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**IN THE MATTER OF THE YUKON ENERGY CORPORATION 2021  
GENERAL RATE APPLICATION**

Heard before the

**YUKON UTILITIES BOARD**

September 27 - 29, 2021

**WRITTEN ARGUMENT OF NATHANIEL YEE**

## Introductory Comments

As expected, I will focus primarily on the issues with the rental diesels in Faro and in Whitehorse. While I do understand the need for increased capacity, the approach of YEC to this particular project has highlighted a number of concerns. Issues not addressed in this document are not implying agreement or disagreement, but are left to other intervenors and the Board.

## Arguments:

### 1. Background and dates.

- |  |              |                      |
|--|--------------|----------------------|
| - Decision made to add more temporary rental diesel  | Jan 2020     | (B-9 p.530 line 5)   |
| - Decision to add additional rental diesels at Faro  | Feb 2020     | (B-9 p.530 line 10)  |
| - Work begins on the installation and infrastructure   | Feb 26, 2020 | (B-9 p.530 line 31)  |
| - YEC's first contact with regulator regarding Faro diesels  | Aug 27, 2020 | (C4-8 p.4)           |
| - Faro residents informed of YEC plans to add rental diesel (just before fuel tanks arrived and installation was obvious to residents on September 30) | Sep 2020     | (B-9 p.530 line 14)  |
| - YEC submits initial application to reinstall 5.65MW + 3 Emergency only generators  | Sep 10, 2020 | (C4-8 p.6-7)         |
| - Regulator informs YEC that YESAB required for additional generators.   | Sep 23, 2020 | (C4-8 p.10)          |
| - YEC submits revised application to reinstall 5.65MW, with no mention of additional generators.   | Sep 28, 2020 | (C4-8 p.13-14)       |
| - Approval from regulator to reinstall 5.65MW, up to 10.6MW total station capacity.  | Oct 13, 2020 | (C4-8 p.15)          |
| - Project completed, 7 rental diesels installed.   | Nov 2020     |                      |
| - The Faro rental site was commissioned and in service   | Dec 1, 2020  | (B-9 p.1507 line 34) |
| - YESAB proposal for Faro generators initiated   | Aug 12, 2021 | YESAB (2021-0115)    |

2. YESAA Purposes of Act (2)(b) “to require that, **before** projects are undertaken, their environmental and socio-economic effects be considered;” (emphasis added)

3. YEC first contacted the regulator in August of 2020, a full six months after undertaking the project on Feb 26, 2020. Two weeks after contacting the regulator, YEC was informed that a YESAB assessment was in fact required for the project as initially proposed.

4. The YESAB assessment was initiated 18 months after the undertaking of the project, and 11 months after contacting the regulator and being informed that an assessment was required and 8 months after the project was in service.

5. The regulator gave YEC “authorization to reinstall previously relocated/de-rated capacity of up to 10.6MW, cumulative station capacity,” (C4-8 p.15) and yet YEC has installed 17.8MW cumulative station capacity. (7 rentals + FD1 + FD7)
6. YEC was not given authority by the regulator to connect more than three of the rental diesels, even for N-1 emergency back-up purposes, as shown below:
7. YEC’s initial application to the regulator on Sep 10, 2020 asks to “*Reinstall relocated/derated capacity (aprx. 5.65 MW) & add 3 x1.8 MW emerg-only units*” (C4-8 p7) and includes the following text on the corresponding installation site layout: “*YM23-YM25 to be connected to system for N-1 emergency-only back-up*” (B-17 p. 9)
8. The regulator replied that this would have to go through YESAB, so YEC submitted a revised application on Sep 28, 2020 asking only to “*Reinstall relocated/derated capacity (aprx. 5.65 MW)*” (C4-8 p.14) and updated the text on the installation site layout page as follows: “*YM23-YM25 to be connected to system for N-1 emergency-only back-up (\*\*\*following future review and approval\*\*\*)*” (B-18 p.6)
9. YM26 (on installation site layouts referred to as YM26 and YM27) is consistently shown as an (*unconnected spare*) (B-17 p.9 and B-18 p.6)
10. YEC’s approved application to the regulator allows asks only for the connection three generators, *YM20-YM-22 connected to system to replace previously relocated and derated site capacity.* (B-18 p.6) and leaves the others to be connected only following review and approval.
11. As the regulator did not approve YM23-YM25 to be connected to the grid even when requested for N-1 emergency purposes only, their capacity should not be allowed in N-1 calculations.
12. YEC has the Faro rentals high on the stacking order, just below the LNG generators and the Whitehorse rental diesels, and states that Faro has “*7 available units but only 6 can be run at a time under current air emissions permit.*” (B-25 p.4) This despite only having authority from the regulator to connect 3 units to the grid.
13. YEC claims that the generators can be run in an N-1 emergency using the emergency exception set out in section 49 of YESAA. That section states that no assessment is required “in response to an emergency when it is in the interest of public welfare, health or safety or of protecting property or the environment that the activity be undertaken immediately.” (B-30 p.7 first lines)
14. Section 49 of YESAA applies only “in response to an emergency,” and has no application to the undertaking of a project in preparation for a potential emergency. Section 49 was clearly not intended to be used as part of the planning process or to bypass the permitting process.
15. YEC applied for and received temporary emergency use authorization for the first six generators in Whitehorse, valid until March 31, 2022 (air emissions permit C-4-8 p. 21-22) but has not received any authorization for any of the others, nor has YEC initiated renewal of the emergency authorization expiring in 2022, despite stating that “rental diesels are expected to be required on the system for the next 8 to 10 years.” (B-9 p.531 line 29)

