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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

REPLY ARGUMENT OF NATHANIEL YEE

Introductory Comments

In this reply argument I will address issues discussed in the Final Arguments of the City of Whitehorse (CW), Utilities Consumers Group (UCG), and Yukon Energy. My silence on issues not addressed is not to be interpreted as agreement with, or disagreement with the stated positions. I leave these matters to the Board to address based on all of the information on the record.

CW Final Arguments Reply:

1. I am in agreement with the City of Whitehorse in that YEC “did not provide anything that looks like a business case.” (CW Arg p.3 Para.11) and that a business case or some kind of analysis would have served YEC not only in the justification of the rental diesels, but in the undertaking of the project.
2. “There should also be a robust discussion of the risks and feasibility of each option.” (CW Arg p.3-4 I Para.12) While this is highly relevant to evaluating different options, feasibility is also a basic requirement of project management even if only one option is being considered. As discussed in my arguments, permitting would have been part of this discussion of risks and feasibility.
3. I agree that “the record lacks any tangible evidence on how YEC made the determination that it would only rent diesel units after that time and continue to do so into the test year.” (CW Arg p.5 Para.16)
4. Comparison of rental diesel vs purchase of the rented units or similar would have been valuable in rationalizing the rentals. (CW Arg p.3 Para.15) It is curious that YEC declined to ask about purchase of at least some of the rented units, given that some rental diesel is expected to be part of the system for the next 8-10 years. YEC has decided that purchase of these units is not “an economic or reliable choice” (Transcript 28th p.305 l.10) And this without even asking the price?
5. The point is, neither the Board nor intervening parties have any way of knowing what the optimal solution is in the absence of a proper business case. (CW Arg p.9 Para.30)
6. I find that CW and Mr. Bell do not go far enough in the requirements of a business case. Part of any study examining possible solutions should also look to investigate the causes of an issue. The growing rental fleet previous to the cold of January 2020 shows that YEC was already failing to address the implications of increasing reliance on electric heat and other recent and possible consumer choices.
7. Selection of the lowest cost option to treat the symptom does not necessarily solve the problem, and failure to examine the root cause risks ignoring fixes that could be more efficient.
8. It is important to determine how and why YEC ended up in an “only option” situation to prevent it from happening again. Comparison of short term solutions without having a clear view of root cause and scope of the problem being solved seems incomplete in this objective

9. The sudden need for increased capacity was a symptom of other failures. Treating the symptom is necessary, but a costly temporary fix should not be viewed as having solved the longer term problem which includes YEC's failure to forecast and/or implement timely solutions to address rising peak loads. Treating the symptom does not provide any assurances that such issues will not happen again. Root cause analysis is a common problem solving approach in business, and might be applicable to this issue.

10. Mr. Hall noted that January 2020 was "you know, quite a learning for us." (Transcript 29th p.443 l.7) It is unclear what was learned however, other than that a quick fix (more of the same) was needed.

11. I agree that the costs of diesel rental should not be allowed in revenue requirement for the reasons Mr. Bell has provided. (CW Arg p.9 Para.31)

UCG Final Arguments Reply:

12. I am in agreement that "it should not be necessary for intervenors to continually submit motions regarding incomplete responses to information requests and incur these additional costs." (UCG Arg p.4 Para.6) I also note in a similar item in my argument that "Receiving multiple conflicting responses does not give confidence that any of the answers are true and complete." (NY Arg p.6 Para.34)

13. An example of this is NY-YEC-1-8(a) where I asked for "Any and all correspondence with regulator(s) regarding rental diesels." (B-9 p.449) YEC initially responded with an obviously incomplete email chain and what was later determined to be an altered application to the regulator that did not match either of the two applications eventually provided. I am inclined to believe that the two applications provided after two motions are what was actually submitted to the regulator, (B-17 p. 9 and B-18 p.6) but have no assurance of this. Aside from the waste of time in having to ask repeatedly, it is disconcerting that YEC would provide a significantly altered document (B-9 p. 458 compared to B-17 p.9 and B-18p.6) in an initial response to an IR. While I understand that YEC did not want to release all of the true information as it did not support YEC's position, withholding and modifying requested documents should not be part of the IR process.

14. Specific directions from the YUB are necessary on this issue along with specific repercussions if these directions are not followed. (UCG Arg p.4 Para.6)

15. I agree that revenue requirement "should be rolled into base rates (without rate riders)" and that "consumers want to see and understand what they are paying for on their bills..." (UCG Arg p.5 Para.11) It would also seem that this would be an important part of any sort of DSM program. Asking consumers to undertake conservation measures while obscuring the results of those measures doesn't make any sense. While month to month consistency in the cost per kwh is preferred, as an alternative YEC could or should include something like "Effective cost per kwh" with each billing statement. It is an easy calculation and should not be difficult to implement. And given that electricity rates and usage vary and are reported on a monthly basis, it would be very helpful to have each statement contain a history of the last 12 months of rates and usage to encourage some awareness of both. I update this in a spreadsheet monthly when my bill arrives, and this information has helped me make decisions that minimize my usage. The table below is given as an example of what could be used to augment or replace the less than useful 12 month consumption chart currently on billing statements.

