site could be constructed and that the diesel generating units could be installed and commissioned by December 2023 to meet projected peak demands for power, and that sufficient permitting would in place by that time at least for normal operating conditions. At the time the Project Proposal was filed, only approximately seven months remained before the units were required to be operational. Proceeding with an Executive Committee screening in May 2023 (as opposed to a Designated Office level assessment) would have left Yukon Energy in the untenable position of having no permitted thermal generating capacity at Mayo Secondary when it would be needed in winter 2023/24.

In contrast to the 4.9 MW figure in the YESAB Project Proposal, the 7.2 MW figure referenced in this question represents the dependable capacity of the four diesel rental units at Mayo Secondary that Yukon Energy forecast in the 2023/24 GRA to be required in winter 2023/24 and 2024/25 to respond to an N-1 emergency event (excluding the fifth unit that was considered to be a "spare").[7] In the 2023/24 GRA, the Board approved that

[7] As addressed further in response to NY-YEC-1-4, in the 2021 GRA, the Board had previously approved the capacity of six rental units in Faro (excluding one spare) for inclusion in Yukon Energy's revenue requirement, despite Mr. Yee's objection that the rental units exceeded the permitted capacity at the site. In the 2021 GRA, the Board had previously accepted that Yukon Energy's diesel rental costs for emergency capacity that was needed to satisfy the N-1 criterion had been prudently incurred. Yukon Energy understood from the 2021 GRA decision that such costs could again be included in Yukon Energy's revenue requirements for the 2023/24 GRA, subject to the Board's direction that Yukon Energy would be expected to provide a sufficient business case to justify its continued reliance on rental diesels for emergency capacity (see Board Order 2022-03, Appendix A, paras. 92-115).

capacity for inclusion in Yukon Energy's revenue requirements. (This figure is based on an assumed 1.8 MW of dependable capacity for each rental unit, without applying a 15% reduction to reflect the Forced Outage Rate for those units as was done in the 2025-27 GRA).

Yukon Energy transparently informed the Board about both of these figures in the 2023/24 GRA proceeding: see, for example, 2023/24 GRA NY-YEC-1-17 (Exhibit 2, PDF pp. 80-81); NY-YEC-1-4 REVISED (Exhibit 6, PDF p. 3); and Rebuttal Evidence (Exhibit 9, PDF pp. 8-9).

(b)

Yukon Energy's referenced August 28, 2023, response to FNNND's comments during the YESAA assessment process (Additional Evidence Attachment 38, PDF pp. 9-10) confirmed Yukon Energy's expectation that the maximum operating capacity of 4.9 MW that it was seeking for the Mayo Secondary facility would be prescribed and enforceable under the air emissions permit to be issued for the project. That 4.9 MW figure reflected the maximum output that Yukon Energy forecast would be required from the site under normal operating conditions. However, for the reasons previously described in Yukon Energy's June 29, 2023 response to IR1.3 of the Mayo Designated Office (Additional Evidence Attachment 36, p. 4), Yukon Energy also anticipated that should additional capacity at the site (i.e., 7.2 MW) be required in case of an N-1 event, such approval might still be granted by Environment Yukon on the basis of section 49 of YESAA.

When Yukon Energy subsequently sought the inclusion of rental costs for four diesel rental units (excluding one spare) in Mayo Secondary in its 2023/24 GRA revenue requirements, totaling 7.2 MW, that request was not inconsistent with the responses previously provided to the Mayo Designated Office and FNNND in the YESAA assessment process. Rather, the request was consistent with the approach the Board had taken previously in the 2021 GRA to allow recovery of rental costs for diesel rental units required to meet N-1 planning criteria, even if the total capacity of rentals at a site exceeded the site's previously assessed and permitted capacity limit. It would ultimately be up to the Board in the 2023/24 GRA to decide what diesel rental costs at each facility were prudently incurred and appropriately recovered in rates – subject to the direction the Board had given in its 2021 GRA decision that Yukon Energy would be expected to provide a sufficient business case to justify its continued reliance on rental diesels (see Board Order 2022-03, Appendix A, paras. 92-115).

With respect to the YESAA process, the Mayo Designated Office specifically recognized in its October 6, 2023 Evaluation Report that Yukon Energy was still proposing to seek approval from relevant authorities on the basis of section 49 of YESAA if it became necessary to operate above 4.9 MW in response to an emergency, and that the potential future application of section 49 in such circumstances would be a matter to be resolved between Yukon Energy and Environment Yukon (Additional Evidence, Attachment 40, PDF pp. 24, 32).

The Rebuttal Evidence that Yukon Energy filed in the 2023/24 GRA several months later, on February 8, 2024, reiterated Yukon Energy's intention at the time of its response to IR1.3 of the Mayo Designated Office (2023/24 GRA Rebuttal Evidence, footnote 5: Exhibit 9, PDF pp. 7-8). However, it also explained the practical consequence of Environment Yukon's apparent reluctance to exercise its authority under section 49 of YESAA to grant approval to exceed 4.9 MW in response to an emergency, and Yukon Energy's conclusion that this would leave the Corporation with no practical option but to exceed its permitted operating capacity if necessary to do so to prevent immediate harm to public welfare, health or safety, and to promptly report that exceedance to Environment Yukon (2023/24 GRA Rebuttal Evidence, Exhibit 9, PDF pp. 5-6).

(c) and (d)

This was not a "7.2 MW project". Yukon Energy's Project Proposal to YESAB contemplated the placement of five rental diesel units at Mayo Secondary, with a permitted operating capacity of 4.9 MW. The request in the 2023/24 GRA was for recovery of rental costs for four of those five rental diesel units required to meet its N-1 planning criteria.

As explained in response to (a) above, Yukon Energy's primary concern was to ensure that the new Mayo Secondary site could be built and the diesel units rented and commissioned by December 2023 – within seven or eight months of filing its YESAA proposal – in order to meet projected peak demands for power, and to ensure that sufficient permitting would in place by that time for normal operating conditions. This supported the objectives and principles of YESAA and the *Environment Act* as much as was practically possible in the circumstances – while still meeting Yukon Energy's duty to serve under section 106 of the *Public Utilities Act* – in light of Yukon Energy's understanding that an Executive Committee process could be expected to take up to two years to complete, which would not be possible in time for winter 2023/24.

The Mayo Designated Office specifically addressed Yukon Energy's ability under YESAA to seek a Designated Office level assessment for a permitted capacity of 4.9 MW for the Mayo Secondary facility while installing five diesel rental units at section 4.4.1 of its October 6, 2023 Evaluation Report (Additional Evidence, Attachment 40, PDF pp. 31-33).

In the 2023/24 GRA, Yukon Energy disclosed all relevant information to the Board regarding the 7.2 MW forecast to be required for emergency capacity, in support of its request to recover rental costs for four rental units at Mayo Secondary in rates. In the meantime, Yukon Energy's approach with YESAB enabled 4.9 MW of the required capacity to be assessed and permitted as soon as possible, in time for winter 2023/24, to avoid a larger shortfall in permitted capacity during the 2023 and 2024 test years.

(e) to (g)

See responses to (a) and (b) above.

(h) and (i)

See responses to YUB-YEC-1-12 (c), NY-YEC-1-5 (e) and NY-YEC-1-6.

(j)

From the time the Mayo Secondary facility was put into operation in winter 2023/24 until its permit was amended on July 24, 2025 to increase the facility's permitted operating capacity to 9 MW, it never actually became necessary for Yukon Energy to exceed the original permitted operating capacity of 4.9 MW at the Mayo Secondary site, even in response to the emergency situation resulting from the Aishihik outage in January 2024.

Yukon Energy has explained in its 2023/24 GRA Rebuttal Evidence and elsewhere how it notified Environment Yukon on the two occasions in December 2022 and January/February 2024 when it became necessary to exceed permitted capacity in Whitehorse in response to emergency conditions, and how Environment Yukon did not take any enforcement action on either occasion.

Yukon Energy also emphasizes that:

- the "Determination of No Significant Change" issued by the Acting Director, Environmental Programs for Environment Yukon on December 12, 2017 concluded that its proposed use of up to 10 MW of emergency diesel generation capacity in excess of previously assessed capacity in Whitehorse was "not anticipated to result in significant changes to the overall facility emissions and the conclusions of previous air quality impact assessments for the station" (Additional Evidence Attachment 12, PDF p. 20); and

- the permit amendments subsequently granted by Environment Yukon on both December 15, 2017 and October 4, 2018 authorized Yukon Energy to use up to 10 MW or 12 MW, respectively, of emergency diesel generation capacity in excess of previously assessed capacity in Whitehorse (Additional Evidence Attachments 13 and 18).

The Acting Director's December 12, 2017 determination referred to section 49.1 of YESAA. However,

- Environment Yukon's earlier email exchange with Yukon Energy in November 2017 had referred to section 49(1), rather that section 49.1 (Additional Evidence Attachment 10); and

- both of the permit amendments that were subsequently granted by Environment Yukon on December 15, 2017 and October 4, 2018 were issued after section 49.1 had already been repealed on December 14, 2017.

(k)

Yukon Energy objects to this question on the basis that it is seeking disclosure of information that is covered by solicitor-client privilege, and that would neither be relevant nor helpful to the Board in this proceeding.

(l)

See section 1.0 of Yukon Energy's Additional Evidence.

(m)

See responses to (a) and (b) above.

As noted in response to (b) above:

- the Mayo Designated Office's Evaluation report specifically acknowledged Yukon Energy's position that approval to exceed the permitted capacity of 4.9 MW in an emergency might be sought from Environment Yukon under section 49 of YESAA, and noted that this would be a matter to be resolved between Yukon Energy and Environment Yukon (Additional Evidence, Attachment 40, PDF pp. 24, 32); and

- Yukon Energy gave further evidence in the 2023/24 GRA about the practical necessity of exceeding permitted operating capacity if necessary to do so to prevent immediate harm to public welfare, health or safety, and then promptly reporting that exceedance to Environment Yukon, in light of Environment Yukon's apparent reluctance to exercise its authority under section 49 (2023/24 GRA Rebuttal Evidence, Exhibit 9, PDF pp. 5-6).

(n)

See Yukon Energy's comments in response to YUB-YEC-1-12 (a) regarding the rental units identified as "spares" in the 2023/24 GRA.

The YESAB assessment did not address "spares". The Mayo Designated Office assessed the 4.9 MW of capacity that Yukon Energy sought to be permitted, while specifically acknowledging Yukon Energy's position (as noted in response to (b) and (m) above) that approval to exceed that permitted capacity in an emergency might be sought from Environment Yukon under section 49 of YESAA, and noting that this would be a matter to be resolved between Yukon Energy and Environment Yukon (Additional Evidence, Attachment 40, PDF pp. 24, 32).

ISSUE: **Whitehorse Diesel**

PREAMBLE: The provision allowing operation of 12 MW of "emergency" rental diesel expired March 31, 2022, and a new amended permit was issued on May 11, 2022 that made no mention of 12 MW of emergency rental diesel, and limited diesel site capacity to "16.15 MW from five diesel generators" and 13.13 MW from LNG.

QUESTION:

a) In Attachment 23 YEC states "No, we are not asking to add more thermal capacity in our proposal".

And in Attachment 24 YEC writes "As part of our ongoing work to provide Yukoners with sustainable, reliable, and cost-effective electricity, Yukon Energy will be submitting a proposal to the Yukon Environmental and Socio-economic Assessment Board (YESAB) to renew its existing air emissions permit in Whitehorse. This permit is needed to run the diesel and liquefied natural gas (LNG) generators at the Whitehorse Rapids Generating Station on Robert Service Way. We are not asking to add more thermal capacity in our proposal."

The current permit at the time of these letters to property and business owners was sent, the permit being renewed, did <u>not</u> include any mention of the 12 MW of rental / emergency diesel, while the "renewal" did include it. The "renewal" took the permit from 29.28 MW to 42.0 MW.

Did the renewal permit allowing 42 MW of thermal capacity add or increase capacity in comparison with the existing 29.28 MW permit?

b) Why was the public not informed that the capacity allowed by the permit renewal would be increased from 29.28 MW to 42 MW?

c) Why was the possibility of an Executive Committee screening never mentioned to the public?

d) Attachment 28, presented on March 22, 2023 also does not mention the possibility of an EC screening, and on the slide titled "Our Existing Whitehorse Permit"

(Attachments PDF p. 36-37) states “12 megawatts from diesel generators that can be used during emergencies” and “Existing permit will expire December 31, 2024”.

However, the existing permit that was set to expire on December 31, 2024 did NOT contain any mention of the additional emergency 12 MW as that provision had expired and had been removed almost a year earlier.

Why did the YEC presentation claim that 12 MW to be used in emergencies provision was part of the existing permit well after it had been removed?

e) The “Existing Permit” slide (PDF p. 37) also states “Not asking for anything new or different”. How is a change from 29.28 MW to 42 MW of permitted capacity not “new or different”?

f) YEC provides similarly problematic information to the public in a community meeting on March 27, 2023, with slides in Attachment 29 (PDF p. 71-72).

Why does YEC make the potentially misleading claim that the “existing permit” allows 12 MW of emergency diesel, when this was not in fact mentioned in the existing permit. When YEC says “Our existing Whitehorse permit” is Yukon Energy expecting this to be interpreted as “our permit that expired last year”?

g) Why does YEC state “Not asking to add more thermal capacity” when the thermal permitting project is adding the capacity of the previously unpermitted and unassessed rentals, taking the capacity from 29.28 MW to 42 MW?

h) How does presenting potentially misleading information concerning existing and expired permits and added capacity support the objectives and principles of YESAA and the Environment Act?

i) Please provide the dollar amount included in 2023 and 2024 revenue requirement for Whitehorse rental diesel, and show how this dollar amount corresponds to rental charges stated in the GRA.

j) “In any event, as explained in Section 2.1 above, at the time the authorization expired in Yukon Energy’s previous permit for its emergency back-up diesel capacity in Whitehorse, it was Yukon Energy’s understanding that, under normal

operating conditions, its permitted site capacity of 16.15 MW from diesel generation could be served by any combination of the permanent and rental diesel units at the site." [1]

What would lead YEC to believe that "any combination" of the generators could be used, considering that the permit was very specific in limiting normal operations to "five generators running exclusively on diesel fuel at the Whitehorse Station" and "six emergency back-up generators, to a maximum cumulative total of 12 MW (2MW maximum capacity per unit), exclusively on diesel fuel at the Whitehorse Station only in the event that an N-1 event occurs". Does the permit mean what it says? Does Yukon Energy have any documentation from Environment that these (or any) permit terms can be selectively ignored or that any combination of generators could be used?

k) Concerning the 2018 amendment to the Whitehorse permit, allowing a 6th rental, YEC's Evidence document states that "...the determination must presumably have been supported by the emergency exemption in YESAA section 49(1)."

Looking at Attachment 16 (PDF p. 33), in explaining why there is no assessment, Environment makes no mention of 49(1) the emergency exemption. Instead, Environment says "The reason is that the rated output is lower than the originally scoped in output, based on nameplate capacity." In this case, Environment determined that even with the 6th generator, the 25.2 MW capacity of the 2011 YESAB and permit would not be exceeded with the additional generator.

Please explain how YEC made the jump from Environment's email stating that "The reason is that the rated output is lower than the originally scoped in output…" to presuming the reason was YESAA 49(1).

l) Please describe the prudence of YEC basing its interpretation of the utility of YESAA 49(1) on an approval that does not mention 49(1), and explain why YEC claims the 2018 determination "must presumably have been supported by the emergency exemption in YESAA section 49(1)"? Is there legal or factual basis for "must presumably"?

[1] YEC Reconsideration Evidence PDF p.31.

m) Why did YEC not ask Environment if 49(1) allowed for operation of the diesels, or mention this interpretation in any documents submitted to Environment, particularly when Environment would not re-authorize emergency capacity without an assessment in 2022?

n) "In that context, Yukon Energy was not expecting Environment Yukon's April 2022 communication that the emergency back-up capacity could no longer be reauthorized under the permit without a new YESAA assessment. In effect, this was a new regulatory requirement."[2]

If this was a new regulatory requirement, what was the old regulatory requirement and where was it documented? Please provide documentation from Environment or other relevant authorities explaining both the old and the new requirement and how/ when / why this changed.

o) While YEC may have presumed that 49(1) was relevant in amending a permit ("...the determination must presumably have been supported by the emergency exemption in YESAA section 49(1)") how did YEC then come to presume that 49(1) also allowed capacity to be operated with no permit or assessment? Did YEC presume that 49(1) could be used in amending a permit and to operate capacity without a permit?

p) In Attachment 21, Environment states that an assessment is required because 49.1 (Significant Change) had been repealed. Why did YEC not at this time suggest the utility of 49(1) (Emergency) to Environment, and note that YEC believed (or presumed) that 49(1) allowed operation of the diesels without assessment or permitting, as YEC repeatedly claimed to the Board in the 2021 and 2023-24 GRAs? Please provide all discussion with Environment concerning the utility of YESAA 49(1) in allowing operation of diesel generators above assessed and permitted capacity or in permitting capacity without assessment.

q) Given that in the evidence provided, YEC made no attempt to invoke 49(1) with Environment to authorize or re-authorize emergency capacity in this instance in 2022, did YEC no longer presume that 49(1) could be used to authorize or re-

[2] YEC Reconsideration Evidence PDF p.31.

authorize operation of the diesels without assessment and permitting? What were YEC's presumptions concerning the utility of 49(1) going forward?

ANSWER:

(a) and (b)

Yukon Energy's permit renewal proposal for Whitehorse sought authorization for all thermal generation capacity that had previously been assessed or permitted for Whitehorse. In addition to renewing the authorization for the LNG and diesel generation capacity required for normal operating conditions, this included re-authorization of the 12 MW of emergency back-up diesel capacity previously authorized in Part 9 of Yukon Energy's Air Emissions Permit No. 60-010.

Apart from the plan to replace the previously assessed 5.15 MW capacity of WD3 with two new 2.5 MW permanent diesel generators (WD8 and WD9),[3] Yukon Energy was not seeking to add any new thermal generators in Whitehorse beyond what had previously been installed at the site.[4] This was shown, for example, in the Public Notice Map issued on August 1, 2024, at the commencement of Seeking Views and Information Stage of the YESAA assessment for the permit renewal proposal (Attachment 1). That map showed all of the existing thermal generators on-site, including all ten rental diesels, as well as the two new permanent units (WD8 and WD9) that were planned to replace the previously assessed capacity of WD3.

[3] At the time the letters in Attachments 23 and 24 were sent, Yukon Energy was contemplating the potential replacement of 5 MW of diesel capacity in Whitehorse with new YEC owned diesel generators to allow for a reduction in the number of rental diesel units in Whitehorse by winter 2024/25 (relative to the ten rental diesel units that had been placed in Whitehorse since winter 2020/21 and were planned for winter 2023/24, one of which was considered to be a spare in the 2023/24 GRA). This was reflected, for example, in the March 2023 presentations in Additional Evidence Attachments 28 and 29, which included references to potential diesel replacement in summer 2024. Subsequently, however, the planned addition of WD8 and WD9 was delayed due to supply chain issues, and Yukon Energy had to re-assess its ability to reduce the number of rental diesel units in Whitehorse. Yukon Energy concluded this would no longer be possible due to a combination of factors, including continued unanticipated growth in non-industrial peak demand (see Table 2.2-1 in Additional Evidence), and delayed completion of the BESS and Callison projects.

[4] The thermal generators on-site in Whitehorse during the 2023 and 2024 GRA test years included: the three LNG units (WG1, WG2 and WG3); four permanent YEC owned diesel units (WD4, WD5, WD6 and WD7); and ten rental diesel units (YM10 to YM19), one of which was considered to be a spare in the 2023/24 GRA.

The fact that the permit renewal proposal included re-authorization of the 12 MW of emergency back-up diesel capacity that had previously been authorized under Part 9 of the permit was specifically discussed during the public and community engagement process for the Whitehorse permit renewal in March 2023. See Stantec's meeting notes from the March 27, 2023 public information session (Additional Evidence, Attachment 33, PDF p. 99).

The Project Proposal Yukon Energy ultimately submitted to the Whitehorse Designated Office of YESAB on May 30, 2024 requested a total proposed permitted capacity of approximately 42.2 MW, which was described as including 13.2 MW LNG and 29 MW diesel, including 12 MW of emergency diesel to restore the authorization previously granted for the emergency back-up diesel capacity in Whitehorse under Part 9 of Yukon Energy's previous permit (Additional Evidence, Attachment 51, PDF p. 7).

