Yukon Energy Corporation
YEC 2023-2024 General Rate Application Reconsideration Proceeding

Yukon Utilities Board Information Request Round 1 to Yukon Energy Corporation (YEC)

YUB-YEC-1-001

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"

Request:

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.

YUB-YEC-1-002

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.

Request:

(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.

YUB-YEC-1-003

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.

Request:

(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.

YUB-YEC-1-004

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.

Request:

(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?

YUB-YEC-1-005

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.

Request:

(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).

YUB-YEC-1-006

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.

Request:

(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?

YUB-YEC-1-007

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)

Request:

(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)?

YUB-YEC-1-008

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.

Request:

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.

YUB-YEC-1-009

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.

Request:

(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.

YUB-YEC-1-010

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)

Request:

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.

YUB-YEC-1-011

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.

Request:

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.

YUB-YEC-1-012

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.

Request:

(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?