16. YEC has indicated that the air emissions permit allows for 14MW of diesel generation in Whitehorse, and has placed the Whitehorse rentals near the top of the stacking order, claiming to be able to run up to 8 at a time. (B-25 p.4)

17. This 14MW cap is not mentioned in the air emissions permit and “*Review of YESAB decision documents and correspondence with Yukon Environment relating to thermal generation at Whitehorse did not provide any specific reference to 14 MW.*” (Undertaking #29 p. 251)

18. YEC claims that the 14MW cap comes from Part 3 of the air emissions permit. “*Therefore, Part 3 of the Permit currently allows for emissions from the equivalent of those five permanent diesel generators. The 14MW referenced by YEC reflects capacities for the existing four units and the capacity for the retired unit (WD3).*” (Undertaking #29 p. 251)

19. Part 3 of the air emissions permit however, is quite specific in referring to the five generators, and does not give any indication that it is suggesting a 14MW cap using any other means than the specific five generators. Part 3 reads as follows: “*The permittee is authorized to operate three liquefied natural gas generators; and five generators running exclusively on diesel fuel at the Whitehorse Station*” (C-4-8 p. 19 part 3 item 1)

20. Part 9 of the air emissions permit is even more specific in the usage of six rentals of a specified capacity only in the event of an N-1 event: (Emphasis added)

“*The permittee is **authorized to operate up to 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**, and periodically for short periods to confirm operational readiness, up until March 31st, 2022, unless otherwise approved by the Branch.*” (C-4-8 p. 21-22 part 9 item 1)

21. Given that YEC can find no documentation referencing the 14MW cap or justifying the use of the rentals in lieu of installed generators, YEC has been in violation of the air emissions permit every time the rentals have been run other than as specified, *for short periods to confirm operational readiness.*

22. As only 6 of the 10 rental diesels in Whitehorse are permitted for N-1 emergencies, only 6 should be allowed in N-1 calculations.

23. The trend in increasing use of rental diesels:

While the cold weather of Jan 2020 is given as the reason for the increase in rentals, the trend shows that an increase in rentals could have been expected. Rentals increased by a factor of 1.5 each year until 2020/2021 when the factor increased to 1.9.

(B-9 p.1194 lines 3-6)

- 2017/2018 – 4 rentals
- 2018/2019 – 6 rentals
- 2019/2020 – 9 rentals
- 2020/2021 – 17 rentals

14 rentals would have been expected in 2020/2021 following the trend of 1.5x per year, and 20 for 2021/2022.