Yukon Energy notes further that when the Executive Committee issued its Level of Assessment Decision in January 2024 directing the proposal for assessment at the Designated Office level, the Executive Committee specifically recognized that the ten diesel units in Whitehorse (YM10 to YM19) were part of the existing generating unit configuration at the site (Additional Evidence, Attachment 48, PDF p. 98).

Yukon Energy also informed the public about the full capacity it was seeking to include in the renewed air emissions permit. See, for example, the postcard sent to Riverdale residents in August 2024 (Additional Evidence, Attachment 55, PDF p. 8), which clearly shows the proposed capacity of 42 MW, including 29 MW diesel and (approximately) 13 MW LNG.

(c)

The premise of this question is incorrect. Yukon Energy's March 2023 presentations did reflect its expectation at the time that the Whitehorse permit renewal would be subject to an Executive Committee level screening. Yukon Energy's descriptions of the project schedule in the presentations both to the City of Whitehorse (Additional Evidence Attachment 28, PDF pp. 48-50) and for the March 27, 2023 community meeting (Additional Evidence Attachment 29, PDF pp. 85-87) described anticipated steps and timing for an Executive Committee process, including the separate pre-screening and post-submission engagement processes that are features of Executive Committee level screenings.

The Executive Committee decided later, in January 2024, that the project would instead be assessed at the Designated Office level (Additional Evidence, PDF pp. 33-34 and Attachments 47 and 48). The Whitehorse Designated Office notified the public in due course, on August 1, 2024, when it commenced the Seeking Views and Information Stage of that process. Further to the response to (a) and (b) above, Yukon Energy notes that the Public Notice Map issued at that time (Attachment 1) clearly showed all thermal generators on-site, including all ten rental diesels, as well as the two new permanent units (WD8 and WD9) that were planned to replace the previously assessed capacity of WD3.

(d) to (h)

This referenced statements were referring to existing capacity that had previously been assessed or permitted, including the 12 MW of emergency back-up diesel capacity that needed to be re-authorized following Environment Yukon's April 2022 communication, as described in response to (a) and (b) above.

These questions appear to be focused on the fact that the slide decks Yukon Energy used for the March 2023 community presentations referred to its "existing permit" in connection with the previously permitted 12 MW of emergency back-up diesel capacity that Yukon Energy was seeking to re-authorize. With the benefit of hindsight, Yukon Energy acknowledges that the wording used in those slides could have been more precise. What is clear, however, as outlined in response to (a) and (b) above, is that:

- Yukon Energy disclosed the full extent of the 42 MW of total thermal operating capacity it was seeking to have authorized in the renewed permit for Whitehorse;

- this was consistent with what had in fact been permitted before March 31, 2022; and

- this would not involve the addition of any new thermal generation equipment at the site (apart from the possible thermal replacement in summer 2024 which was ultimately delayed).

(i)

See response to YUB-YEC-1-12 (c).

(j)

Yukon Energy explained previously, in its December 12, 2023, response to Mr. Yee's motion for further disclosure in the 2023/24 GRA (NY-YEC-1-12 (a): Exhibit 3A, PDF p. 5), how the 16.15 MW figure in the Air Emissions Permit was determined based on the total capacity of the five permanent diesel units installed at the time the permit was issued (WD3 to WD7). However, this was never understood as preventing Yukon Energy from using other diesel generation available on-site to supply that permitted operating capacity.

In particular, as further explained in response to YUB-YEC-1-2 (c), Yukon Energy's air emissions permits, including the permits for Whitehorse, have included provisions requiring it to "run the sources at each site in order of highest possible efficiency under the circumstances", which Yukon Energy has understood as establishing a general requirement to operate more efficient diesel rental units higher in its thermal stacking order than less efficient permanent diesel units (subject to various additional considerations as noted in that IR response).

From an air quality perspective, it was only the total permitted operating capacity of 16.15 MW for Yukon Energy's diesel generators in Whitehorse that was actually relevant to the previous YESAA assessments for the site, not the specific number of permanent or rental units used to provide that operating capacity.[5] This explains why, for example, when WH3 was retired, Environment Yukon readily confirmed that its previously assessed capacity could be replaced by two new permanent generators (WD8 and WD9) (see Additional Evidence, PDF p. 33, and Attachments 43 and 45 (PDF pp. 88, 90).

Moreover, as in Faro, Yukon Energy's use of its rental diesel units higher in the stacking order over pre-Tier permanent Yukon Energy owned units in Whitehorse could not have had any additional incremental negative impact on air quality, since the rental diesel units are more fuel efficient than the permanent units, which would ordinarily be expected to result in lower emissions.

As noted previously in Yukon Energy's 2023/24 GRA Reply Argument (PDF p. 23), Yukon Energy has been transparent with Environment Yukon about this understanding of how it

[5] The reasons for this are similar to those given in response to YUB-YEC-1-8, where Yukon Energy explains why, from an air quality perspective, it was only the 15.5 MW total permitted operating capacity in Faro that was relevant to the 2011 YESAA assessment for that site, regardless of the ratio of permanent vs. rental units used to provide that operating capacity. The same considerations apply in Whitehorse.

is expected to operate its diesel generating units, and Environment Yukon has not raised a concern about this.

(k) to (q)

See responses to YUB-YEC-1-2 (d) and NY-YEC-1-4.

Yukon Energy continues to be of the view that Environment Yukon has always had authority under section 49 of YESAA to grant permit authorization in advance for the contingent use of its emergency back-up diesel generation capacity in response to an emergency as described in section 49, without the need for a YESAA assessment of that activity. However, regardless of that view, Yukon Energy chose to work cooperatively with Environment Yukon after April 2022 to take the necessary steps to achieve Environment Yukon's objective of completing YESAA assessments for its emergency diesel back-up capacity.

YESAB
Yukon Environmental and
Socio-economic Assessment Board

Map Package

2024-0103

YEC – Whitehorse Air Emissions Permit Renewal

Proponent: Yukon Energy Corporation

Prepared on: July 30, 2024

Whitehorse Designated Office
203-309 Strickland St. Whitehorse Yukon Y1A 2J9
Phone: 867-456-3200 Email: whitehorse.do@yesab.ca

Coordinates:

The proposed project is located on map sheet 105D11. The coordinates used are an approximate location within the proposed project area.

Decimal Degrees
60.70048 °N 135.04356 °W
60.70005 °N 135.04568 °W
6069530 °N 135.04512 °W
60.69484 °N 135.04709 °W

Watershed(s) and drainage region of project area as indicated on GeoYukon:

Major Drainage Area: Yukon Drainage Area

Sub Drainage: Headwaters Yukon

Sub-Sub Drainage: Headwaters Yukon - Lake Laberge

Traditional Territories overlapping with the project area:

Kwanlin Dün First Nation
Ta'an Kwäch'än Council

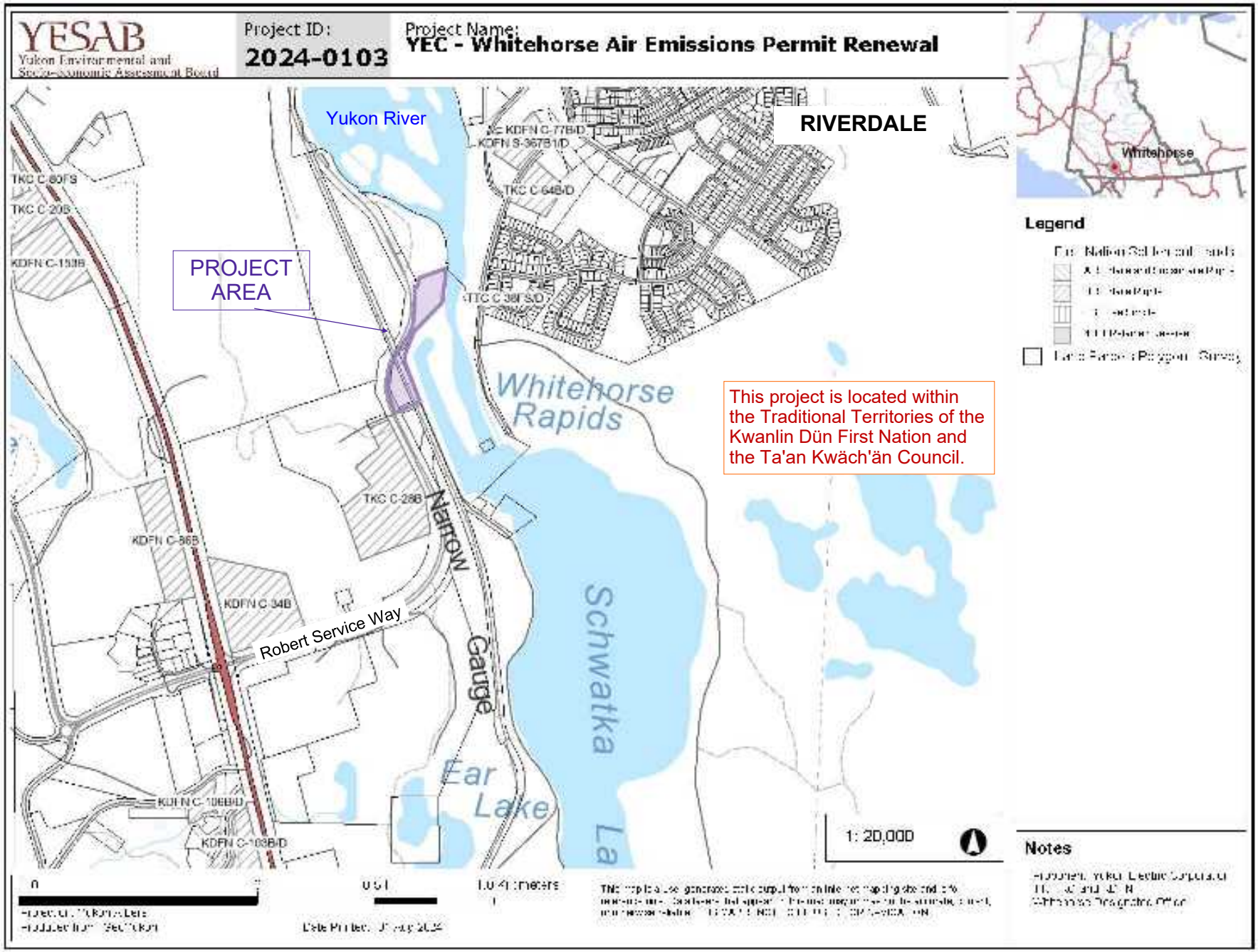
Regional Land Use Plan Overlapping Project:

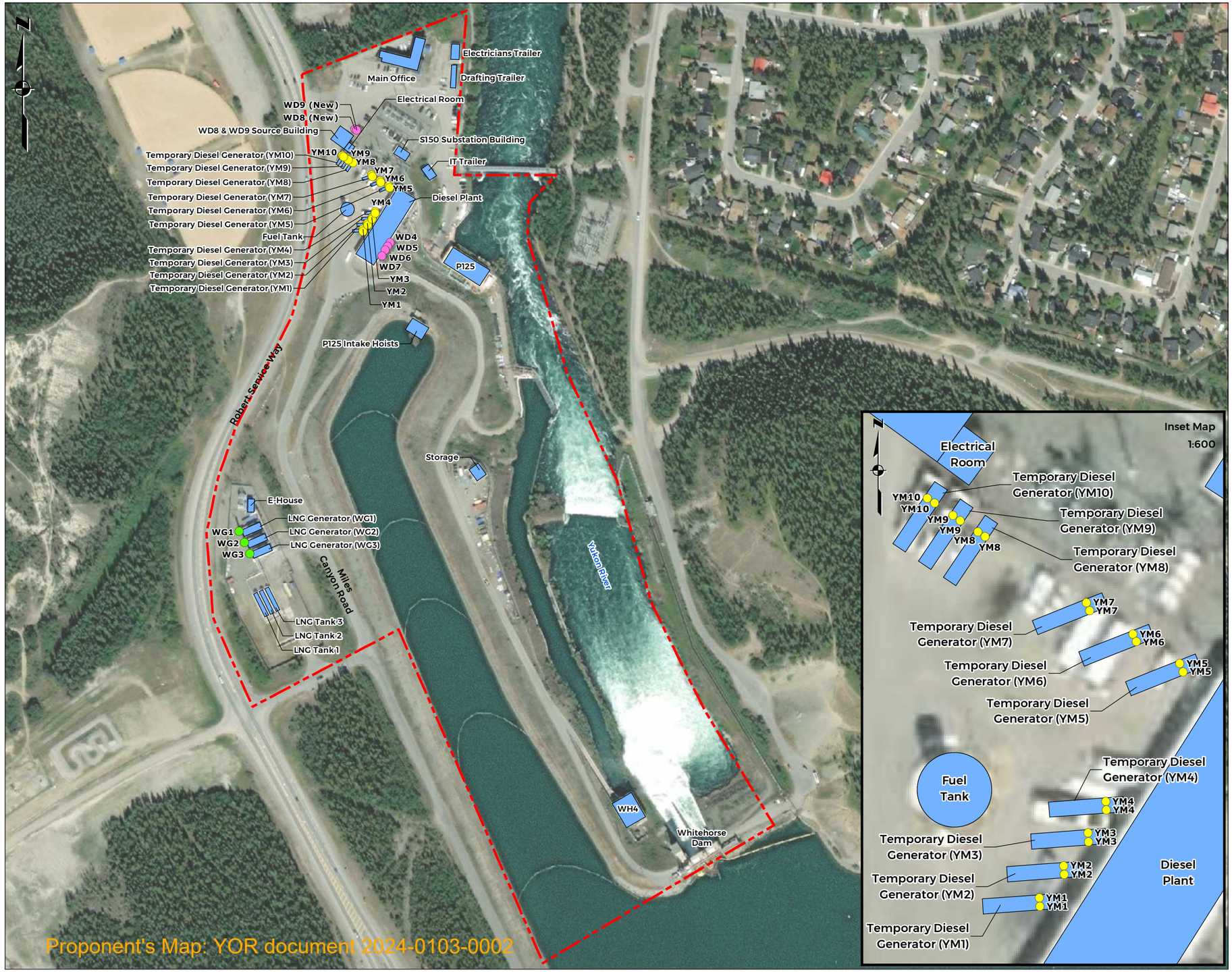
No Regional Land Use Plan

Land Use Planning Unit and Designation:

N/A

Disclaimer: Information provided in this map package is correct at the time of preparation; information is subject to correction or change.


YESAB
Yukon Environmental and Socio-Economic Assessment Board
Project ID:
2024-0103
Project Name:
YEC - Whitehorse Air Emissions Permit Renewal
Yukon River
RIVERDALE
PROJECT AREA
Whitehorse Rapids
Narrow
Gauge
Schwatka La
Ear Lake
Robert Service Way
This project is located within the Traditional Territories of the Kwanlin Dün First Nation and the Ta'an Kwäch'än Council.
Whitehorse
Legend
1: 20,000
Notes


N
Electricians Trailer
Main Office
Drafting Trailer
Electrical Room
WD9 (New)
WD8 (New)
WD8 & WD9 Source Building
S150 Substation Building
IT Trailer
Temporary Diesel Generator (YM10)
Temporary Diesel Generator (YM9)
Temporary Diesel Generator (YM8)
Temporary Diesel Generator (YM7)
Temporary Diesel Generator (YM6)
Temporary Diesel Generator (YM5)
Fuel Tank
Temporary Diesel Generator (YM4)
Temporary Diesel Generator (YM3)
Temporary Diesel Generator (YM2)
Temporary Diesel Generator (YM1)
YM10
YM9
YM8
YM7
YM6
YM5
YM4
YM3
YM2
YM1
Diesel Plant
WD4
WD5
WD6
WD7
P125
P125 Intake Hoists
Robert Service Way
Storage
E-House
LNG Generator (WG1)
LNG Generator (WG2)
LNG Generator (WG3)
WG1
WG2
WG3
Miles Canyon Road
LNG Tank 3
LNG Tank 2
LNG Tank 1
Yukon River
WH4
Whitehorse Dam
Proponent's Map: YOR document 2024-0103-0002
Inset Map
1:600
Electrical Room
Temporary Diesel Generator (YM10)
Temporary Diesel Generator (YM9)
Temporary Diesel Generator (YM8)
Temporary Diesel Generator (YM7)
Temporary Diesel Generator (YM6)
Temporary Diesel Generator (YM5)
Fuel Tank
Temporary Diesel Generator (YM4)
Temporary Diesel Generator (YM3)
Temporary Diesel Generator (YM2)
Temporary Diesel Generator (YM1)
Diesel Plant
KEY MAP
1:1,000,000
WHITEHORSE
Site Location
Legend
Mobile Diesel Generators
Permanent Diesel Generators
Permanent Natural Gas Generators
Station Boundary
Buildings
énergie yukon
yukon energy
Air Quality Assessment
Figure 2
Site Diagram
Whitehorse Rapids Generating Station
Yukon
Scale: 1:3,000
0 20 40 80 120 160 200 Metres
Universal Transverse Mercator (Zone 8)
North American Datum (1983)
Report By: JS
Drawn by: JH
Reviewed By: JS
WSP Job #: 221-07678-00
Date: April 4, 2023
Office: Calgary
Notes:Imagery Source: ESRI Imagery Service [2021]

ISSUE: **Faro Rental Diesel**

PREAMBLE: 15.5 MW – This is the permitted capacity of the Faro generating station through 2023-24, and until January 2026. During the GRA proceeding, YEC insisted to Environment that capacity was not being increased beyond 15.5 MW.

20.6 MW – This was the capacity presented to the Board in the 2023-24 GRA submitted August 31, 2023. Customers were charged for this capacity.

QUESTION:

a) In the GRA, YEC stated that capacity would increase to 20.6 MW[1], while also saying that no YESAB assessment would be required. Given that YEC was aware as of 2022 that "emergency" capacity did require assessment,[2] and aware of the "Regulatory Reminder" from YESAB 2023-0090 specifically stated that an assessment was required regardless of 49(1), why then did YEC claim in the GRA that this capacity could be added without assessment?

b) While telling the Board in the GRA that capacity would increase, YEC informed Environment that capacity was not being added, stating in a January 10 email[3] that "We are not asking to increase the assessed site capacity of 15.5 MW, just swapping capacity around to meet operational needs." and also stating that "we will need fewer YMs (rentals) after the replacement units are installed".

Why did YEC tell Environment that capacity would not be increased while also telling the Board that capacity would be increased without the need for an assessment?

[1] YEC 2023-24 GRA p. 163 (15.5MW + 5.1 MW).

[2] YEC Reconsideration Evidence PDF p.31 YEC notes that "emergency back-up capacity could no longer be reauthorized under the permit without a new YESAA" (This was true since the repeal of 49.1 in 2017).

[3] YEC Evidence Attachment 46, in Attachments 35-50, PDF p. 91.

c) Why does YEC's Evidence not mention that the GRA itself stated that capacity was increasing by 5.1 MW[4] (to 20.6 MW) at the Faro site and that the GRA also stated that no assessment was needed for this increase?[5]

d) Please provide documentation of when Environment was informed of the increase to 20.6 MW as described in the GRA.

e) Please provide the dollar amount included in 2023 and 2024 revenue requirement for Faro rental diesel, and show how this dollar amount corresponds to rental charges stated in the GRA.

f) Please provide the dollar amount included in 2023 and 2024 revenue requirement for Faro capacity exceeding 15.5 MW.

g) I wrote a letter expressing my concerns about different regulators receiving conflicting project details from YEC. This letter was to the Minster of Environment and to press, and Yukon News reported on it.[6] The article quotes an email from YEC, "We are currently working to replace that engine. When the engine is replaced, the number of rental diesels needed on site will be less. This is consistent with what has been shared with the department of Environment," reads the email. Shortly after the article, YEC's opening statement for the oral hearing includes "Relocation of two diesel rentals from Faro continues to be planned for winter 2024/25 (reducing Faro diesel rentals from 7 units to 5 units) but YEC has not yet finalized assessments for its decision as to where these mobile units will be relocated."[7]

Why was the relocation of Faro rentals not previously mentioned in the GRA proceeding?

[4] YEC 2023-24 GRA PDF p. 163.
[5] YEC 2023-24 GRA PDF p. 163.
[6] https://yukon-news.com/2024/01/28/yukoner-argues-yukon-energy-gave-false-incomplete-info-to-government/.
[7] YEC Opening Statement 2023-24 GRA, PDF p. 10.

h) Please provide documentation of the planning of relocating the Faro diesels, and provide references to where this possibility was mentioned in the GRA proceeding documents.

i) YEC's legal counsel appears to list review of the Yukon News article in its Cost Claim application.[8] Please provide correspondence and comments concerning the news article and also Mr. Ritchie's comments if not privileged.

01/29/24	JKH	Review Yukon News article regarding NY's allegations about Faro diesel units; review and consider Mr. Ritchie's comments about draft statement responding to NY's fraud allegations, and further correspondence with Mr. Ritchie regarding same; revise draft high level statement responding to NY's fraud allegations, and further correspondence with Mr. Osler regarding same; further review and consider specific points potentially to be addressed in rebuttal evidence, and further prepare draft comments regarding same;	5.00

ANSWER:

(a)

Yukon Energy did not say in the 2023/24 GRA that no YESAA assessment would be required for the operation of diesel generation capacity in Faro exceeding 15.5 MW. As reviewed below, this question mischaracterizes what Yukon Energy said in the 2023/24 GRA.

The first sentence in this question (referencing that "no YESAB assessment would be required") appears to be referring to the following statement included in the 2023/24 GRA filed in August 2023 (Exhibit 1, PDF p. 163):

> "Faro is currently authorized to operate diesel-fired electrical generators up to a maximum capacity of 15.5 MW. This authorization was granted as a result of a recent YESAA assessment and associated decision document (YESAA Project Assessment 2021-0115). Pursuant to Part 2, Item 5 of the FGS Air Emissions Permit (No. 60-010-01) approval for the installation of

[8] YEC Cost Claim Application 2023-24 GRA PDF p. 46.

> the new generators contemplated by this project will require regulatory approval, but will not require a new YESAA assessment, as the permitting can be completed under the existing decision document for the facility. Because the units being proposed to replace existing generation at the site meeting modern emissions standards (EPA Tier 2 or higher) the regulatory approval should be fairly routine and achievable within 60 days of submitting an amendment application to the regulator. …"

That statement was referring to the planned installation of YEC owned units FD8 and FD9 to replace the previously assessed capacity of FD1. As explained further in YUB-YEC-1-8, that capacity replacement was a routine matter that did not require a further YESAA assessment.

The subsequent paragraph in the 2023/24 GRA that this question is also referencing was commenting on the total dependable capacity of 20.6 MW that was projected at that time for Faro after the addition of 5.0 MW from new permanent diesels.[9] This projection reflected Yukon Energy's plan to continue to have seven diesel rental units placed in Faro in winter 2024/25 – including the one month in the 2024 test year (December 2024) – to ensure sufficient dependable capacity to respond to an N-1 emergency event.[10] As noted in the GRA, this would add a further 5.1 MW of dependable capacity at the site over and above the capacity authorized in the permit issued on May 11, 2022.[11]

[9] Yukon Energy notes that the installation of new permanent diesels in Faro was subsequently delayed, and that, in the 2025-27 GRA, Yukon Energy provided updated nameplate capacities for FD8 and FD9, totaling 5.2 MW (i.e. 2.6 MW for each unit). The 2025-27 GRA also provided an updated forecast of dependable capacity of FD8 and FD9, totaling 4.992 MW (i.e. 2.496 MW for each unit), applying an adjustment for effective load carrying capacity (ELCC) (2025-27 GRA NY-YEC-1-1 Attachment 1, Exhibit 4, p. 5).

[10] As noted in Yukon Energy's Additional Evidence (PDF pp. 35-37), earlier in 2023, Yukon Energy was originally forecasting that it would potentially be able to reduce the number of diesel rental units in Faro from seven to five, with the fifth unit designated as a "spare". However, Yukon Energy had to revisit that plan for winter 2023/24 because of the delayed timing of the addition of FD8 and FD9, and then again for winter 2024/25 in light of further delays in completing the BESS and Callison projects.

[11] This was without taking into account the ELCC adjustment to dependable capacity applied subsequently in the 2025-27 GRA.

In response to Mr. Yee's further question about why Yukon Energy claimed in the GRA that this capacity could be added "without assessment", this is an inaccurate interpretation of the evidence Yukon Energy provided in the 2023/24 GRA.

As explained further in response to NY-YEC-1-4 (a), it has always been Yukon Energy's view that Environment Yukon has the authority to amend its air emissions permit to grant contingent authorization for the emergency use of that additional capacity without further YESAA assessment, on the basis of section 49 of YESAA. However, in its 2023/2024 GRA Rebuttal Evidence, Yukon Energy also explained its understanding of Environment Yukon's objective to bring the emergency operation of all diesel rentals within Yukon Energy's permitted capacity, following assessment by YESAB, and Yukon Energy confirmed that it was in the process of working with Environment Yukon to achieve that objective. In that sense, Yukon Energy did not suggest that "no assessment" would be required by Environment Yukon as a practical matter (regardless of Yukon Energy's position on the interpretation of section 49).

With respect to the further reference in this question to the July 20, 2023 "Regulatory Reminder", please see NY-YEC-1-4 (b) and (c).

(b)

In the referenced January 10, 2024 email (Additional Evidence, Attachment 46), Yukon Energy was not requesting approval for any increase to the 15.5 MW permitted capacity specified in the air emissions permit issued for Faro on May 11, 2023. The email was concerned with the capacity replacement described in (a) above, to **replace** the previously assessed capacity of FD1 with FD8 and FD9.

As explained in response to (a) above, it was that capacity replacement that Yukon Energy said in the 2023/24 GRA could be done without a further YESAA assessment.

In January 2024 (at the time of the email), Yukon Energy was still anticipating that it would potentially be able to reduce the number of diesel rental units in Faro for winter 2024/25. However, as explained in Yukon Energy's Additional Evidence (PDF p. 37), Yukon Energy had to revisit that plan in the months that followed in light of unanticipated delays in completing the BESS and Callison projects. This is addressed further in Yukon Energy's response to (g) and (h) below.

Yukon Energy submitted Project Proposal (2024-0145) to the Watson Lake Designated Office of YESAB in August 2024 to expand the permitted capacity in Faro from 15.5 MW to 20.4 MW.

(c)

As explained in response to (a) and (b) above, this question mischaracterizes what Yukon Energy said in the 2023/24 GRA.

(d)

As indicated in Yukon Energy's Additional Evidence (PDF p. 37), in light of unanticipated delays to the BESS and Callison projects, Yukon Energy had determined that it would no longer be possible to reduce the number of rental units in Faro for winter 2024/25 by the time it contracted with Finning in May 2024 for the continued rental of 22 diesel rental units for that winter.

Yukon Energy does not have a record of when this determination was first communicated to Environment Yukon. However, Yukon Energy has already provided the Board with a copy of the public notice shared with Faro residents in August 2024 explaining this (Additional Evidence, Attachment 54), as well as the YESAA Project Proposal for the Faro Generating Station Capacity Expansion (2024-0145) that was submitted to the Watson Lake Designated Office on August 23, 2024 (Additional Evidence, Attachment 56).

(e) and (f)

See response to YUB-YEC-1-12 (c).

(g) and (h)

As noted in Yukon Energy's Additional Evidence (PDF pp. 35-36), in early 2023, Yukon Energy was forecasting that it would potentially be able to reduce the number of diesel rental units in Faro from seven to five, with the fifth unit designated as a "spare". However, Yukon Energy had to revisit that plan for winter 2023/24 in light of the retirement of FD1 and the fact that FD8 and FD9 would not be added in time for that winter.

Yukon Energy also had to revisit that plan again for winter 2024/25 after unexpected delays to the BESS and Callison projects became known.

Yukon Energy had explained that this could be a possibility in its November 29, 2023 response to 2023/24 GRA YUB-YEC-1-25 (Exhibit 2, PDF pp. 272-273), which informed the Board that the potential reduction of the total number of diesel rental units on the grid for winter 2024/25 would be dependent on whether confirmation could obtained that the BESS and/or Callison projects would be completed and commissioned in time for that winter.

As noted in response to (b) above, in January 2024, Yukon Energy was still forecasting that it would potentially be able to reduce the number of diesel rental units in Faro for the following winter, 2024/25. This was reflected in Mr. Ritchie's January 10, 2024 email to Environment Yukon (Additional Evidence, Attachment 46).

When Yukon Energy filed its 2023/24 GRA Opening Statement with the Board on March 1, 2024, it provided updates on its major capital projects (2023/24 GRA Exhibit 10, PDF p. 13), explaining that:

- the BESS project was not expected to be commissioned until 2025 before it could be relied on for dependable capacity; and

- it was uncertain at that time whether assessment and permitting for the Callison project could be completed before the end of 2024.

As a result of these updates, Yukon Energy informed the Board that the BESS and Callison projects would not displace rental diesels for winter 2024/25. At that time, Yukon Energy was still contemplating the possibility of relocating two of the diesel rental units in Faro, but, as explained in the passage from Yukon Energy's Opening Statement quoted in question (g) (2023/24 GRA Exhibit 10, PDF p. 10) a decision about where those two units could be relocated had not yet been made.[12]

[12] The fact that no decision had yet been made about where those two units could potentially be located had also been explained in footnote 1 of Yukon Energy's February 8, 2024 Rebuttal Evidence (Exhibit 9, PDF p. 3).

Yukon Energy later determined that it would not be possible to relocate any of the seven rental units that needed to be kept in Faro for winter 2024/25, having regard to considerations such as those described in response to UCG-YEC-1-5 (a), including the lack of space to relocate them at another existing Yukon Energy rental site.

(i)

Yukon Energy commented on the *Yukon News* article in footnote 1 of its 2023/24 GRA Rebuttal Evidence (Exhibit 9, PDF p. 3).

Yukon Energy objects to Mr. Yee's request for the further information sought in this question on the basis that the information requested is covered by solicitor-client privilege.

ISSUE: **Specific Applicability of YESAA 49(1)**

QUOTE: YEC was aware since 2022 that "emergency" capacity needed to be assessed and permitted to be authorized or re-authorized.[1] In 2023, YEC stated that "any use of the installed Capacity higher than the Air Emissions Permit Operating Capacity threshold would require approval by the authority having jurisdiction, in this case the Yukon Government Environment Department"[2] and was also aware in 2023 before submitting the GRA that "The regulator is unable to provide authorization to operate above the assessed capacity in the event of an emergency situation."[3]

PREAMBLE: With this in mind:

QUESTION:

a) Please identify each statement in the 2023/24 GRA proceeding (GRA, IRs, oral hearing, final and reply arguments, etc.) where YEC stated, suggested, or relied on the position that YESAA 49 or 49(1) or any other authority allowed rental diesel capacity to be operated above the assessed or permitted capacity limit.

b) For each statement identified, please identify the factual, legal, and regulatory basis relied on by YEC, and explain how this relates to Environment's declaration made previous to the submission of the GRA that Environment is "unable to provide authorization to operate above the assessed capacity in the event of an emergency situation".

c) Please identify where in the 2023/24 GRA record YEC disclosed to the Board that the Department of Environment had advised YEC that operation above assessed capacity could not be authorized even in an emergency situation.

d) Does YEC now accept that YESAA 49(1) does not by itself authorize operation above an air-emissions permit limit, and that Environment is also unable to provide

[1] YEC Reconsideration Evidence PDF p.31, what YEC calls a "new regulatory requirement".

[2] YEC response to IR1.3, June 29, 2023 from YESAB 2023-0090, referenced EX8 NY Evidence PDF p. 38.

[3] Regulatory Reminder from Environment, July 20, 2023, YESAB 2023-0090 referenced EX8 NY Evidence PDF p.31.

such authorization? If not, please provide the legal authority relied on by YEC for the contrary position.

ANSWER:

(a)

This question oversimplifies Yukon Energy's position in the 2023/24 GRA proceeding concerning the relationship between the regulatory framework under the *Environment Act* and the Board's mandate under the *Public Utilities Act*, the effect of section 49 of YESAA, and its potential significance for Yukon Energy's use of its emergency back-up diesel generation capacity.

In particular, it appears that this question may be conflating comments made by Yukon Energy about section 49 of YESAA in the 2021 GRA with those made later during the 2023/24 GRA. However, it is important to distinguish between comments made during the 2021 GRA about how Yukon Energy understood it could rely on section 49 in the context of the Air Emissions Permit that was in effect at that time for all four of its thermal generation sites, and the comments Yukon Energy made later, in the course of the 2023/24 GRA, in the context of the new site specific air emissions permits that were in effect after May 11, 2022.

As elaborated in Yukon Energy's Additional Evidence, at the time of the 2021 GRA, the single Air Emissions Permit that covered all four of Yukon Energy's then operating thermal generation sites did not specify a numerical capacity limit for any site. Part 3 of the permit did refer to Yukon Energy's operation of two LNG generators and five diesel generators in Whitehorse, with an associated requirement for further regulatory approval to add additional LNG generators; however, there was no corresponding requirement specified for the addition of diesel generators in Whitehorse (Additional Evidence, Attachment 18). In contrast, the five site specific Air Emissions Permits in effect during the 2023/24 GRA proceeding did specify capacity limits for each site.

As explained in Yukon Energy's Additional Evidence (PDF p. 17), during the 2021 GRA proceeding, at a time when Yukon Energy's Air Emissions Permit did not specify a capacity limit for any of its thermal generation sites, it was Yukon Energy's understanding that any capacity limits were necessarily implied by the scope of the previous YESAA assessments. In other words, when Yukon Energy referred in the 2021 GRA to Faro

having a permitted production capacity of 10.6 MW for normal operations, that figure was not stated anywhere in the Air Emissions Permit that was in effect at the time. Rather, it was based on the capacity that had originally been assessed by YESAB in 2011 (YESAB File No. 2011-0246) based on the approximate total nameplate capacity of FD1, FD3, FD5 and FD7 (see October 25, 2011 Project Proposal, Additional Evidence Attachment 1, PDF p. 24).[4]

It was in that context that Yukon Energy provided the explanations in 2021 GRA NY-YEC-2-2 REVISED (Exhibit B-32, PDF pp. 11-12) and in its 2021 GRA Final Argument (PDF pp. 27-28) referenced in its Additional Evidence, as well as in its 2021 GRA Rebuttal Evidence (Exhibit B-30, PDF pp. 6-7), regarding Yukon Energy's ability to rely on its emergency back-up diesel generation capacity in Faro. Since the actual terms and conditions of the permit in effect at the time were silent on any capacity limit, it was Yukon Energy's understanding in the context of that permit that it could legally operate diesel generators in Faro beyond 10.6 MW in reliance on the emergency exception in section 49 of YESAA without further assessment, since section 49 exempted that emergency operation from a requirement for further assessment under YESAA.

There was no issue in the 2021 GRA about Yukon Energy's emergency back-up diesel generation capacity in Whitehorse because the emergency use of up to 12 MW was specifically authorized under Part 9 of the permit that was in effect at that time (Additional Evidence, Attachment 18).

It should be emphasized that Environment Yukon:

- had provided contingent authorization in the December 15, 2017 permit amendment for the temporary emergency use of up to 10 MW in Whitehorse over and above the (approximately) 25 MW of capacity that was originally assessed by YESAB in 2011, "using more modern and clear operating EPA tier 2 rated engines", which use was "not anticipated to result in significant changes to the

[4] As noted in Yukon Energy's 2021 GRA Rebuttal Evidence (PDF p. 6), and addressed further in Yukon Energy's response to YUB-YEC-1-8 in this proceeding, Yukon Energy had confirmed with Environment Yukon in 2020 that it was authorized under the provisions of its existing permit to replace the previously assessed capacity of the then retired units FD3 and FD5 without the need for a further YESAA assessment and Decision Document, based on the assessment previously completed in 2011.

overall facility emissions and the conclusions of previous air quality impact assessments for the station" (Additional Evidence, Attachment 12, PDF p. 20); and

- re-authorized the temporary emergency use of up to 12 MW in Whitehorse in the subsequent October 4, 2018 amendment, nearly ten months after the repeal of section 49.1 of YESAA (as addressed further in response to YUB-YEC-1-2 (d)).

In any event, the situation that was present during the 2021 GRA changed after May 11, 2022, when the single Air Emissions Permit covering all four sites was replaced with separate site specific Air Emissions Permits for each of Whitehorse, Faro, Dawson City, and downtown Mayo, with numerical operational capacity limits for each site specified directly in the applicable permit for the first time (2023/24 GRA YUB-YEC-1-35 REVISED, Attachments 3 to 6, Exhibit 5, PDF pp. 63-83).[5] A site specific operational capacity limit was also specified in the Air Emissions Permit issued for the Mayo Secondary facility on November 21, 2023 (2023/24 GRA YUB-YEC-1-35 REVISED Attachment 7, Exhibit 5, PDF pp. 84-89).

Yukon Energy explained its then-current understanding of the effect of section 49 of YESAA in the context of these updated Air Emissions Permits in its responses to information requests in the 2023/24 GRA, including NY-YEC-1-12 (a), NY-YEC-1-17 (a) - (e), NY-YEC-1-18 (c) and YUB-YEC-1-35 REVISED – Follow-up Question #3 (Exhibit 2, PDF pp. 34-35, 80-81, 83-84; Exhibit 5, PDF pp. 21-22) as well as in Yukon Energy's 2023/24 GRA Rebuttal Evidence (Exhibit 9, PDF pp. 5-6).

Yukon Energy's 2023/24 GRA IR responses and Rebuttal Evidence recognized the distinction between assessment requirements under YESAA and permitting requirements under the *Environment Act* and its regulations.

What Yukon Energy said in the 2023/24 GRA was that section 49 of YESAA allows Environment Yukon to grant a permit amendment authorizing emergency operations without the need for a further YESAA assessment (2023/24 GRA Rebuttal Evidence, Exhibit 9, PDF pp. 5-6). That is why Yukon Energy said in the responses it provided to NY-YEC-1-12 (a), NY-YEC-1-17 (a) - (e), NY-YEC-1-18 (c) on November 29, 2023 that it

[5] This included the increased operating capacity limit for Faro of 15.5 MW, as authorized by the YESAA assessment and resulting Decision Document for the Faro Generation Station Capacity Expansion Project in YESAB File No. 2021-0115 (see Additional Evidence Attachment 20).

understood there are provisions in YESAA that preclude the need for an assessment in the case of an emergency. That is distinct from any issues of compliance with conditions specified in its air emissions permit.

As further elaborated in Yukon Energy's response to YUB-YEC-1-35 REVISED – Follow-up Question #3, Yukon Energy explained that in case of an emergency situation that could (or did) require Yukon Energy to exceed its permitted operating capacity at any site, Yukon Energy would communicate with Environment Yukon immediately, and that Yukon Energy would address any requirements of Environment Yukon under those circumstances to the best of its ability.[6]

Yukon Energy explained further in its February 8, 2024 Rebuttal Evidence in the 2023/24 GRA (Exhibit 9, PDF p. 5) that it was of the view that Environment Yukon had legal authority to grant an emergency amendment to an existing air emissions permit on an expedited basis in response to an emergency described in section 49 of YESAA without a further assessment by YESAB. By that time, however, in light of Environment Yukon's apparent reluctance to exercise that authority, Yukon Energy also noted (Exhibit 9, PDF pp. 5-6) that it considered that the only other practical option available to prevent immediate harm to public welfare, health or safety during an emergency event would be to exceed its permitted operating capacity if and when it became necessary to do so and to report that exceedance to Environment Yukon in accordance with section 113 of the *Environment Act* and the "unauthorized emissions" provisions in Part 7 of each of the then-existing permits (as did in fact occur during the emergency events in December 2022 and January 2024).

Yukon Energy also specifically acknowledged (Exhibit 9, PDF p. 6) its understanding of Environment Yukon's objective to bring the emergency operation of all of Yukon Energy's rental diesels within its permitted capacity, following assessment by YESAB (notwithstanding YEC's views about section 49 of YESAA). As such, Yukon Energy explained how it was in the process of working with Environment Yukon to achieve that objective. Those efforts are now outlined in greater detail in the Additional Evidence filed in the current proceeding.

[6] This was consistent with the response Yukon Energy previously provided to IR1.3 of the Mayo Designated Office in the YESAA assessment for the Mayo Secondary Thermal Generation Project (2023-0090) (Additional Evidence, Attachment 36, PDF p. 4).

Yukon Energy also argued in its 2023/24 GRA Reply Argument (PDF p. 21) that if there was any conflict between any specific provisions of the *Environment Act* and Yukon Energy's overarching statutory duty under section 106 of the *Public Utilities Act* to provide service to customers, Yukon Energy's duty under section 106 should be interpreted as taking precedence, at least during an emergency event that engages the exemption from assessment under section 49 of YESAA.