24. The permitting of the rentals started well, but has not kept up with the increasing number of rental diesels:

- 2017/2018 – 4 rentals – 4 permitted for emergency use. From the Record of Determination of Significant Change dated Dec 11, 2017, (B-9 p. 487 first full paragraph) *YEC will be renting four diesel engines as back up this winter (2017/18) and The applicant is requesting this emergency use be approved during the winter seasons until 2021, which is when they plan on having a more permanent solution to addressing the longer term capacity gap.*
- 2018/2019 – 6 rentals – Air emissions permit amended to allow operation of 6 rental diesels only in an N-1 event, valid until March 31, 2022. (C-4-8 p. 21-22 Part 9)
- 2019/2020 – 9 rentals – no updates to air emissions permit, 3 rentals with no permit or authorization.
- 2020/2021 – 17 rentals – no updates to air emissions permit, 3 of 7 Faro rentals allowed as reinstall of previously removed / derated capacity. 8 rentals with no permit or authorization of any kind.

25. The amount of time the rentals will be needed has also been increasing.

- 2017/2018 – Rentals needed until 2021, or 4 total winters (B-9 p. 487)
- 2018/2019 – Rentals needed until 2022, or 5 total winters (C4-8 p. 21-22)
- 2021 GRA – Rentals until 2028 or 2029, or 11-12 winters (Transcript 29 Sept p.400 lines 8-12)

The current estimate of a total of 11 or 12 seasons of temporary rental diesel is a matter of concern, particularly given the history of expansion of this number.

26. The permitting of the additional generators is a time consuming process, particularly given that adding 3 generators is 5.4MW (permit needed in both Faro and Whitehorse) and would trigger an executive level screening for each. *“it's above 5 megawatts so you're looking at an executive level screening by YESAA, which typically is 12 months or more just for YESAA.”* (Transcript 29 Sept p 455 line 24) While this was given as a reason for not pursuing a 20MW greenfield plant, the same requirement for the rentals cannot be ignored.

27. The 20MW greenfield plant was not pursued due results of public engagement, as Mr. Hall stated in reply to a question from Mr. Landry. *“Certainly it was the result of this public engagement, which our board, you know, considered very carefully.”* (Transcript 29 Sept p 453 line 23) In response, after the cancellation of the 20MW greenfield plant, YEC has now installed a total of 27MW of rentals without any such public engagement.

#### Recommendations:

28. That the the Board not include the rental costs in rates as YEC did not go through the required permitting and YESAB processes. Undertaking, completing and operating a project previous to initiating the required permitting process comes with many risks, and should not be considered a prudent expenditure. There is no assurance that these expenditures will ever be authorized to provide service to the public. YEC’s haphazard approach to environmental and socioeconomic issues and assessments should not be funded by ratepayers.

29. YEC should not be allowed to include generators that have not been through any sort of permitting process as part of the rate base or in N-1 calculations.
30. YEC should be directed to comply with their emissions permit, and not operate any of the Whitehorse rentals except in response to an N-1 emergency event.
31. YEC should initiate the permitting and assessment process for the Whitehorse rentals.
32. YEC should be limited to operating only three of the Faro rentals, as only three are permitted to be connected to the grid.
33. YEC should be directed to provide a business case for the continuing use of rental diesel for the next 8-10 years, as currently planned. It is a concern that the expansion of rental diesel has been justified as being the only option, but given the expanding time frame, this may not be the case. It is also important to consider that the number of units and number of years may continue to increase, and hopefully a more thoroughly considered approach could avert this.
34. YEC should provide correct and complete information in the IR process without the need for multiple motions to find information. Receiving multiple conflicting responses does not give confidence that any of the answers are true and complete. Having to go through multiple requests and motions to get an answer to a question is wasting the time of intervenors and the Board, and adds to the time and cost of the GRA process. To encourage better responses, YEC should not be allowed to claim costs for time preparing revised IRs.
35. Communication and public engagement should be improved. The first time that Yukon Energy asked for public comment for the Faro project was one day after the site was commissioned and in service. It was clear that YEC was not interested in public engagement for this project.
36. While likely outside the scope of this process, ideally YEC should offer some compensation to residents of Whitehorse affected by the noise of the unauthorized use of rental generators over past seasons.

Concluding thanks:

I wish to thank the Board for the opportunity to be involved in this process. I appreciate having my concerns heard, and gaining a greater understanding of the operation and regulation of public utilities.

Respectfully submitted,

Nathaniel Yee  
October 12, 2021