(b)

Yukon Energy understands the referenced statement in the July 20, 2023 "Regulatory Reminder" to have been expressing Environment Yukon's interpretation at that time that it was unable to include a provision in Yukon Energy's Air Emissions Permit for Mayo Secondary granting contingent authorization, in advance, for use of Yukon Energy's emergency back-up diesel generation in the event of an emergency described by section 49 of YESAA, without further assessment of that emergency capacity.

To be clear, Yukon Energy does not agree with this interpretation.

Yukon Energy submits that the text of section 49 is broad enough to allow Environment Yukon to grant a permit amendment authorizing emergency operations without the need for a further YESAA assessment, and that section 49 should be interpreted accordingly, in light of the section's clear public safety purpose. Indeed, the Court of Appeal in *Yee v. Yukon Energy Corporation*, 2026 YKCA 1, at para. 6 specifically noted that it was unclear why Environment Yukon had not taken this step.

Yukon Energy notes further that Environment Yukon's interpretation is contradicted by the permit amendment that it did in fact grant in 2018 – which was done at that time without any further YESAA assessment – to continue to provide contingent authorization for use of Yukon Energy's emergency back-up diesel generation in Whitehorse in response to an N-1 event, despite the repeal of section 49.1 of YESAA. Four years later, in April 2022, Environment Yukon took the position that such an amendment could no longer be made because of the repeal of the "no significant change" exemption in the former section 49.1 of YESAA; however, that position does not explain the 2018 amendment that Environment Yukon granted months after section 49.1 had already been repealed.

In any event, despite Yukon Energy's disagreement with the interpretation that Environment Yukon has given to section 49 of YESAA since 2022, Yukon Energy has

taken the necessary steps since that time to bring its emergency back-up capacity within the scope of its air emissions permits. This included completing the environmental assessments that Environment Yukon considered to be necessary in Whitehorse, Faro and Mayo Secondary to support the issuance of the necessary permit amendments authorizing the emergency capacity located at each facility, as outlined in greater detail in Yukon Energy's Additional Evidence.

(c)

Yukon Energy is inferring that this question is asking about the July 20, 2023 "Regulatory Reminder" that was referenced in Mr. Yee's 2023/24 Intervener Evidence. Yukon Energy commented on the "Regulatory Reminder" in its Rebuttal Evidence, in response.

As noted in response to (b) above, Yukon Energy understands the referenced statement in the July 20, 2023 "Regulatory Reminder" to have been expressing Environment Yukon's interpretation that it was unable to include a provision in Yukon Energy's Air Emissions Permit for Mayo Secondary granting contingent authorization, in advance, for use of Yukon Energy's emergency back-up diesel generation, without further assessment of that emergency capacity.

By the time of the 2023/24 GRA, Environment Yukon had also refused to consider re-authorizing such a provision for Whitehorse without further assessment.

Despite the "Regulatory Reminder", it continued to be Yukon Energy's view at the time – and continues to be Yukon Energy's view to this day – that section 49 of YESAA does give Environment Yukon the ability to consider granting a permit amendment to authorize activities needed to protect public welfare, health or safety in response to an emergency situation. The language of section 49 is clear and unambiguous in that regard.

It was that view that was reflected in Yukon Energy's IR responses in the 2023/24 GRA – as well as the response that Yukon Energy had previously given to IR1.3 of the Mayo Designated Office in the YESAA assessment for the Mayo Secondary Thermal Generation Project (2023-0090) (Additional Evidence, Attachment 36, PDF p. 4).

In its Rebuttal Evidence provided subsequently in the 2023/24 GRA, Yukon Energy commented further on the practical necessity of exceeding permitted operating capacity if necessary to do so to prevent immediate harm to public welfare, health or safety, and to

then promptly report that exceedance to Environment Yukon, in light of Environment Yukon's apparent reluctance to exercise its authority under section 49 (2023/24 GRA Rebuttal Evidence, Exhibit 9, PDF pp. 5-6).

(d)

From the time that Environment Yukon specified site-specific operational capacity limits directly in the new air emissions permits issued to Yukon Energy on May 11, 2022, Yukon Energy agrees that operations exceeding those specified operational capacity limits would be considered to constitute non-compliance with the applicable permit under the *Environment Act*, and that in the event of such non-compliance Yukon Energy would be required to report to Environment Yukon under section 113 of the *Environment Act* and the "unauthorized emissions" provisions of the applicable permit(s).

However, Yukon Energy does not agree that "Environment Yukon is also unable to provide such authorization." As elaborated in the responses to (a), (b) and (c) above as well as NY-YEC-1-2 (k) to (q), Yukon Energy continues to be of the view that section 49 gives Environment Yukon that authority.

ISSUE: **General Confirmations**

PREAMBLE: Please confirm the following. If not confirmed, please state YEC's position and provide supporting documents:

QUESTION:

a) In the 2023-24 GRA, YEC sought recovery from customers for rental diesel capacity exceeding applicable permit limits.

b) Capacity that exceeded permit limits could not lawfully be operated.

c) YEC has not identified any document in which Environment Yukon stated that YESAA 49(1) allowed operation above assessed and permitted limits.

d) YEC accepts that the Court of Appeal found that need alone did not resolve the legal issue or make charges for unpermitted capacity lawful, given that the Court stated the need for the generators was "undisputed, situational, and well motivated" but still allowed the appeal.

e) If the Board disallows costs attributable to unpermitted capacity, YEC is able to calculate the refund or bill credit amount.

ANSWER:

(a)

Confirmed.

(b)

As noted in response to NY-YEC-1-4 (d), Yukon Energy confirms that, after Environment Yukon specified operational limits directly in the separate, site-specific air emissions permits issued for each site on May 11, 2022, operations exceeding those specified operational capacity limits would be considered to constitute non-compliance with the applicable permit under the *Environment Act*, and that Yukon Energy would be required to report such non-compliance to Environment Yukon under section 113 of the *Environment Act* and the "unauthorized emissions" provisions of the applicable permit(s).

Yukon Energy has provided extensive evidence elsewhere (both in its Additional Evidence and other IR responses) about:

- the circumstances – including relevant facts that were not in evidence before the Court of Appeal in *Yee v. Yukon Energy Corporation*, 2026 YKCA 1 – in which Yukon Energy considered it necessary to have sufficient emergency back-up diesel generation capacity on the grid to meet N-1 capacity criteria, notwithstanding the acknowledged need to address permitting issues following Environment Yukon's April 21, 2022 email and the issuance of replacement air emissions permits with specified operational capacity limits for each site on May 11, 2022; and

- why allowing Yukon Energy to recover associated diesel rental costs in rates in those circumstances does not "threaten the integrity of the legal system" (as per the legal test stated by the Court of Appeal in *Yee*).

Yukon Energy also wishes to emphasize that:

- while section 112 of the *Environment Act* and section 2 and Schedule 1, item 8 of the *Air Emissions Regulation* require permit authorization for the *operation* of electricity generating facilities resulting in "release of contaminants", there is nothing in those provisions that requires authorization for the mere *installation* of additional capacity at an existing facility that may be needed to ensure public safety in an emergency; and

- in the case of the new facility established at the Mayo Secondary site in 2023, Yukon Energy's YESAA Project Proposal specifically described Yukon Energy's plan to install of five rental diesel units at that new facility, with a total nameplate capacity of 9.0 MW, even though Yukon Energy was only seeking an authorized operating capacity of 4.9 MW in order to expedite a Designated Office level YESAA assessment in time for winter 2023/24 (see YUB-YEC-1-6 (a) and (d) and NY-YEC-1-1 (a)).

(c)

See responses to YUB-YEC-1-2 (d) and NY-YEC-1-4.

(d)

The Court of Appeal decision speaks for itself.

(e)

See responses to YUB-YEC-1-12 (c) and NY-YEC-1-6.

The calculation of any refund, if found to be required, will depend on any applicable directions given by the Board in its decision in this reconsideration process.

ISSUE: **Implementation**

QUESTION:

If the Board disallows costs associated with unpermitted capacity, provide YEC's proposed method for implementing the adjustment, including:

a) Total revenue requirement reduction for 2023 including a breakdown by location;

b) Total revenue requirement reduction for 2024 including a breakdown by location; and

c) Proposed refund or bill credit and how it could be implemented.

Please provide full documentation explaining how revenue requirement reductions were determined and correspond with costs expressed in the GRA proceeding.

ANSWER:

(a) to (c)

Please see response to YUB-YEC-1-12 (c).

If the Board disallows a portion of the diesel rental costs, depending on the amount disallowed, the refunds, if any, could be implemented either: (i) as a refund rider as a separate line item; or (ii) as part of the existing Rider J1, reducing the rider amount.

The response to YUB-YEC-1-12 (c) shows the steps and references for the proposed calculation of incremental diesel rental costs in excess of those that needed to be incurred to supply the Environment Yukon approved capacity at each thermal generation site. It is not clear to Yukon Energy what other "documentation" this question could be requesting at this time. If the Board decides in this reconsideration proceeding to disallow any portion of the diesel rental costs previously approved in the 2023/24 GRA, the calculation of the amount of any resulting refund rider or any reduction of the existing Rider J1 will presumably need to be addressed in a compliance filing in accordance with any directions given by the Board in its decision.

YUKON UTILITIES CONSUMERS' GROUP (UCG)

ISSUE: **General**

QUESTION:

a) Is YEC now properly permitted for all diesel capacity in Whitehorse, Faro and Mayo? Please explain.

ANSWER:

(a)

Yes, subject to the notes for each site provided below.[1]

Existing Permits

Yukon Energy has provided the Board with copies of its most recently issued Air Emissions Permits for Whitehorse, Mayo Secondary and Faro, as Attachments 69, 74 and 75 of its Additional Evidence.

Those permits now authorize the operation of any thermal electricity generating facilities installed at each site up to the specified maximum operating capacity for the site, namely:

- 9.0 MW for Mayo Secondary;
- 42.0 MW for Whitehorse; and
- 20.4 MW for Faro.

[1] Yukon Energy assumes that this question is asking only about the Mayo Secondary site, and not about the downtown Mayo site, since there are no rental diesels in downtown Mayo and that permit is therefore not in issue in this reconsideration process. However, Yukon Energy confirms it is also properly permitted for all diesel capacity in downtown Mayo.

Dependable Capacity per 2025-27 GRA

1. Mayo Secondary

In the 2025-27 GRA, as set out in 2025-27 GRA NY-YEC-1-1 Attachment 1 (Exhibit 4, PDF p. 5), Yukon Energy forecast a total dependable capacity for Mayo Secondary of 7.65 MW, taking into account the rental diesels' effective load carrying capacity (ELCC).

2. Whitehorse

In the 2025-27 GRA, as set out in 2025-27 GRA NY-YEC-1-1 Attachment 1 (Exhibit 4, PDF p. 5), Yukon Energy forecast a total dependable capacity for Whitehorse of 42.303 MW[2] (including 11.616 MW from LNG, 15.387 MW from YEC owned diesels, and 15.3 MW from ten rental diesels), taking into account the ELCC of all thermal generation resources at the site.[3]

Because of a delay in bringing WD8 and WD9 into service, the actual total dependable capacity for Whitehorse for winter 2025/26 was 37.311 MW (excluding the forecast 4.992 MW of dependable capacity attributable to those two units, which were not yet in service that winter).

Yukon Energy currently forecasts that WD8 and WD9 will be brought into service for winter 2026/27. For that winter, Yukon Energy acknowledges that the dependable capacity from all thermal sources in Whitehorse will exceed the currently permitted capacity at the site by 303 kW. However, since it is not possible to rent a fractional unit, there is no additional incremental cost associated with that difference.

[2] Yukon Energy acknowledges that the dependable capacity forecast in the 2025-27 GRA from all thermal sources in Whitehorse exceeds the currently permitted capacity at the site by 303 kW. However, since it is not possible to rent a fractional unit, there is no additional incremental cost associated with that difference.

[3] These totals do not include the 15 MW of GRA approved new capacity that Yukon Energy is projecting to be added in winter 2027/28 in phase 1 of the Whitehorse Power Centres project, as it is anticipated that a separate air emissions permit will need to be issued to authorize that new capacity following completion of the YESAB Executive Committee screening for the project (YESAB File No. 2025-0108). Yukon Energy began engagement with the Whitehorse area First Nations, Yukon Government and City of Whitehorse about this project in 2024, and submitted a Project Description to the Executive Committee in July 2025. The Executive Committee screening is currently at the pre-submission engagement stage; the Executive Committee's public comment period on Yukon Energy's response to its Project Proposal Guideline closed on May 25, 2026, and the Executive Committee is in the process of preparing a Project Proposal Report.

Yukon Energy also acknowledges the difference between nameplate and dependable capacities. Capacity shortfalls, and therefore the number of rentals required, are determined based on dependable capacity.

The current Whitehorse permit authorizes a total "production capacity" of 42.0 MW.

The term "production capacity" has been interpreted by YESAB Designated Offices in the context of the YESAA assessments for other Yukon Energy thermal generation sites. As noted in footnote 15 of Yukon Energy's Additional Evidence (PDF p. 19), the Mayo and Watson Lake Designated Offices have interpreted "production capacity" as meaning "the proponent's intended operational production capacity, rather than the theoretical maximum production capacity a project's proposed infrastructure, equipment and operation could allow."

For winter 2027/28, Yukon Energy currently forecasts that phase 1 of the Whitehorse Power Centres project will be in service by that time. This would allow Yukon Energy to reduce the number of rental units as discussed in response to YUB-YEC-1-8 (a)-(b) Attachment 1 from the 2025-27 GRA [Exhibit 4, pdf pages 131-137].

3. Faro

In the 2025-27 GRA, as set out in 2025-27 GRA NY-YEC-1-1 Attachment 1 (Exhibit 4, PDF p. 5), Yukon Energy forecast a total dependable capacity for Faro of 18.672 MW (including 7.962 MW from YEC owned diesels and 10.71 MW from seven rental diesels), taking into account the ELCC of all thermal generation resources at the site.

As indicated above, Yukon Energy also acknowledges the difference between nameplate and dependable capacities. Capacity shortfalls, and therefore the number of rentals required, are determined based on dependable capacity.

The forecast dependable capacity in Faro is fully permitted. YESAB's Watson Lake Designated Office, in its June 2025 Evaluation Report, specifically recognized that the amended permit for Faro would allow Yukon Energy to operate any combination of ten diesel generators at the site up to a total operational capacity of 20.4 MW, including FD7, FD8, FD9 and all seven rental diesels at the site (Additional Evidence Attachment 73, PDF pp. 53, 80).

QUESTION:

a) Why did the YEC take so long in adding full diesel capacity to deter rental situation by actively pursuing upgrades, rebuilds, purchasing the necessary YEC-owned diesel units?

b) Give time line of all YEC diesel owned units being upgraded, rebuilt, and new purchases.

ANSWER:

(a)

Yukon Energy's capacity planning has consistently pursued the development and commissioning of new permanent dependable capacity, and has always considered diesel rental as a residual option, to be relied on only to the extent that the combination of other feasible generation options that Yukon Energy can implement each year are forecast to be insufficient to meet dependable capacity shortfalls without being supplemented by diesel rentals.

Please see the response to 2023/24 GRA YUB-YEC-1-35 (e) and (f) REVISED (Exhibit 5, PDF pp. 6-16), which provides detailed information on the resource options Yukon Energy pursued to reduce reliance on diesel rentals, as well as the additional information provided in section 2.2 of Yukon Energy's Additional Evidence (PDF pp. 21-26).

See also Yukon Energy's response to YUB-YEC-1-5 in this proceeding.

(b)

Yukon Energy notes that the only new YEC owned diesel units forecast to be acquired during the 2023/24 GRA test years were FD8 and FD9, which were assumed in service for winter 2024/25 in the 2023/24 GRA.

During the 2023/24 GRA, in response to NY-YEC-1-2 REVISED [2023/24 GRA, Exhibit 4, PDF pp. 1-3], Yukon Energy provided explanations for changes in dependable capacity.

The 2023/24 GRA had assumed that two of the YEC owned units in downtown Dawson (DD2 and DD5) would be retired. However, as addressed during the 2025-27 GRA in Mr. Murchison and Mr. Epp's oral evidence (Transcript, pp. 23-24, 498-500), in Yukon Energy's further response to Undertaking #40, and in Yukon Energy's Final Argument (PDF pp. 50-51), the units were not retired and they remain as dependable capacity, with ongoing maintenance and repair.

QUESTION:

a) Why has the YEC not done a capacity planning criteria to ensure its regulator of the N-1 standard? Explain.

ANSWER:

(a)

Yukon Energy's capacity planning criteria were subject to extensive review by the Board and intervenors in the 2006 20-Year Resource Plan proceeding and have been accepted by the Board since 2007.

Following that review, the Board, in its January 15, 2007, report to the Commissioner in Executive Council, accepted the use of the N-1 and LOLE planning criteria as proposed by Yukon Energy.

Yukon Energy has also conducted periodic updates to the Resource Plan to confirm the use of these accepted capacity planning criteria, including 2011 and 2016 resource plan updates, as well as the 10-Year Renewable Electricity Plan in 2020.

Yukon Energy provides updates to the dependable capacity requirements under the planning criteria accepted by the Board in each GRA, as well as other regulatory proceedings such as Part 3 hearings. Please see the response to 2023/24 GRA YUB-YEC-1-35 (e) and (f) REVISED (Exhibit 5, PDF pp. 6-16), which provides detailed information on the resource option evaluations under the accepted capacity planning criteria.

QUESTION:

a) Does the YEC 20 Year Resource Plan (2006-2025) presented May 2006 reference diesel capacity shortfalls up until 2025? Reference and explain if followed through with all these plans.

ANSWER:

(a)

Yes.

Note, however, that while the 2006 Resource Plan included longer term capacity forecasts, its focus was on near-term requirements and action items within the initial years to address the forecast shortfall of about 19 MW by 2012, assuming that all three Mirrlees units in Whitehorse (11.4 MW) would have been retired by that time.

The near-term proposed projects included:

- the Aishihik 3rd turbine [completed in 2011];
- the Carmacks-Stewart Transmission project [also completed in 2011];
- Marsh Lake Storage [the project was started, but was later cancelled in 2022]; and
- the Mirrlees life extension [WD3 was deemed to be in the best condition and was refurbished in 2010, but refurbishment of WD1 and WD2 (both first in service in 1968) was not deemed to be an option; subsequently, all three units were retired].

The 2006 Resource Plan also reviewed opportunities for three 8 MW diesel units under Whitehorse Diesel Replacement/Expansion as a contingency option if other major projects did not proceed as proposed.

The resource plan is subject to periodic refinements/updates based on changes in requirements/conditions, forecasts and other facts that are deemed to be reasonable expectations at the time of those refinements or updates. Please see the response to 2023/24 GRA YUB-YEC-1-35 (e) and (f) REVISED (PDF pp. 6-16), which provides

detailed information on the resource plan updates and other regulatory proceedings before the Board regarding the resource option evaluations.

Additional dependable capacity additions that were completed prior to the 2016 resource plan update, to address evolving N-1 dependable capacity requirements, included:

- the addition of Mayo B to the Mayo hydro plant in 2011, increasing the capacity to generate additional renewable energy at the existing site without the need for a new dam or reservoir; and

- the addition of a Liquefied Natural Gas (LNG) facility in Whitehorse, which was commissioned in 2015.

The evolution in Yukon Energy's system planning forecasts between winter 2017/18 and the 2023/24 GRA, including the impact of the unexpectedly rapid rate of growth in non-industrial peak demand over that time period, is further outlined in section 2.2 of Yukon Energy's Additional Evidence.

QUESTION:

a) Why did YEC not place rental Yukon diesels not permittable in other communities on the grid when they became aware of permitting problems in the three chosen communities? Explain.

b) Does YEC have permission to fire up ATCO Yukon Electric diesels in various communities if there is an emergency? Explain.

ANSWER:

(a)

Permitting requirements are not avoided by shifting rental diesels to other grid communities.

During the 2023 and 2024 test years, there was no other grid-connected community with existing Yukon Energy thermal facilities that had excess thermal capacity authorized under an existing air emissions permit, which could have accommodated the operation of added diesel rental units without the need for further permitting.[1]

It is also important to recognize that the placement of rental units involves planning and other considerations, such as timing to prepare the site and whether the site has or is near existing electrical infrastructure to avoid significant capital costs and added delays, including a substation with transformer capacity, available space for rentals, staff availability in the vicinity, road access, etc. In light of these considerations, location options were limited at the time of placing the rental units in use during 2023 and 2024.

[1] In particular, the existing facility in downtown Dawson was not an option. The 2023/24 GRA had assumed that two of the YEC owned units in downtown Dawson (DD2 and DD5) would be retired, which would have resulted in a gap between the permitted capacity of 7.1 MW and dependable capacity of 4.5 MW at that site for winter 2024/25. However, as addressed during the 2025-27 GRA in Mr. Murchison and Mr. Epp's oral evidence (Transcript, pp. 23-24, 498-500), in Yukon Energy's further response to Undertaking #40, and in Yukon Energy's Final Argument (PDF pp. 50-51), the units were not retired and they remain as dependable capacity, with ongoing maintenance and repair. Apart from permitting issues, with all YEC owned units still installed in at the downtown Dawson site, there is no physical space in the existing facility to add any rental diesel units. The new Callison thermal site was also not yet available during the 2023 and 2024 test years.

Yukon Energy considered these factors when it was no longer feasible to install additional rental diesel units at the Whitehorse diesel plant (because of space limitations within the existing plant), and when it therefore became necessary to consider other grid communities. Relevant considerations included that:

- the Faro site had already previously been assessed for additional diesel capacity, which had been reduced after FD3 and FD5 were removed from the site; and

- the Mayo Secondary site offered an opportunity to develop a new facility on Yukon Energy's existing Mayo hydro site, which:
    - was away from residential neighbourhoods and commercial facilities in the Village of Mayo;
    - could also provide access for large equipment and fuel trucks; and
    - already had available transformer capacity at the nearby substation that could accommodate the addition of rental diesel generation.

In these circumstances, given that the placement of rental units in other communities would still have been subject to assessment and permitting requirements, any alternative location would have taken a longer time to complete and would have resulted in higher costs.

(b)

When there is a need to use ATCO Electric Yukon (AEY) grid-connected standby diesel units, Yukon Energy requests AEY to bring available units online. These grid-connected diesel units are also included in assessment of N-1 dependable capacity shortfalls.

YUKON UTILITIES BOARD
(YUB)

REFERENCE: **YEC Reconsideration Proceeding Additional Evidence, PDF page 4.**

ISSUE: **Additional information required for each test year (2023 and 2024) for each diesel generation site with rented diesels**

QUOTE: This reconsideration process directed by the Court now requires the Board to undertake a further "nuanced analysis."

QUESTION:

For the Board to undertake a further "nuanced analysis", please provide the response to this IR in a format that includes a tabular summary for each test year (2023 and 2024) for each diesel generation site with rented diesels. In that table, and for each of 2023 and 2024, provide categories separating rented diesel generation units and YEC owned diesel generation units. In each category list each diesel generation unit and the site GRA forecast approved capacity for each unit. For each site, please also provide the Environment Yukon site approved capacity, and the difference between the site forecast approved capacities and the Environment Yukon approved capacity.

ANSWER:

Please see the requested table below.

The table does not include the two spare rental units that were located, respectively, at the Mayo Secondary and Whitehorse diesel generation sites in the winters of 2023/24 and 2024/25, because Board Order 2024-05 did not allow for inclusion of the rental costs for either of those two units in Yukon Energy's revenue requirement for either test year. For operational purposes, Yukon Energy does not designate a particular rental unit as the "spare" at each site; however, for the purpose of responding to this information request, Yukon Energy has arbitrarily identified the last numbered unit at each site, specifically, YM34 at Mayo Secondary and YM19 in Whitehorse, as the spare rental units, and those units are excluded from the table.

In addition to providing the differences between the GRA forecast approved capacities and Environment Yukon approved capacities for each site, the table identifies:

- the minimum number of diesel rentals that were required at each site each winter to ensure the presence of enough dependable capacity to supply the Environment Yukon approved capacity at the site; and

- the variance between that figure and the total number of GRA approved rental units at the site.

For example, in both winters of 2023/24 and 2024/25, Yukon Energy needed to have at least three rental diesel units installed at Mayo Secondary to provide sufficient reliable capacity to supply the Environment Yukon approved capacity of 4.9 MW at that site (given the physical impossibility of installing a fractional unit).[1]

To provide further relevant information to the Board, Yukon Energy has also included additional columns in the table to illustrate the effect of considering the effective load carrying capacity (ELCC) of all diesel generation units, based on the application of forced outage rates as proposed in the 2025-27 GRA. For example, if a 15% forced outage rate is applied to the diesel rental units at Mayo Secondary (as was applied when determining the dependable capacity of all diesel rental units in the 2025-27 GRA), then all four of the GRA approved diesel rental units would have been needed at that site to provide sufficient dependable capacity to supply the Environment Yukon approved capacity of 4.9 MW.[2]

While Yukon Energy's 2023/24 GRA did not previously take ELCC into account, the ELCC approach subsequently presented in the 2025-27 GRA provides the best available evidence of the actual dependable capacity of Yukon Energy's generation facilities. Yukon Energy submits that it is appropriate for the Board to consider that evidence as part of the

[1] This number does not consider the effective load carrying capacity (ELCC) of each unit based on forced outage rates, as Yukon Energy had not yet adopted that more accurate approach of estimating dependable capacity as of the time of the 2023/24 GRA. ELCC was subsequently incorporated into Yukon Energy's capacity planning in the 2025-27 GRA.

[2] The two final columns in the table below take into account the 15% forced outage rate for rental diesel generation units, as well as the forced outage rates of YEC owned thermal generation units as described in the 2025-27 GRA (Exhibit 1, PDF p. 53) (i.e. 1% for the existing permanent diesel units in Whitehorse and Faro; in the absence of data, a forced outage rate of 4% is conservatively assumed for new Yukon Energy owned thermal units).

"nuanced analysis" the Court has required it to undertake in this reconsideration proceeding.

	2023/24 GRA		2023/24 GRA with ELCC	
	2023/24 F	2024/25 F	2023/24 F	2024/25 F
Location	Dependable Capacity (kW)	Dependable Capacity (kW)	Dependable Capacity (kW)	Dependable Capacity (kW)
Faro				
FD7	3,000	3,000	2,970	2,970
FD8 - new diesel		2,500		2,496
FD9 - new diesel		2,500		2,496
Total Permanent	**3,000**	**8,000**	**2,970**	**7,962**
YM20	1,800	1,800	1,530	1,530
YM21	1,800	1,800	1,530	1,530
YM22	1,800	1,800	1,530	1,530
YM23	1,800	1,800	1,530	1,530
YM24	1,800	1,800	1,530	1,530
YM25	1,800	1,800	1,530	1,530
YM26	1,800	1,800	1,530	1,530
Total Rental	**12,600**	**12,600**	**10,710**	**10,710**
Total GRA Dependable Capacity	**15,600**	**20,600**	**13,680**	**18,672**
Air Emissions Permit	**15,500**	**15,500**	**15,500**	**15,500**
Variance	**100**	**5,100**	**-1,820**	**3,172**
Number of diesel rental units required to supply permitted capacity	**7**	**5**	**9**	**5**
Variance in total number of GRA approved diesel rental units	**0**	**2**	**-2**	**2**
Mayo Secondary - excluding one spare rental				
YM30	1,800	1,800	1,530	1,530
YM31	1,800	1,800	1,530	1,530
YM32	1,800	1,800	1,530	1,530
YM33	1,800	1,800	1,530	1,530
Total Rental	**7,200**	**7,200**	**6,120**	**6,120**
Total GRA Dependable Capacity	**7,200**	**7,200**	**6,120**	**6,120**
Air Emissions Permit	**4,900**	**4,900**	**4,900**	**4,900**
Variance	**2,300**	**2,300**	**1,220**	**1,220**
Number of diesel rental units required to supply permitted capacity	**3**	**3**	**4**	**4**
Variance in total number of GRA approved diesel rental units	**1**	**1**	**0**	**0**
Whitehorse - excluding one spare rental				
WD4	2,500	2,500	2,475	2,475
WD5	2,500	2,500	2,475	2,475
WD6	2,500	2,500	2,475	2,475
WD7	3,000	3,000	2,970	2,970
Total Permanent	**10,500**	**10,500**	**10,395**	**10,395**
YM10	1,800	1,800	1,530	1,530
YM11	1,800	1,800	1,530	1,530
YM12	1,800	1,800	1,530	1,530
YM13	1,800	1,800	1,530	1,530
YM14	1,800	1,800	1,530	1,530
YM15	1,800	1,800	1,530	1,530
YM16	1,800	1,800	1,530	1,530
YM17	1,800	1,800	1,530	1,530
YM18	1,800	1,800	1,530	1,530
Total Rental	**16,200**	**16,200**	**13,770**	**13,770**
Total GRA Dependable Capacity	**26,700**	**26,700**	**24,165**	**24,165**
Air Emissions Permit	**16,150**	**16,150**	**16,150**	**16,150**
Variance	**10,550**	**10,550**	**8,015**	**8,015**
Number of diesel rental units required to supply permitted capacity	**4**	**4**	**4**	**4**
Variance in total number of GRA approved diesel rental units	**5**	**5**	**5**	**5**

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF page 4.**

ISSUE: **Emergency Back-up Generation**

QUOTE: More particularly, it includes historical evidence about the assessment and permitting of Yukon Energy's thermal generation facilities going back to 2011, and about system planning considerations going back to 2017, which the Board will need to understand in order to evaluate the measures taken by Yukon Energy after it was informed by Environment Yukon in April 2022 of what was effectively a new regulatory requirement to complete environmental assessments for emergency back-up generation capacity that Environment Yukon had previously authorized in permit amendments granted without assessments in 2017 and 2018.

QUESTION:

a) Given that permits issued before April 2022 related to emergency back-up, is it the position of YEC that any variance in permitted diesel capacity from actual or approved forecast capacity is emergency back-up generation? Please explain.

b) For each site with diesel rentals, and on a unit basis, during the 2023-2024 test period, please identify each diesel generation unit which was used in an emergency situation, the dates each unit was used in that emergency situation, and the run time (duration) each unit was run during the emergency situation.

c) In contrast to your response to part (b) above, for each rental diesel generation unit during the 2023-2024 test period, by each generation site, please provide, on an annual basis, the total run time for each of the diesel generation units. Please provide the reasons for running these units.

d) Given that YEC was notified of new regulatory requirements to complete environmental assessments for emergency back-up generation capacity in April 2022, and had been previously authorized in 2017 and 2018, on what basis and under what authority were the 2017 and 2018 authorizations (without environmental assessments)? If the basis and authority were not provided, did

YEC seek an explanation for the issuance of those authorizations (without environmental assessments)? Please explain.

e) Were any environmental authorizations (without environmental assessments) issued to YEC subsequent to 2022 and, if any, on what basis or under what authority? Please explain.

ANSWER:

(a)

Yukon Energy understands this question to be describing to the variance between: (i) Yukon Energy's permitted diesel capacity at each site; and (ii) the actual or GRA-approved forecast diesel capacity at the site (i.e., not including LNG).

As explained further below, during the period from April 1, 2022 through to December 31, 2024, Yukon Energy agrees that this variance described its emergency back-up generation capacity at each site. However, this was not the case at other times, both before and after that period, when some or all of Yukon Energy's emergency back-up generation capacity has been included in its air emissions permits.

When Yukon Energy refers to "emergency back-up generation capacity" – at least before the issuance of the most recently issued air emissions permits for Whitehorse, effective January 1, 2025, for Mayo Secondary on July 24, 2025, and for Faro on January 19, 2026 – it is generally referring to the available capacity at a diesel generation site that exceeds the capacity contemplated for normal operating conditions under the applicable air emissions permit,[1] but which Yukon Energy needs to have available at the site to provide sufficient dependable capacity to respond to an N-1 event or to respond to or prevent other significant outages particularly during extreme cold winter weather conditions that would constitute an "emergency" within the meaning of section 49(1) of YESAA. It is practically necessary for Yukon Energy to be able to rely on its additional back-up capacity in such circumstances to prevent immediate harm to public welfare, health or safety.

[1] Since each of the most recently issued permits for Whitehorse, Mayo Secondary and Faro (Additional Evidence Attachments 69, 74 and 75) now specify a single capacity limit that addresses both normal and emergency operating conditions, there is no longer a need to describe any portion of that capacity as "emergency back-up" capacity.

As the Court of Appeal recognized in its decision (*Yee v. Yukon Energy Corporation*, 2026 YKCA 1) at para. 6:

> "All parties agree that recourse to diesel generation may be necessary for the health and security of Yukon residents in emergency situations in the depths of winter if a hydro-electric generating facility fails. Such situations have arisen in the past and prudence dictates planning for them to arise in the future."

Yukon Energy would describe such additional capacity that is not authorized for use under normal operating conditions as constituting "emergency back-up generation capacity", regardless of whether or not such emergency use is authorized in its permits.

For example, between December 15, 2017 and October 3, 2018, Yukon Energy's Air Emissions Permit No. 60-010 provided specific authorization for 10 MW of emergency back-up generation in Whitehorse;[2] and, between October 4, 2018 and March 31, 2022, it provided specific authorization for 12 MW of emergency back-up generation in Whitehorse.[3]

However, from April 1, 2022 to December 31, 2024, Yukon Energy's Air Emissions Permits made no distinction between the normal and emergency operation of Yukon Energy's diesel generation facilities – despite the Court of Appeal's observation in its decision that it is unclear why Environment Yukon had not taken the step of issuing contingent permits to regularize Yukon Energy's use of back-up diesel generating capacity in emergency situations.[4]

As a result, from April 1, 2022 to December 31, 2024, Yukon Energy's emergency back-up capacity at each site (as approved in the 2023/24 GRA) corresponded to the variance between the available dependable diesel capacity (on a GRA-forecast or actual basis) and the permitted diesel capacity under the applicable air emissions permit.

[2] Air Emissions Permit No. 60-010 (Amendment 1) issued December 15, 2017 (Yukon Energy Additional Evidence, Attachment 13).

[3] Air Emissions Permit No. 60-010 (Amendment 2) issued October 4, 2018 (Yukon Energy Additional Evidence, Attachment 18).

[4] *Yee v. Yukon Energy Corporation*, 2026 YKCA 1, at para. 6.

However, when Yukon Energy submitted its project description to the YESAB Executive Committee in November 2023 for the renewal of Air Emissions Permit No. 60-010-04 for Whitehorse, the project was described as including up to 12 MW of emergency diesel capacity, and the rental diesels were described as providing "emergency backup".[5] This was also the case when Yukon Energy subsequently submitted its project proposal for the Whitehorse Air Emissions Permit Renewal Project (2024-0103) to the Whitehorse Designated Office in May 2024.[6] It was necessary to describe the project in this way because of Environment Yukon's communication in April 2022 that the emergency backup capacity would not be re-authorized without an assessment, despite the fact that Environment Yukon had done so previously in 2017 and 2018.

Accordingly, the Designated Office considered Yukon Energy's potential use of that emergency back-up capacity in Whitehorse under emergency scenarios (as well as expected maximum emission scenarios under normal operating conditions) as part of the assessment of the Whitehorse Air Emissions Permit Renewal Project that the Designated Office completed in the fall of 2024.

Consistent with the above, the Designated Office's November 14, 2024 evaluation report for the Whitehorse Air Emissions Permit Renewal Project referred distinctly to what it described as "typical" operations in contrast to "emergency back-up", both of which were considered and addressed as part of the effects characterizations and significance determinations detailed in the report.[7] However, when Environment Yukon issued the actual renewed permit for Whitehorse, with an effective date of January 1, 2025, the permit itself authorized a maximum production capacity of 42.0 MW at the site from all thermal sources (including both diesel and LNG) without explicitly distinguishing between "normal" or "typical" operations and "emergency back-up generation capacity".[8]

Like the current Whitehorse permit, both of the amended permits subsequently issued for Mayo Secondary on July 24, 2025[9] and for Faro on January 19, 2026[10] similarly specify a single operating capacity limit that encompasses both normal and emergency operations at the site, without distinguishing between them.

[5] Yukon Energy Additional Evidence, Attachment 42.
[6] Yukon Energy Additional Evidence, Attachment 51.
[7] YOR # 2024-0103-0042.
[8] Yukon Energy Additional Evidence, Attachment 69.
[9] Yukon Energy Additional Evidence, Attachment 74.
[10] Yukon Energy Additional Evidence, Attachment 75.

(b)

As noted in Yukon Energy's 2023/24 GRA Rebuttal Evidence [Exhibit 9, PDF p. 4], due to the Aishihik Generating Station outage in January of 2024, it became necessary for Yukon Energy to briefly exceed the diesel generation capacity limit under its permit in Whitehorse for five hours on January 31, 2024 [average capacity exceedance was 2.6 MW] and for a further ten-minute period on February 2, 2024 [average capacity exceedance was 0.5 MW]. This avoided a situation that could otherwise have presented a significant and immediate risk of harm to Yukoners.

The following table shows the run time hours for the diesel units on January 31, 2024 between 7:10 am and 12:10 pm [average capacity exceedance was 2.6 MW as indicated above].[11] The February 2, 2024 emergency exceedance was only for 10 minutes [average capacity exceedance was 0.5 MW as indicated above]; Yukon Energy is unable to provide additional information by unit hours for the February 2, 2024 exceedance because it was only for 10 minutes.

[11] The dispatching of generation units is subject to demand on the system, including load centres, availability of the generation resources, maintaining system stability, air emissions permit under normal operating conditions, and the timing of bringing those units online in time to respond to the change in loads, etc.. For example, due to exceptionally cold weather conditions and operational challenges, Yukon Energy was unable to connect the downtown Mayo YEC owned diesel units to the grid. Therefore, there were no running hours for MD1, MD2 and MD3 during this outage.

Facility	Unit ID	Run time hours for January 31, 2024, between 7:10 am and 12:10 pm
Whitehorse	WD4	5.00
	WD5	5.00
	WD6	5.00
	WD7	5.00
	YM10	3.83
	YM11	5.00
	YM12	3.33
	YM13	1.83
	YM14	5.00
	YM15	5.00
	YM16	5.00
	YM17	5.00
	YM18	0.00
	YM19	0.00
Faro	FD7	0.00
	YM20	5.00
	YM21	5.00
	YM22	5.00
	YM23	0.00
	YM24	5.00
	YM25	0.00
	YM26	5.00
Mayo	MD1	0.00
	MD2	0.00
	MD3	0.00
Mayo Secondary	YM30	0.50
	YM31	0.00
	YM32	5.00
	YM33	0.00
	YM34	0.00
Dawson	DD1	5.00
	DD2	5.00
	DD3	5.00
	DD4	5.00
	DD5	5.00
	YM1	0.00

1

As indicated in response to (c) below, Yukon Energy relied heavily on its diesel rental units during the January 2024 Aishihik Generating Station outage, and, as a result, the annual hours for most of the rental units exceeded the contracted 500 hours per season per unit as shown in the table in response to (c). To be clear, however:

- it did not become necessary to exceed the Environment Yukon permitted site capacity in Faro or at Mayo Secondary during or as a result of the January 2024 Aishihik Generating Station outage; and

- the exceedance in Whitehorse on January 31 and February 2, 2024 as a result of the Aishihik Generating Station outage was the only occasion during the 2023 and 2024 test years in which it became necessary for Yukon Energy to exceed the Environment Yukon permitted capacity limit at any of its diesel generation sites.

(c)

Please see the table below, which provides the total operating hours for each diesel rental unit, including both spares, at all three sites with diesel rentals in the 2023 and 2024 calendar years.

As noted in response to 2023/24 GRA NY-YEC-1-4 REVISED [Exhibit 6, PDF pp. 2-4], as a general rule, the diesel rentals are operated in the thermal stacking order, subject to constraints such as (a) total thermal operation at each site not exceeding air emissions permit under normal operation conditions, and (b) where feasible, maintaining the operational hours for each rental unit under the contractual allowance of 500 hours per season.

Yukon Energy noted further in its Additional Evidence (PDF p. 19) that its air emissions permits have included provisions requiring it to “run the sources at each site in order of highest possible efficiency under the circumstances”, except for “maintenance or test purposes”. This is reflected in the thermal stacking order; Yukon Energy has understood these permit provisions as requiring it to operate the more efficient diesel rental units higher in the stacking order than its less efficient permanent diesel units, subject to the additional considerations noted above that were described in 2023/24 GRA NY-YEC-1-4

REVISED. Yukon Energy's use of the diesel rental units in this manner is reflected in the total operating hours shown in the table below.[12]

Aside from the foregoing explanation, Yukon Energy does not routinely record or report the reason for running a particular unit at a particular time. However, the usual assumption is that diesel generation units are used (in accordance with the stacking order) at times when:

- no other renewable source is available (i.e., renewable generation is maxed out, offline, or subject to operational constraints, such as reduced water flows to prevent downstream flooding or because of drought conditions, etc.);

- local generation is required, for example, because the location/region is isolated due to transmission line issues or based on available units across the system, depending on where load is; or

- the system is otherwise at or near peak.

Yukon Energy can confirm, however, that the increased operating hours for the rental units shown in the table for 2024 reflect Yukon Energy's heavier than usual reliance on the rental units during the January 2024 Aishihik Generating Station outage. In particular, because of that outage, it was not feasible in 2024 to maintain the operational hours for each rental unit below the targeted cap of 500 hours for the season.

[12] Yukon Energy notes that its use of diesel rental units higher in the stacking order than the less fuel efficient Yukon Energy owned units would ordinarily be expected to result in lower emissions and lower fuel costs.

		2023		2024	
Facility	**Unit ID**	**Total Operating Time (hrs)**	**Total Energy Produced (GWh)**	**Total Operating Time (hrs)**	**Total Energy Produced (GWh)**
Whitehorse	YM10	305	0.51	619	1.05
	YM11	361	0.62	883	1.52
	YM12	345	0.59	949	1.60
	YM13	345	0.59	673	1.14
	YM14	355	0.62	1,021	1.76
	YM15	206	0.35	847	1.47
	YM16	383	0.67	826	1.41
	YM17	272	0.47	640	1.10
	YM18	377	0.65	716	1.21
	YM19	285	0.50	743	1.28
Total		**3,234**	**5.58**	**7,915**	**13.53**
Faro	YM20	176	0.30	605	1.05
	YM21	82	0.15	480	0.83
	YM22	85	0.44	470	0.78
	YM23	246	0.44	306	0.51
	YM24	80	0.13	349	0.59
	YM25	243	0.43	168	0.27
	YM26	192	0.34	198	0.33
Total		**1,103**	**2.23**	**2,576**	**4.36**
Mayo Secondary	YM30	20	0.03	775	1.17
	YM31	18	0.03	660	0.98
	YM32	19	0.03	635	0.95
	YM33	36	0.06	807	1.24
	YM34	19	0.03	129	0.19
Total		**112**	**0.19**	**3,005**	**4.53**

(d)

1. <u>December 2017 Permit Amendment</u>

As explained previously in section 2.1.2 of Yukon Energy's Additional Evidence, when Yukon Energy requested the amendment to Air Emissions Permit No. 60-010 that was

granted on December 15, 2017 providing contingent authorization for Yukon Energy's use of 10 MW of emergency back-up diesel generation capacity in Whitehorse in an emergency scenario, it was Yukon Energy's understanding that Environment Yukon had authority to grant that amendment without further assessment by YESAB under the emergency exemption in section 49(1) of YESAA. That understanding was reflected in Mr. Ritchie's November 23, 2017 email to Environment Yukon included in Additional Evidence, Attachment 10 (PDF pp. 11-12).[13]

When Environment Yukon's Environmental Protection Analyst responded to Mr. Ritchie's email that same day, she informed him that Environment Yukon would be "moving ahead with conducting a Determination of Significant Change (YESAA, s. 49(1))", referring to section 49(1) rather than section 49.1. Regardless of the section referenced, it was Yukon Energy's understanding at the time that Environment Yukon was satisfied that the amendment Yukon Energy was seeking could be made on the basis of previously issued Decision Documents[14] without the need for a further YESAA assessment.

As outlined further in section 2.1.2 of Yukon Energy's Additional Evidence (PDF pp. 14-15), Environment Yukon's Acting Director, Environmental Programs went on to issue a determination on December 12, 2017 that a YESAA assessment would not be required for the requested permit amendment (Additional Evidence, Attachment 12). That determination was stated to be made under YESAA section 49.1.

Section 49.1 of YESAA was then repealed two days later, effective December 14, 2017. By the time Environment Yukon issued the amended permit on December 15, 2017, specifically authorizing Yukon Energy's use of emergency back-up diesel generation capacity in response to a defined N-1 event (Additional Evidence, Attachment 13), section 49.1 had already been repealed one day earlier.

In those circumstances, Yukon Energy did not understand that Environment Yukon's authority to grant the requested permit amendment on December 15, 2017 without the need for a further YESAA assessment was specifically dependent on the continued operation of section 49.1, when that section had just been repealed.

[13] Throughout these IR responses, for ease of reference for all parties, any PDF page references provided by Yukon Energy for the attachments to its Additional Evidence reflect the pagination in the PDF batches of attachments posted on the Board's website.

[14] As noted in Yukon Energy's Additional Evidence (PDF pp. 12-13), Decision Documents had previously been issued for Whitehorse on January 27, 2012 and July 7, 2014 (Additional Evidence, Attachments 3 and 5).

2. October 2018 Permit Amendment

When Environment Yukon granted the October 4, 2018 permit amendment re-authorizing (and increasing) the emergency back-up diesel generation capacity in Whitehorse, it did not specify the legal authority under which it was acting. At that point, however, section 49.1 of YESAA had been repealed the previous December. As such:

- there was no reason at the time Environment Yukon granted the October 2018 permit amendment for Yukon Energy to assume that Environment Yukon's authority to grant the amendment might have been dependent in any way on section 49.1, when that section no longer existed; and

- Yukon Energy had no reason to expect that a subsequent request to re-authorize its 12 MW of emergency back-up diesel generation capacity in 2022 would be treated any differently than the same request made in 2018 – until Environment Yukon notified Yukon Energy on April 21, 2022, that it had formed the view that this could no longer be done without a further YESAA assessment.

Five months before the issuance of the October 2018 permit amendment, Environment Yukon had already confirmed its authority to amend the Air Emissions Permit to re-authorize the use of Yukon Energy's emergency back-up diesel generation capacity up to an increased limit of 12 MW, without further assessment, when Environment Yukon responded in May 2018 to Mr. Ritchie's April 16, 2018 inquiry about that proposed amendment (Additional Evidence, Attachment 16, PDF pp. 32-35). That inquiry was made four months after section 49.1 had been repealed, when the only potentially applicable exemption still remaining in YESAA was the emergency exemption in section 49(1).

Since the only potentially applicable YESAA exemption that was still in effect in May 2018 was the emergency exemption in section 49(1), there was no reason for Yukon Energy to think at that time that Environment Yukon could possibly have been relying on section 49.1 or any other provision of YESAA as a necessary source of its authority to grant the additional requested permit amendment on the basis of Environment Yukon's understanding of what was previously assessed by YESAB in 2011.

In the circumstances, Mr. Ritchie did write back to the Analyst to request further clarification about Yukon Energy's ability to combine its request to increase its authorized emergency back-up capacity in Whitehorse from 10 MW to 12 MW together with a request

for a permit amendment to authorize the operation of a third LNG generator in Whitehorse, as a single combined permit amendment application.

Mr. Ritchie did not identify any reason to seek a further explanation about Environment Yukon's understanding of the legal basis for its authority to re-authorize Yukon Energy's emergency back-up capacity at the increased level of 12 MW without further assessment. It was reasonable for Yukon Energy to rely on the confirmation the Analyst had already given that Environment Yukon had that authority.

When the additional requested permit amendment was ultimately granted by Environment Yukon on October 4, 2018 without further YESAA assessment – which specifically re-authorized Yukon Energy's use of emergency back-up diesel generation capacity in response to a defined N-1 event (Additional Evidence, Attachment 18) – Yukon Energy did not receive any further communication from Environment Yukon that might have put it on notice that Environment Yukon was mistakenly continuing to rely on section 49.1 of YESAA, when that provision had been repealed nearly ten months earlier.

In the circumstances, it was Yukon Energy's ongoing understanding in October 2018 that Environment Yukon continued to have the necessary authority to grant that amendment despite the repeal of section 49.1, when the only exemption still appearing in YESAA was the "emergency exemption" in section 49(1). If Environment Yukon disagreed with that understanding, it did not inform Yukon Energy of that disagreement until April 2022.

Once again, Yukon Energy did not identify a reason to seek a further explanation from Environment Yukon about its understanding of the legal basis for its authority to grant the October 4, 2018 amendment. It was reasonable for Yukon Energy to rely on the fact that Environment Yukon granted the amendment ten months after the repeal of section 49.1.

(e)

It is Yukon Energy's understanding that it can request Environment Yukon approvals or amendments to existing permits for activities that are within the scope of what has previously been assessed under YESAA – provided that there is an applicable and still valid YESAA Decision Document – without the need for a further YESAA assessment (e.g., to swap or change units, or to replace or add fuel tanks). This is done periodically.

In other circumstances where an authorization is granted on the basis of a pre-existing but still valid Decision Document, it would be done with reference to the earlier environmental assessment that was the basis for the pre-existing Decision Document.

The following three authorizations – all involving water use licence amendments under the *Waters Act* – have been issued to Yukon Energy since 2022 on an emergency basis under section 49 of YESAA without reference to/authority deriving from an applicable YESAA Decision Document:

- The April 1, 2022, emergency amendment to the water use licence for the Whitehorse Rapids Generating Station expanding the licensed low supply level of Marsh Lake to allow for a temporary reduction of lake levels to mitigate the risk of flooding due to high snow pack conditions (Water Use Licence HY99-010, Amendment 2). That amendment was issued by the Water Board and approved by the Yukon Government on April 1, 2022, following the Water Board's determination that there was an emergency within the meaning of section 49 of YESAA.[15]

- The September 26, 2025, emergency amendment to the water use licence for the Whitehorse Rapids Generating Station authorizing the temporary closure of the Whitehorse Rapids Fish Ladder to allow Yukon Energy to proceed with necessary repairs (Water Use Licence No. HY24-061, Amendment 1). That amendment was issued by the Water Board and approved by the Yukon Government on September 26, 2025, following the Water Board's determination that there was an emergency within the meaning of section 49 of YESAA.[16]

- The June 26, 2026 emergency amendment to the water use licence for the Mayo Generating Station authorizing the commencement of in-water work during the 2026 construction year for the Wareham Dam Spillway Replacement project (Water Use Licence No. HY25-027, Amendment 1). That amendment was issued by the Yukon Water Board and approved by the Yukon Government on June 26, 2026, following the Water Board's determination that there was an emergency within the meaning of section 49 of YESAA.[17]

[15] Yukon Water Board Reasons for Decision, Application HY99-010-2, March 31, 2022, at p. 4.
[16] Yukon Water Board Reasons for Decision, Application HY24-061-1, September 26, 2025, at p. 3.
[17] Yukon Water Board Reasons for Decision, Application HY25-027-1, June 26, 2026, at p. 4.

Although these three examples all involve emergency water licence amendments, they illustrate the more general principle that an environmental authorization (or an amendment to an existing environmental authorization) may be issued by a territorial agency, including Environment Yukon, without an assessment or decision document under YESAA to authorize activities to be undertaken in response to an emergency within the meaning of section 49 of YESAA. The same principle applies equally to Environment Yukon's authority under section 49 to grant or amend an air emissions permit to authorize activities to be undertaken in response to an emergency, without an assessment or decision document under YESAA.

REFERENCE: **YEC Reconsideration Process Application, PDF page 6.**

ISSUE: **Emergency back-up generating capacity**

QUOTE: That additional evidence that was not before the Court must be considered in combination with the evidence that is already on the record from the GRA hearing about the critical need for Yukon Energy to maintain sufficient emergency back-up generating capacity to ensure public safety.

QUESTION:

a) Please define what YEC means by "emergency back-up generating capacity." Please provide examples of any relevant circumstances.

b) Does the above definition apply specifically to diesel rental units, or does it apply to YEC owned units? Please explain.

c) In YEC's view, would generating capacity under emergency back-up operations typically be considered part of permitted capacity? Please explain.

ANSWER:

(a)

As explained in response to YUB-YEC-1-2 (a), when Yukon Energy refers to "emergency back-up generation capacity", it is generally referring to the available dependable capacity at a diesel generation site that exceeds the capacity contemplated for normal operations, but which Yukon Energy needs to have available at the site to provide sufficient dependable capacity to respond to an N-1 event or to respond to or prevent other significant outages during extreme cold winter weather conditions that would constitute an "emergency" within the meaning of section 49(1) of YESAA. It is practically necessary for Yukon Energy to be able to rely on its additional back-up capacity in such circumstances to prevent immediate harm to public welfare, health or safety.

The above definition of emergency back-up generating capacity is consistent with Environment Yukon's amended permits issued on December 15, 2017 and October 4, 2018, each of which specifically authorized Yukon Energy's use of specified emergency

back-up diesel generation capacity in response to a defined N-1 event (Additional Evidence, Attachment 13 and Attachment 18).

As detailed in the response to YUB-YEC-1-2 (a):

- between December 15, 2017 and October 3, 2018, Air Emissions Permit No. 60-010 provided specific authorization for 10 MW of emergency back-up generation in Whitehorse;

- between October 4, 2018 and March 31, 2022, Air Emissions Permit No. 60-010 provided specific authorization for 12 MW of emergency back-up generation in Whitehorse; and

- between April 1, 2022 and December 31, 2024, in the absence of specific authorization under its air emissions permits, Yukon Energy's emergency back-up capacity corresponded to the variance between the available dependable capacity at a specific site (on a GRA-forecast or actual basis) and the permitted capacity under Yukon Energy's air emissions permits at the Whitehorse, Faro and Mayo Secondary sites, respectively.

As explained further in section 2.3 of Yukon Energy's Additional Evidence, after Environment Yukon informed Yukon Energy in April 2022 of its view that Yukon Energy's emergency back-up diesel generation capacity could not be reauthorized without further YESAA assessment, Yukon Energy started taking diligent steps to pursue the further YESAA assessments that would be needed to bring its emergency back-up diesel generation capacity within its permits in light of Environment Yukon's interpretation.

In the meantime, as Yukon Energy has previously explained, there were two occasions during the April 1, 2022 to December 31, 2024 period when Yukon Energy needed to make use of its emergency back-up generating capacity to ensure uninterrupted service to customers and avoid a significant and immediate risk of harm to the public:

- during the emergency event of December 19 and 20, 2022, when Yukon Energy needed to rely on its emergency back-up capacity in Whitehorse to meet very high

system and customer demand over a 25-hour period during extreme cold winter temperatures;[1] and

- during the N-1 event resulting from the January 31, 2024 outage at the Aishihik Hydroelectric Generating Station.[2]

(b)

All thermal generating units at each site, including both Yukon Energy owned units and rental units, contribute to the total generating capacity that is available at the site to ensure that Yukon Energy has sufficient back-up capacity to respond to an emergency event. In that sense, the above-noted definition of "emergency back-up generation capacity" takes into account the total thermal generation available from both Yukon Energy owned units and rental units at each site.

From a system-wide planning perspective, during the 2023 and 2024 test years, Yukon Energy needed to have a sufficient total number of diesel rental units available on the grid, in addition to the thermal generation available from Yukon Energy owned permanent units at all sites, to ensure sufficient dependable capacity on the grid to respond to an N-1 emergency event.

(c)

Ideally, yes. Under ordinary circumstances, it is preferable to have air emissions permits that provide directly for emergency back-up operations, as suggested by the Court of Appeal in its decision (*Yee v. Yukon Energy Corporation*, 2026 YKCA 1, at para. 6).

This was not the case during the 2023 and 2024 test years, while Yukon Energy was taking steps to pursue the assessments that were needed as a result of Environment Yukon's April 21, 2022 email. Since that time, however, as outlined in response to UCG-YEC-1-1, Yukon Energy has expanded its permitted capacity in Whitehorse, Faro and Mayo Secondary to encompass the dependable capacity required to respond to emergencies.

[1] 2023/24 GRA YUB-YEC-1-35 REVISED – Follow-up Question #3 and Attachment 8, Exhibit 5, PDF pp. 23-24 and 90-92.

[2] 2023/24 Rebuttal Evidence, Exhibit 9, PDF p. 4.

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF page 20.**

ISSUE: **March 31, 2022 Expiry of air emissions permit (Part 9) in Whitehorse**

QUOTE: On March 31, 2022, shortly after the Board issued the 2021 GRA decision, the explicit authorization in Part 9 of Yukon Energy's Air Emissions Permit for 12 MW of emergency back-up generation in Whitehorse expired. Accordingly, Yukon Energy consulted further with Environment Yukon about reauthorizing the emergency back-up capacity in Whitehorse, as had previously been done in 2018.

QUESTION:

a) With respect to YEC's ongoing emergency back-up capacity requirements, did YEC seek reauthorization of the Whitehorse air emissions permits before the expiry of the previous permit in 2022? Please explain.

b) For the referenced quote, when did YEC begin the process of reauthorization?

ANSWER:

(a)

As a preliminary point, Yukon Energy wishes to clarify that its whole Air Emissions Permit did not expire on March 31, 2022 – only the emergency back-up provisions for Whitehorse in Part 9.[1]

During the time leading up to March 31, 2022, Yukon Energy was engaged in both written and verbal communications with Environment Yukon about its Air Emissions Permit, which at the time still covered all four sites in Whitehorse, Faro, downtown Mayo and Dawson

[1] When the provisions in Part 9 of Yukon Energy's Air Emissions Permit expired on March 31, 2022, the rest of the provisions of the permit governing all four sites in Whitehorse, Faro, downtown Mayo and Dawson City remained in effect (Additional Evidence Attachment 18). That permit had an expiry date of December 31, 2024; however, Environment Yukon chose to replace it early, with four separate site-specific permits, effective May 11, 2022 (2023/24 GRA YUB-YEC-1-35 REVISED Attachments 3 to 6, Exhibit 5, PDF pp. 63-83).

City. Because the same permit covered all four sites, this included communications about the application that Yukon Energy had filed with Environment Yukon on January 17, 2022 to authorize 4.9 MW of additional operational capacity in Faro (in anticipation of the YESAA Decision Document issued by the Yukon Government the following day for the Faro Generating Station Capacity Expansion Project: Additional Evidence, Attachment 20).

Yukon Energy does not have a specific record, however, of when it first communicated with Environment Yukon about its intention to also seek re-authorization of its emergency back-up capacity in Whitehorse. Yukon Energy believes this occurred verbally at a point before Yukon Energy's receipt of Environment Yukon's April 21, 2022 email (Additional Evidence, Attachment 21). Accordingly, Yukon Energy cannot confirm precisely when the consultation described in the referenced quote was first initiated.

It is important to recognize that Yukon Energy's communications with Environment Yukon about its Air Emissions Permit in early 2022 took place in a context in which there was no immediate perceived urgency to pursue the re-authorization of Yukon Energy's emergency back-up capacity in Whitehorse, given that:

- this re-authorization would not actually need to be in place until the next winter (i.e. December 2022);

- the previous re-authorization had been granted expeditiously by Environment Yukon on October 4, 2018, through an informal process and without the need for any further YESAA assessment, following Yukon Energy's April 16, 2018 inquiry; and

- Yukon Energy was not aware of any reason that Environment Yukon would not be expected to take a consistent approach to a similar re-authorization request in 2022 as it had taken in 2018.

(b)

As noted in response to (a) above, Yukon Energy is unable to confirm precisely when it initiated verbal communications with Environment Yukon about seeking re-authorization of the emergency back-up capacity in Whitehorse.

After receipt of Environment Yukon's April 21, 2022, email informing Yukon Energy that Environment Yukon would not re-authorize the emergency back-up capacity in Whitehorse without a further YESAA assessment, Yukon Energy proceeded to take the steps described in section 2.3.1 of its Additional Evidence (PDF pp. 32-35) to pursue that assessment, and to obtain the authorization that was ultimately incorporated into the renewed permit issued by Environment Yukon for Whitehorse on December 19, 2024.

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF pages 21-26, Tables 2.2-1 to 2.2-4.**

ISSUE: **Committed and Planned Supply Options**

PREAMBLE: Each of the tables present supply options to YEC with operational outputs to certain forecast years.

QUESTION:

a) For the 2022-23 winter season, as shown in Table 2.2-3 (BESS Part 3 submission, January 2021), contributions to reduce capacity shortfall were forecast to be 4.4 MW from DSM, 7 MW from BESS, and 0.6 MW from hydro uprates. For the 2023-24 winter season, as shown in Table 2.2-4 (2023/24 GRA assumptions), contributions to reduce capacity shortfall were forecast to be 0.1 MW from DSM, 0 MW from BESS, and 0.0 MW from hydro uprates. Please provide reasons for the variances for the noted contributions to reduce capacity shortfall in the 2023-24 GRA forecast compared to the contributions to reduce capacity shortfall previously forecast to be derived from DSM, BESS, and hydro uprates from the BESS Part 3 submission (winter 2022-2023 season).

b) Similarly, for the 2023-2024 winter season, as shown in Table 2.2-3 (BESS Part 3 submission, January 2021) contributions to reduce capacity shortfall were forecast to be 6.6 MW from DSM, 7 MW from BESS, 12.5 MW from diesel replacements, and 0.6 MW from hydro uprates. For the 2023-24 winter season, as shown in Table 2.2-4 (2023/24 GRA assumptions) contributions to reduce capacity shortfall were forecast to be 0.1 MW from DSM, 0 MW from BESS, 0 MW from diesel replacements, and 0 MW from hydro uprates. Please provide reasons for the variances for the noted contributions to reduce capacity shortfall in the 2023-24 GRA forecast compared to the contributions to reduce capacity shortfall previously forecast to be derived from DSM, BESS, diesel replacements and hydro uprates from the BESS Part 3 submission (winter 2023-2024 season).

ANSWER:

(a) and (b)

Yukon Energy has previously provided information to the Board regarding the changes and delays in the completion of these capacity projects that explain the 2023/24 GRA variances from the earlier forecasts presented in Table 2.2-3 of the Additional Evidence. Table 2.2-3 is from the BESS Part 3 submission filed with the Board in January 2021 and was based on Yukon Energy's 10 Year Renewable Electricity Plan. That information is re-summarized below for each capacity project.

1. Battery Energy Storage System (BESS)

In response to 2023/24 GRA YUB-YEC-1-44 (a)-(c), (h)-(l) (Exhibit 2, PDF pp. 351-353), Yukon Energy noted that the BESS project experienced significant delays, primarily due to a confluence of factors that extended beyond the initial timelines. A key reason for the postponement was the due diligence required to finalize the terms and conditions following the contract award signing with the Engineering, Procurement, and Construction (EPC) contractor. This delay was further exacerbated by supply chain disruptions and a rapid escalation in material costs, as a consequence of post-COVID inflationary pressures. These economic changes significantly impacted the cost structure of the project, leading to increased expenses for raw materials and subcontracting services.

To address these unforeseen challenges, a change order was issued to extend the contract duration. This revision was necessary to accommodate the additional time needed to navigate the complex landscape of increased costs and supply chain hurdles, ensuring that the project could proceed despite the existing challenges faced by the main EPC contractor. The cumulative effect of these factors played a pivotal role in pushing the project's completion timeline beyond its original schedule, resulting in the capacity from the BESS project being delayed from 2022/23 as had previously been projected in the BESS Part 3 submission until 2025/26 in the 2023/24 GRA submission.

2. Hydro Uprate

The BESS Part 3 submission assumed 0.6 MW from WH2 uprate in 2021/22, shown in Table 2.2-3 as a planned/committed resource option.

As the project was completed and the 0.6 MW was already added as dependable capacity by the time of the 2023/24 GRA, the capacity benefit of the WH2 uprate was included in the calculation of the 35.4 MW capacity shortfall for the winter 2023/24 season as shown in the first column of Table 2.2-4, reducing the amount of that capacity shortfall by 0.6 MW as explained previously in the 2023/24 GRA application (Exhibit 1, PDF p. 40, footnote 23).

3. Thermal Replacement Project

The BESS Part 3 submission assumed 12.5 MW from the Thermal Replacement Project in 2023/24, shown in Table 2.2-3 as a planned/committed resource option.

As explained in Section 5.1A-1 of the 2023/24 GRA application (Exhibit 1, PDF pp. 157-165), with an additional 4 MW diesel expansion planned at Dawson/Callison, the project's overall planned diesel installation was increased to 16.5 MW. Therefore, the 2023/24 GRA assumptions in Table 2.2-4 show 5 MW in 2024/25, reflecting the expected in-service date for new diesel units in Faro, plus an additional 11.5 MW in 2025/26, reflecting 5 MW in Whitehorse and 6.5 MW at Callison.

As Yukon Energy previously explained in its response to 2023/24 GRA YUB-YEC-1-41 (a) (Exhibit 2, PDF pp. 342-343), the delays in completion of this project were primarily due to challenges in the global supply chain and manufacturing issues.

4. DSM

As shown in Table 2.2-3, the BESS Part 3 submission assumed forecast DMS contributions to reducing capacity shortfall by 4.4 MW in winter 2022/23, 6.6 MW in winter 2023/24, and 6.7 MW in winter 2024/25.

In response to YUB-YEC-1-35 (a) in the BESS Part 3 review process (BESS Exhibit B-3, PDF p. 248), Yukon Energy explained that the estimated DSM impacts were calculated based on data from a Yukon-specific conservation potential review update that was completed for the 2016 Resource Plan using equipment that could be used to design a capacity-focused DSM program for the utility, and that this level of forecast DSM savings was part of the portfolio presented in Yukon Energy's 10-Year Renewable Electricity Plan [i.e., the forecast DSM impacts were based on the analysis prepared for the 2016 Resource Plan, prior to the issuance of Board Order 2018-10 in the YEC 2017/18 GRA].

Yukon Energy's approach to DSM was fundamentally altered as a result of the Board's disallowance of DSM program costs in Board Order 2018-10 (Appendix A, pars. 477-483), issued on December 27, 2018.

Subsequently, on February 17, 2021, the Commissioner in Executive Council issued OIC 2021/16, which amended the *Rate Policy Directive (1995)*, OIC 1995/90 (in section 10) to require the Board to allow Yukon Energy to recover reasonably incurred DSM program costs in rates. In light of that Order in Council, and pursuant to policy direction provided in the Yukon Government's Climate Change policy initiatives, Yukon Energy initiated the design of a new portfolio of DSM programs (DSM Program 2022-2030) as detailed in the 2023/24 GRA Application Section 5.2A-2 (Exhibit 1, PDF pp. 236-255) with updated DSM capacity impacts as shown in Table 2.2-4.

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF page 29.**

ISSUE: **Mayo Secondary - Permits**

QUOTE: Yukon Energy's priority was to ensure that a permit would be in place as quickly as possible to maximize its ability to rely on as much of that new generating capacity as possible, as soon as possible. With this objective in mind, Yukon Energy decided to assess the Mayo Secondary site for 4.9 MW of capacity, so that the assessment could be completed as expeditiously as possible by YESAB's Mayo Designated Office without triggering an Executive Committee level screening assessment, which Yukon Energy did not expect it would be possible to complete before winter 2023/24. After obtaining an initial Air Emissions Permit for Mayo Secondary, it would then be a priority for Yukon Energy to pursue subsequent assessment and permitting processes for the balance of its diesel rental capacity at that facility.

QUESTION:

a) At the time YEC was seeking a permit for a capacity of 4.9 MW at Mayo Secondary, how many diesel units was YEC expecting to rent at that site for the 2023-2024 winter season?

b) At the time YEC was seeking the permit what was the total capacity requirement for YEC at that site?

c) Please confirm whether YEC began the process for an air emissions permit from Environment Yukon six to eight months before the 2023-2024 heating season. If not confirmed, please provide the date at which YEC began the process, and explain fully.

d) Under normal circumstances (i.e., no capacity issues for the environmental regulators) and with the knowledge that as of April 2022 Environment Yukon would require a YESAA assessment, is the response to part (c) a realistic timeframe to begin a permitting process in March of 2023 and expect the permit to be in place by September/October of that year?

ANSWER:

(a)

As explained in Yukon Energy's Additional Evidence (PDF p. 39), at the time Yukon Energy submitted its Project Proposal to YESAA for the Mayo Secondary Thermal Generation Project, seeking an authorized operating capacity of 4.9 MW, it was Yukon Energy's expectation that it would be renting and installing five rental diesel generators at that site.

Yukon Energy was transparent about this expectation in the Project Proposal it filed with the Mayo Designated Office of YESAB in May 2023 (Additional Evidence, Attachment 32). The Project Description provided in Part 5 of that proposal explained (at PDF p. 43):

> Project activities will include:
>
> - Operation: Operation of EPA Approved Tier 2 Caterpillar 3516C Diesel Generators (specifications attached), up to a maximum operating capacity of 4.9 MW, during peak demand (winter) and during emergencies to complement hydro power and other thermal resources on the Yukon's electrical grid, also known as the Yukon Integrated System (YIS).
>
> - Construction: Installation and commissioning of up to five (5) rental diesel generators at 1.8 MW each, connections to transformation at Yukon Energy's S249 substation and two fuel storage tanks on previously disturbed Yukon Energy-owned lands at the Mayo Hydro Generating Station. Two (2) of the up to five (5) units installed at site are intended to be available only as back up in case of emergencies (e.g., failure to start of another unit).

Part 4 of the proposal (Project Location and Details) further explained (at PDF p. 42) that the project's "principal purpose" was "to ensure there is sufficient generation capacity to meet near term peak winter energy demands and to have sufficient dispatchable capacity in the case of an N-1 emergency on Yukon's electrical grid."

These expectations were also reflected in the Decision Document issued for the project by the Yukon Government on October 25, 2023 (Additional Evidence, Attachment 41).

And, when Air Emissions Permit No. 60-010-05 was issued for the site (2023/24 GRA YUB-YEC-1-35 REVISED Attachment 7: Exhibit 5, PDF pp. 84-89), it authorized Yukon Energy to operate any of the electricity generating equipment at the site up to a maximum production capacity of 4.9 MW.

(b)

As reflected in 2023/24 GRA NY-YEC-1-2 REVISED Attachment 1 (Exhibit 4, PDF p. 5), the dependable capacity requirement for the Mayo Secondary site was 7.2 MW, based on four units at 1.8 MW per unit (excluding the one spare unit). See also the response to YUB-YEC-1-1 in this proceeding.

(c)

As explained in Yukon Energy's Additional Evidence (PDF pp. 29 and 39), Yukon Energy determined in or around March 2023 that it would be necessary to establish a new diesel generation facility at the Mayo Secondary site to be put into service by winter 2023/24 (about seven or eight months later) to address updated projections of dependable capacity shortfalls. As explained in Yukon Energy's June 2023 information sheet on the Mayo Secondary project (Additional Evidence Attachment 35), this was largely due to supply chain issues causing delays in the implementation of longer-term generating options, including the BESS and diesel replacement projects, combined with rapid growth in non-industrial peak demand forecasts.

Accordingly, Yukon Energy started planning immediately for the steps that would be needed to obtain a permit for that site in time for winter 2023/24. For example, Yukon Energy met with representatives from the First Nation of Na-Cho Nyäk Dun on two occasions in March 2023 to discuss the need for the additional diesel capacity and Yukon Energy's plan to address that need by assessing and permiting the site at 4.9 MW in the coming months with a view to constructing the new Mayo Secondary facility before the winter 2023/24 season.

Yukon Energy continued to pursue the necessary steps to obtain an air emissions permit for the Mayo Secondary site as a high priority, filing its Project Proposal with the Mayo Designated Office of YESAA on May 5, 2023, approximately seven months before the permit was expected to be needed in December 2023 when the diesel unit rental season starts.

(d)

Under the normal circumstances described in this question, based on Yukon Energy's past experience, it was realistic to expect that the filing of the Project Proposal on May 5, 2023 would allow enough time to have a permit in place by the start of the diesel unit rental season in December 2023, given Yukon Energy's choice to assess the site for only 4.9 MW of operating capacity. Yukon Energy made that choice so that the assessment could be completed as expeditiously as possible at the Designated Office level without triggering an Executive Committee level screening assessment.

The reasonableness of this expectation was demonstrated by the fact that the air emissions permit 4.9 MW of operating capacity at Mayo Secondary was, in fact, issued on November 21, 2023, in time for winter 2023/24.

If, on the other hand, Yukon Energy had sought to assess more than 4.9 MW of operating capacity for the Mayo Secondary site in May 2023, it is unlikely that there would have been enough time to complete an Executive Committee level screening assessment in time for winter 2023/24.

The prescribed steps and procedural requirements in YESAB's *Rules for Screenings Conducted by the Executive Committee*[1] (including amendments in June 2022 adding a new pre-submission engagement process) could not realistically have been completed in time for winter 2023/24. As indicated presently on the YESAB website, "projects move through [the Executive Committee] screening process with a legislated timeline of up to 16 months."[2]

[1] https://yesab.b-cdn.net/wp-content/uploads/2026/06/EC-Rules-Consolidated-EN.pdf

[2] See: https://yesab.ca/executive-committee-screening/. Note further that it had been Yukon Energy's experience with Executive Committee screenings for previous generation projects that the full process took 11 months to complete for the Whitehorse Natural Gas Conversion Project (2013-0115) (Proposal submitted August 8, 2013; Executive Committee screening report issued June 12, 2014; Decision Document issued July 7, 2014), and 15 months for the Mayo Hydro Enhancement Project (Mayo B) (2009-0040) (Proposal submitted March 2, 2009; Executive Committee screening report issued May 12, 2010; Decision Document issued June 2, 2010). Consistent with those earlier examples, it took over a year to complete the full process for the most recent Executive Committee screening for the Callison Generating Station Project (2023-0150) from the time the initial Project Description was submitted on November 9, 2023 until a screening report was issued on November 5, 2024 and a Decision Document was signed on December 24, 2024.

Since the need for the Mayo Secondary site only become apparent in or about March 2023, a Project Proposal could not realistically have been filed significantly earlier than May 2023. In this context, Yukon Energy's Project Proposal was filed as quickly as was reasonably possible, on May 5, 2023.

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF page 30.**

ISSUE: **Diesel Rentals**

QUOTE: In the most recent 2025-2027 GRA, Yukon Energy adopted a quantifiable approach to evaluating the poor reliability of its rental diesel units by discounting their winter rated capacity by an estimated Forced Outage Rate of 15%, to 1.53 MW per unit, to reflect Yukon Energy's actual reliability experience with the diesel rental units. Although Yukon Energy had not yet adopted the Forced Outage Rate approach for evaluating dependable capacity at the time of the 2023/24 GRA, with the benefit of hindsight, that approach does provide a quantifiable way to more accurately evaluate the actual dependable capacity of the rental units that Yukon Energy had installed during the 2023 and 2024 test years, taking into account the known reliability concerns with those units. (Footnote removed) (Underlining added)

Footnote 22: From the 2025-27 GRA, see: Exhibit 1-A, Application, PDF p. 53; YUB-YEC-1-7, Exhibit 4, PDF pp. 124-125; and Final Argument, PDF pp. 18-19, 51. As noted further below, the reliability concerns with the rental units were exemplified by one of the Faro rental units becoming non-operational shortly after commissioning in winter 2023/24. Yukon Energy now applies Forced Outage Rates to all Yukon Energy owned generation units, including hydro and LNG units, which would increase the need for diesel rentals. (Underlining added)

QUESTION:

a) Does YEC's contract with the diesel rental supplier indicate that if a unit fails it must be repaired or replaced? Please explain.

b) What was the response to the Faro rental unit that became non-operational after commissioning in winter 2023-2024 (i.e., was the unit repaired or replaced and by whom, was the rental fee refunded)?

ANSWER:

(a)

Yukon Energy's contract with the diesel rental supplier includes a representation by the supplier that the equipment is in good running order, but it does not specifically address whether a unit that fails to operate while on-site is to be repaired or replaced. Typically, when a rental unit fails or won't start, the diesel rental supplier on-site is able to repair the unit. However, there have been occasions where more serious failures have resulted in a unit's removal from site or replacement.

(b)

The Faro unit that became non-operational shortly after commissioning in winter 2023/24 was repaired by the diesel rental supplier on-site by installation of a replacement part. It was not necessary for there to be any refund of rental fees. The agreement with the supplier allows for hour transfer flexibility between units/locations. In essence, Yukon Energy pays for a pool of run-time hours for a season, of which it can use to generate power from any of the rental units at any location.

REFERENCE: **YEC Reconsideration Process Application, PDF page 36, footnote 37.**

ISSUE: **Faro Permit Allowance**

QUOTE: Yukon Energy acknowledges that the permit referred to "six rental diesel generators", not seven. However, with the retirement of FD1, the total number of units operating at the site in winter 2023/24 was equal to the eight authorized in the permit, just with one fewer permanent diesel generator and one additional (more efficient) rental unit.

QUESTION:

Please explain the significance of Environment Yukon permitting a set ratio of permanent-to-rental diesels to YEC actually operating a different set of permanent-to-rented diesel ratio? Does YEC believe Environment Yukon would concur? Please explain.

ANSWER:

When Environment Yukon granted the site specific Air Emissions Permit No. 60-010-01 for Faro on May 11, 2022 (2023/24 GRA YUB-YEC-1-35 REVISED Attachment 3: Exhibit 5, PDF pp. 63-68) authorizing Yukon Energy "to operate any combination of the two permanent diesel generators and six rental diesel generators to a site capacity of 15.5 MW", this was done on the basis of Decision Document 2021-0115 issued for the Faro Generating Station Capacity Expansion Project on January 18, 2022 (Additional Evidence, Attachment 20). As explained in section 2.1.3 of Yukon Energy's Additional Evidence (PDF pp. 17-20), that Decision Document authorized a 4.9 MW increase to the (approximately) 10.6 MW operating capacity that had been previously been assessed for Faro in 2011, based on the total capacity of the four permanent generators that were installed at that time (FD1, FD3, FD5 and FD7) (YESAB File No. 2011-0246).[1]

As addressed further below, however, from an air quality perspective, it was only the 15.5 MW total operating capacity for the site that was actually relevant to the assessment in

[1] See October 25, 2011 YESAB Project Proposal, Additional Evidence Attachment 1, PDF p. 24.

YESAB File No. 2021-0115, not the ratio of permanent vs. rental units used to provide that operating capacity.

The original YESAA assessment for Faro in 2011 considered the 5.15 MW capacity of the FD1 unit originally installed at the site, together with the 1 MW and 1.4 MW capacities of the previously installed FD3 and FD5 units, and the 3 MW capacity of FD7, all of which had Pre-Tier emission rates.[2]

FD3 and FD5 were subsequently relocated prior to the 2014 renewal of Yukon Energy's Air Emissions Permit (Additional Evidence, Attachment 8). However, on October 13, 2020, Environment Yukon confirmed (Additional Evidence, Attachment 19, PDF p. 45) that:

- the 2011 assessment was sufficient and still valid to allow Yukon Energy to replace the operating capacity previously supplied by FD3 and FD5 with rental diesels, without the need to reassess that capacity and without the need for a formal amendment to the 2014 permit; and

- a further assessment and amended permit would only be needed for additional operating capacity exceeding 10.6 MW.

The Watson Lake Designated Office of YESAB specifically recognized Environment Yukon's October 2020 confirmation of the previous replacement of the operating capacity of FD3 and FD5 with rental diesels in the Evaluation Report the Designated Office issued on December 7, 2021 for the Faro Generating Station Capacity Expansion Project.[3] The Designated Office described 10.6 MW as the "current permissible capacity of the facility" under the 2014 permit (at p. 18), and accepted that further assessment was only needed for additional operating capacity exceeding that level (pp. 7-8).

The Designated Office also specifically recognized in its Evaluation Report (at p. 8) that all seven rental diesel units in Faro (including the one unit designated at the time as a "spare") had "already been transported to the project area, installed and ha[d] been in operation with full transparency to the regulator [Environment Yukon]."

[2] See Additional Evidence, PDF p. 11.

[3] YOR # 2021-0115-0021.

The above decisions of Environment Yukon and the Designated Office reflected the (undisputable) fact that replacing the previously assessed capacity of FD3 and FD5 with rental diesel units could not possibly have had any negative incremental impact on air quality, since the rental diesel units are more fuel efficient than FD3 and FD5 and meet Tier 2 emissions standards, which would ordinarily be expected to result in lower emissions.

After the Watson Lake Designated Office issued its December 7, 2021 Evaluation Report for the Faro capacity expansion, the Yukon Government proceeded to issue Decision Document 2021-0115 on January 18, 2022 authorizing the expanded capacity of 15.5 MW, and the site specific permit issued for Faro on May 11, 2022 was granted on that basis.

When Yukon Energy later retired FD1 in 2023, its previously assessed 5.15 MW capacity was substituted with capacity from rental diesel units, including the seventh rental unit that had previously been designated as a “spare”. From an air quality perspective, this was similar to the capacity replacement that was allowed previously in October 2020. Once again, the substitution of the previously assessed capacity of FD1 with rental diesel units could not possibly have had any negative incremental impact on air quality since the rental diesel units are more fuel efficient than FD1 and meet Tier 2 emissions standards, which would ordinarily be expected to result in lower emissions.[4]

Accordingly, for the same reasons as in October 2020, there would again have been no basis for Environment Yukon to have any concern about that further capacity replacement in 2023.

As outlined further in response to YUB-YEC-1-2 (c), Yukon Energy’s operation of the diesel rental units in Faro in higher priority in the thermal stacking order over the Yukon Energy owned units is also consistent with the condition in the Air Emissions Permit requiring Yukon Energy to “run the sources at each site in order of highest possible efficiency under the circumstances”, except for “maintenance or test purposes”.

[4] With respect to potential noise impacts resulting from the use of the seventh rental diesel unit in Faro in response to an emergency, as Yukon Energy explained in its response to 2025/27 GRA NY-YEC-1-24 (a) (Exhibit 4, PDF p. 76) and as Ms. Cunha elaborated in her oral evidence in that proceeding (2025/27 GRA Transcript, p. 30, lines 11-23), in the absence of any applicable noise legislation in the Yukon, Yukon Energy follows the BC Noise Control Best Practices Guidelines, which do not apply in emergency situations when public safety is at risk.

Yukon Energy notes further that its most recently issued air emissions permits authorize the applicable facility's maximum operating (emitting) capacity from thermal electricity generating equipment at the site without specifying numbers of units or distinguishing between owned and rented units in the permit: see, for example, Whitehorse Air Emissions Permit No. 60-010-04, issued December 19, 2024 (Additional Evidence, Attachment 69); Mayo Secondary Air Emissions Permit No. 60-010-05, issued July 24, 2025 (Additional Evidence, Attachment 74); and Faro Air Emissions Permit No. 60-010-01, issued January 19, 2026 (Additional Evidence, Attachment 75).

Amongst other things, this clarification recognizes that a capacity substitution such as what was done in Faro in 2023 (with equipment having similar or better emissions performance) would have no adverse effect on air quality, where all permits continue to include the same general requirement described above to run the sources at the site in order of highest possible efficiency.

REFERENCE: **YEC Reconsideration Process Application, Additional Evidence, Attachment 67, starting at PDF page 912.**

ISSUE: **Letter from Director, Environmental Protection and Assessment Branch**

QUOTE: For those thermal generating projects that are seeking renewal, but that are out of compliance, EPA requests that YEC continue to operate in accordance with the terms of the existing permits until new permits can be issued. As with any Environment Act permit, the obligations included in the existing permit survive the permit's expiry date.

QUESTION:

a) Does YEC interpret the above quote to mean that it can continue to operate its thermal generating projects with expired air emissions permits until new permits are issued?

b) In this context, what conditions must exist for the permit to continue to apply?

c) Does the continuation of the permits referenced in the letter apply to all renewal processes or just for this instance and the renewals for the 2023-2025 time period? Please explain.

ANSWER:

(a)

Yukon Energy interprets the above quote as a clear request from Environment Yukon – specifically, from the Director of Yukon's Environmental Protection and Assessment Branch – for Yukon Energy, in the event that the renewal of air emissions permits are delayed, to continue to operate thermal generating projects with pending renewals in accordance with the terms of their prior permits until new permits could be issued.

The December 11, 2024 letter from Environment Yukon was not equivalent to an air emissions permit under the *Environment Act* and the *Air Emissions Regulations*. However, it specifically requested that Yukon Energy continue to operate generators beyond January 1, 2025, even if that would result in non-compliance due to a permitting renewal

delay, having regard to the various overriding concerns recognized in the letter. Those concerns included:

- the “serious challenges” experienced by Yukon Energy “with load capacity and infrastructure”, presenting a “safety risk to Yukon communities”;
- the impact of YESAB capacity issues on prolonging the time taken to complete environmental assessments;
- the “essential nature of power generation”; and
- the fact that Yukon Energy was “in the process of working towards compliance by going through the YESAA assessment and permitting processes” for its thermal generation facilities.

The request is evidence of Environment Yukon’s practical recognition that, in the particular circumstances facing Yukon Energy, public safety considerations necessarily outweighed concerns about temporary non-compliance.

(b)

Yukon Energy understands that an expired permit continues to apply in the manner stated by Environment Yukon in its letter, in the sense that the obligations included in a permit survive the permit’s expiry date.

Yukon Energy understood Environment Yukon to be requesting that it continue to operate a thermal generation facility after January 1, 2025, even if its permit renewal was delayed, while continuing to comply with all obligations stated in the expired permit, if that continued operation was necessary to protect public safety.

(c)

The specific request in the quoted passage applied to the particular permits that were set to expire on December 31, 2024. This would have included the Air Emissions Permit for

Whitehorse if it had not been renewed in time, as well as the permits for downtown Dawson and downtown Mayo.[1]

The letter also recognized the potential need for Yukon Energy to operate other "new" projects prior to issuance of a permit, in which case Environment Yukon asked Yukon Energy to "notify Environmental Compliance and Inspections immediately", which would then be expected to "use their authorized discretion in managing any non-compliance."

Yukon Energy submits that these requests provide broader evidence in support of its position that, in the circumstances Yukon Energy was facing during the 2023/2024 period – and having regard to its ongoing actions during that period to secure all required additional permits as soon as feasible – it did not "threaten the integrity of the legal system" for Yukon Energy to ensure that it had sufficient diesel rental capacity available and ready to protect public safety in response to a potential emergency situation, even if the use of that capacity would have temporarily put Yukon Energy into non-compliance with the *Environment Act*.

[1] The renewed Air Emissions Permit for Whitehorse was in fact issued on December 19, 2024, with an effective date of January 1, 2025.

REFERENCE: **YEC Reconsideration Process Application, PDF page 45 and YEC Additional Evidence, Attachment 68, PDF page 914.**

ISSUE: **Letter from Minister responsible for the Yukon Development Corporation and Yukon Energy Corporation**

QUOTE: The Yukon Government recognizes that Yukon Energy provides Yukoners with essential power generation. Given the public safety risk of not having generation available, Yukon Government expects Yukon Energy to operate generators beyond January 1st, as required, to maintain system reliability. Yukon Government also expects that Yukon Energy will continue to be diligent in navigating assessment and regulatory processes and continue regular communication and notifications with the relevant Yukon Government departments while necessary operations are maintained prior to receiving operating permits. (Emphasis removed)

QUESTION:

a) Did YEC consider the Minister's letter as direction to operate generators for the purpose of maintaining system reliability even though doing so may occur prior to receiving operating permits? Specifically, does YEC view the letter from the Minister as being equivalent to a permit? Please explain.

ANSWER:

(a)

As explained further below, Yukon Energy considered the Minister's December 17, 2024 letter to be a statement of the Yukon Government's clear expectation that Yukon Energy would continue to operate thermal generation facilities as required to maintain system reliability, even if not all air emissions permits were renewed by January 1, 2025.

The Minister's December 17, 2024 letter was not equivalent to a permit, nor did it constitute a legally binding "direction" as that term is defined in the *Environment Act.*

As a practical matter, however, Yukon Energy is wholly owned by the Yukon Government through the Yukon Development Corporation (YDC), a territorial corporation established under the *Yukon Development Corporation Act* that operates for all purposes as an agent of the government, and it considers that it must comply with expectations that are clearly stated and communicated by the Minister responsible for YDC.

This letter, in particular, provided a clear statement of the Minister's expectation that Yukon Energy would continue to operate thermal generation facilities as required to maintain system reliability, even if this would put Yukon Energy into non-compliance with the *Environment Act*, because of the overriding concern described by the Minister of "the public safety risk of not having generation available" and the need "to support public safety while assessment and permitting processes are underway".

As with the request made by Environment Yukon in its December 11, 2024 letter, the expectation stated by the Minister in his December 17, 2024 letter similarly provides broad evidence in support of Yukon Energy's position that, in the circumstances Yukon Energy was facing during the 2023/2024 period, it did not "threaten the integrity of the legal system" for Yukon Energy to ensure that it had sufficient diesel rental capacity available and ready to protect public safety in response to a potential emergency situation, even if the use of that capacity would have temporarily put Yukon Energy into non-compliance with the *Environment Act.*

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF pages 45-46.**

ISSUE: **Use of Diesel Rentals**

QUOTE: Having regard to the totality of the evidence that is now before the Board on this reconsideration, any suggestion that Yukon Energy was undertaking a "deliberate practice" of regulatory non-compliance through this time period, or that its choices to prioritize public safety in the face of regulatory challenges and delays could ever be characterized in these circumstances as "threatening the integrity of the legal system", would simply be irreconcilable with the direction expressed in these letters from the Yukon Government. These letters were not on the record before the Court of Appeal; however, the Board must take them into account now when reconsidering Yukon Energy's entitlement to recover diesel rental costs that it incurred that were consistent with the policy direction expressed in both of these letters.

If Yukon Energy had not incurred those costs, the risk to public safety would simply have been unacceptable. These units were used and useful, and as demonstrated by the evidence provided during the 2023/24 GRA they were in fact needed to protect public safety in the emergency events that occurred both in December 2022 and January 2024. (Footnotes removed)

Footnote 48: The diesel rentals have provided about 70% of the approximately 7 GWh winter diesel generation in 2023 and about 62% of the approximately 36 GWh winter diesel generation in 2024.

QUESTION:

a) Is it YEC's position that the letters from Environment Yukon and the Minister responsible for the Yukon Development Corporation and Yukon Energy Corporation were directions to it to operate the rental diesel units in an emergency? Does YEC view the letter from the Ministers as being equivalent to a permit? Please explain.

ANSWER:

(a)

As explained further in response to YUB-YEC-1-9 and YUB-YEC-1-10, Yukon Energy considered Environment Yukon's December 11, 2024 letter to be a clear "request" for Yukon Energy to continue to operate thermal generation facilities after January 1, 2025 in accordance with the terms of their prior permits in the event their renewals were delayed, and it considered the Minister's December 17, 2024 letter to be a statement of the Yukon Government's clear expectation that Yukon Energy would do so as required to maintain system reliability.

Both letters referred to the public safety risks of not having sufficient generation available while assessment and permitting process are ongoing, and the letter from Environment Yukon also specifically recognized Yukon Energy's efforts to work towards compliance by going through assessment and permitting process for its thermal generation facilities, as well as the impact of YESAB capacity issues on prolonging the time taken to complete those assessments.

Neither letter was equivalent to a permit, or constituted a legally binding "direction" as that term is defined in the *Environment Act.* As a practical matter, however, as explained in Yukon Energy's response to YUB-YEC-1-10, Yukon Energy considers that it must comply with expectations that are clearly stated and communicated by the Minister responsible for the Yukon Development Corporation (YDC).

Taken together, Yukon Energy considered these letters as providing clear guidance both from the Minister and from Environment Yukon about the need to prioritize public safety and to continue to operate its thermal generators in the event of a possible delay in permitting.

As outlined in response to YUB-YEC-1-9 and YUB-YEC-1-10, these letters together provide broad evidence in support of Yukon Energy's position that, in the circumstances Yukon Energy was facing during the 2023/2024 period, it did not "threaten the integrity of the legal system" for Yukon Energy to ensure that it had sufficient diesel rental capacity available and ready to protect public safety in response to a potential emergency situation, even if the use of that capacity would have temporarily put Yukon Energy into non-compliance with the *Environment Act*.

REFERENCE: **YEC Reconsideration Proceeding, Additional Evidence, PDF page 39, YEC Additional Evidence, Attachment 36, PDF pages 387-388.**

ISSUE: **Mayo Secondary**

QUOTE: Accordingly, Yukon Energy submitted its initial YESAA Project Proposal to YESAB's Mayo Designated Office for the Mayo Secondary Thermal Generation Project (2023-0090) on May 5, 2023, seeking to install five rental generators at the site with a total nameplate capacity of 9.0 MW, but with their authorized operating capacity to be limited to 4.9 MW … (PDF page 39)

…

Yukon Energy is seeking approval from the Yukon Government to operate up to 4.9 MW of fossil fuel-fired electrical generating equipment at any one time at the Project site. Depending on the generators in use this may range from one to several units in order to reach the operating capacity threshold under the air emissions permit (see definition in response to IR1.2). The current proposal is to utilize the generators referred to in the Project Proposal and mentioned in the IR preamble, above. (PDF page 387)

…

As outlined in the response to IR1.1a, Yukon Energy is seeking authorization from the Yukon Government to operate up to 4.9 MW of fossil fuel-fired electrical generating equipment at any one time at the Project site. As with all Yukon Energy thermal generating stations, any use of the installed Capacity higher than the Air Emissions Permit Operating Capacity threshold would require approval by the authority having jurisdiction, in this case the Yukon Government Environment Department. If ever required, such approval might be granted in an emergency and would be subject to the provisions of YESAA in this regard (i.e., Section 49(1) and 49(2)).

PREAMBLE: It appears that for the Mayo secondary site YEC is planning to keep two spare units as back-up**.**

QUESTION:

a) The Whitehorse and Faro sites appear to have utilized only one spare unit that was not included in approved revenue requirements for the 2023 and 2024 GRA test years. Are the additional two rental units at the Mayo site considered spares? Please explain.

b) Although not included in the 2023 or 2024 revenue requirements for YEC, where were the two spare diesel generation rental units expected to be located?

c) For each of the test years (2023 and 2024), what were the total forecast costs of the incremental diesel generation capacity (including contracted running costs) above 4.9 MW?

ANSWER:

(a)

No. Only one of the rental units at the Mayo Secondary site was considered to be a spare during the winters of 2023/24 and 2024/25. The other rental unit considered to be a spare for those two winters was located in Whitehorse. None of the rental units in Faro were considered to be a spare during the winters of 2023/24 and 2024/25.

The only time during the 2023-2024 test period that one of the rental units in Faro was considered to be a spare was during the portion of winter 2022/23 that was included in the 2023 test year (i.e. from January to April 2023).

This is reflected in Table 2 of the response that Yukon Energy provided previously to YUB-YEC-1-1 in the 2023/24 GRA (Exhibit 2, PDF page 217). As shown in that table:

- a total of five diesel rental units were located at the Mayo Secondary site in both winters of 2023/24 and 2024/25; and, of those five units, the rental costs for four units were included in the revenue requirements for the test years, and the fifth unit was considered to be a spare;

- a total of ten diesel rental units were located in Whitehorse in those two winters; and, of those ten units, the rental costs for nine units were included in the revenue

requirements for the test years, and the tenth unit was considered to be a spare; and

- a total of seven diesel rental units were located in Faro in those two winters, and the rental costs for all seven of those units for the winters of 2023/24 and 2024/25 were included in the revenue requirements for the test years.

During the preceding winter of 2022/23 (including the period from January to April 2023), prior to the commissioning of the Mayo Secondary site, one of the seven diesel rental units located in Faro was considered to be a spare. Therefore, the $0.5 million cost of spares shown in Table 2 of 2023/24 GRA YUB-YEC-1-1 for the 2023 calendar year includes the cost of the spare unit in Faro for January-April 2023 and the cost of the spare unit in Mayo in December 2023. The costs of spares shown in that table were not included in Yukon Energy's revenue requirements in the 2023/24 GRA. Please also see the response to (c) below.

As Yukon Energy explained further in its GRA 2023/24 Rebuttal Evidence (Exhibit 9, PDF p. 9, footnote 7):

- one of the advantages of diesel rental units is that they are mobile and can be moved from one location to another (for example, in case of a unit needing to be taken out of service due to extended repairs or being deem unfit for service); and

- the 2023/24 GRA included four units (excluding a spare) allocated to Mayo Secondary, nine units (excluding a spare) allocated in Whitehorse, and seven units allocated to Faro, providing a total of 36 MW at all three locations (20 diesel rental units, excluding 2 spares) to meet forecast 2023/24 and 2024/25 winter N-1 dependable capacity requirement.

Yukon Energy also noted in its Rebuttal Evidence that, at that time (i.e. in February 2024), it expected that some diesel units may be relocated prior to the winter of 2024/25, as reflected, for example, by YEC's February 14, 2023 email to Environment Yukon in NY-YEC-1-14(b) Attachment 1 (which is also now included in Yukon Energy's Additional Evidence, Attachment 27, PDF pp. 19-21). Yukon Energy indicated further in its Rebuttal Evidence that, regardless of where each of the rental diesel units would ultimately be situated in the winter of 2024/25, Yukon Energy was committed to ensuring that it would have the dependable capacity in place that was needed to meet N-1 dependable capacity

planning criteria, and that a total of 20 diesel rental units (excluding spares) across all three sites were forecast to be needed for that purpose.

(b)

As explained in the above response to (a), the two units considered to be spares in winter 2023/24 and 2024/25 were located at the Mayo Secondary and Whitehorse sites. However, prior to the commissioning of the Mayo Secondary site, one of the units in Faro was considered to be a spare from January to April 2023 (i.e. during winter 2022/23).

(c)

The total rental costs for the 2023 and 2024 test years were previously provided in response to 2023/24 GRA YUB-YEC-1-1 (a) – (c), Table 2 (Exhibit 2, PDF p. 217). Yukon Energy notes that the calendar year costs shown in that table included rental costs for spares, even though the costs of those spares were not included in Yukon Energy's revenue requirements. This included the costs for the one unit in Faro that was considered to be a spare from January to April 2023, as well as the one spare at Mayo Secondary in winter 2023/24 and 2024/25, and the one spare in Whitehorse throughout this time period.

The following table provides a further breakdown showing the cost of spares as well as the incremental rental costs for the number of GRA approved diesel rental units at each site that exceeded the number of units needed to supply Environment Yukon approved capacity at the site, as identified in response to YUB-YEC-1-1. This includes the specifically requested incremental rental costs for the spare unit in Mayo Secondary, as well as the incremental rental costs for the spare unit in Faro (for the period from January to April 2023) and the spare unit in Whitehorse. The table also provides an alternative calculation of those incremental rental costs that takes ELCC into account:

$ millions	Diesel Rental Cost	Cost of Spares	Diesel Rental Cost net of Spares	Diesel Rental Units Exceeding Air Emission Permit Capacity as per YUB-YEC-1-1	Rental cost for one unit	Estimated Impact	Diesel Rental Units Exceeding Air Emission Permit Capacity as per YUB-YEC-1-1 with ELCC	Rental cost for one unit	Estimated Impact
	A	B	C=A-B	D	E	F=D*E	G	H=E	I=G*H
2023 Calendar Year									
Whitehorse	$2.58	$0.21	$2.38	5	$0.21	$1.03	5	$0.21	$1.03
Faro	$2.54	$0.19	$2.35	0	$0.32	$0.00	-2	$0.32	
Mayo	$0.34	$0.06	$0.28	1	$0.06	$0.06	0	$0.06	$0.00
Total	**$5.46**	**$0.46**	**$5.00**			**$1.09**			**$1.03**
2024 Calendar Year									
Whitehorse	$2.92	$0.28	$2.63	5	$0.28	$1.41	5	$0.28	$1.41
Faro	$2.78	$0.00	$2.78	2	$0.38	$0.76	2	$0.38	$0.76
Mayo	$1.67	$0.32	$1.35	1	$0.32	$0.32	0	$0.32	$0.00
Total	**$7.37**	**$0.61**	**$6.76**			**$2.50**			**$2.17**

Notes:

1. The 2023 calendar year costs are based on the 2022/23 and 2023/24 winter rental costs. Accordingly, they assume one spare unit in Faro for 2022/23 winter and no spares in Faro for 2023/24 winter, with one spare unit at Mayo Secondary for 2023/24 winter. Therefore, for 2023, the cost of spares for Faro only reflects January to April 2023 and the cost of spares for Mayo Secondary only reflects December 2023.
2. The rental cost for one unit in column E includes the rental cost of one generator and one transformer, including start-up and commissioning and transportation costs for one unit as per 2023/24 GRA assumptions [the estimated rental cost for one unit does not include rental cost related to fuel tanks].
3. The rental costs for Mayo were lower due to lower overall transportation costs for Mayo, as some of the rental units previously held in Whitehorse and in Faro were moved to Mayo, as explained in response to 2023/24 GRA YUB-YEC-1-1 (a) – (c) [Exhibit 2, PDF p. 217].