Statement Date	KWH Used	Cost per KWH	Cost excluding GST and Customer Charge
...
July-2021	179	\$0.19	\$34.01
Aug-2021	146	\$0.21	\$30.66
Sep-2021	189	\$0.20	\$37.80
Oct-2021	311	\$0.18	\$55.98
Avg monthly, last 12 months	238.8	\$0.19	\$45.37

16. I agree with UCG’s submission concerning prudence reviews and “used and useful” as criteria for inclusion into the rate base. (UCG Arg p.6 Para.22)

17. I was disappointed and confused by YEC’s failure to understand the concept of supply side management. (UCG Arg p.11 Para.49)

Interestingly, a good working definition of supply side management can be found in YEC’s 2011 DSM background paper for the YEC Charrette of that year. “Supply Side Management includes measures to reduce the costs of production and transmission of electricity on the utility side of the customer’s meter...”

18. I agree that YEC should be directed to apply supply side management techniques in their portfolio, and that both of UCG’s examples of supply side management, peak shaving and voltage management are relevant to YEC’s current issues. (UCG Arg p.11 Para.50-51) The voltage management that I have read about is often referred to as CVR, for Conservation Voltage Reduction and there are versions that can be implemented with or without AMI meters. UCG’s suggestions are a welcome and refreshing (if brief) respite from the dominant discussions of thermal and diesel.

19. The support of supply side management and related DSM projects may require YEC and the Board to approach issues from a longer term perspective. Mr. Maissan, in the first point of his presentation, suggests that “the true public interest is broader than just short-term financial in nature, its aspects include long-term cost and physical well-being too.” The presentation goes on to say that “Today’s ratepayers are paying higher costs for what has been uncontrolled peak load growth for the rental of more diesel generators and increased LNG and diesel generation which could have been mitigated by DSM and peak management programming.”

20. In support of this, though not in evidence, “Yukoners want energy decisions to consider more than just cost;” and “future energy options must be affordable, reliable, flexible and environmentally responsible.” Mr. Maissan’s suggested approach is what Yukoners have been asking for for a long time as the quotes beginning this paragraph would suggest. These quotes are nothing new, but are results of the Charrette Report of 2011. Reading this report was instructive in seeing how little progress has been made in the last 10 years. It was noted that demand would be increasing due to changes in home heating and transportation and that many possible options to address this issue were discussed. From what I can tell, the only options that YEC fully implemented in the following ten years were thermal / LNG.

21. Like UCG, I also take issue with Mr. Landry's prompting of YEC's self-congratulation on the installation of the diesel units and do not see YEC's self-review as relevant to the proceedings. (UCG Arg p.18 Para.86) Additionally it is noted that YEC was congratulating themselves on implementing an incomplete last-minute temporary fix to a problem that should have been addressed earlier. Each year YEC has applied a bigger temporary band-aid fix, and admitted that the amount of time the band-aid will be needed has increased. Is any of this worthy of praise? For defense of the above statement, the project is incomplete in that as of this writing, only 3 of the 7 generators are permitted to be connected to the grid. The last-minute and temporary nature of the project is touted by YEC, and forecasting and planning should not have understated increasing peak demands as a result of increased electric heating.

22. I agree with UCG's concern that YEC's claim that the rate increase will not materially affect customer bills is deceptive. (UCG Arg p.29-30 Para.148-151) It is interesting that YEC has filed for interim rate increases to protect the customer from the impact of reduced rates due to the delay of the GRA, but has no plan to protect the customer from the higher rates that will arrive due to Rider F. I therefore agree with UCG's statement that "this attitude taken by Yukon Energy is a shameful example of how our publicly-owned utility continually tries to make itself look good with half-truths and misdirection." (UCG Arg p.30 Para.151)

YEC Final Arguments Reply:

In this section each reply argument is preceded with the heading of the relevant YEC argument.

Preface: (YEC Arg p.2)

23. I am amused by the statement in the preface to YEC's Final Argument that "no evidence-based contrary position has been tendered by any party." I recognize that this statement is meaningless and is part of YEC boilerplate text regardless of reality, having appeared verbatim in YEC's final argument in 2012 and 2017 GRAs. This statement may have been appropriate and meaningful in the 2012 GRA hearing, when no intervenor evidence was filed, but only indicates a lack of attention to detail in 2021.

A. Rate Strategy: (YEC Arg p.3)

24. YEC claims that their approach to the 2021 GRA "allows it to address this serious revenue shortfall while avoiding a material change in bills for Yukon ratepayers. Implementation of this rate strategy will result in a very small change to customer bills, i.e., less than 1% from November 2020 bills..." (YEC Arg p.3) This is deceptive in that the approach does not "avoid" a material change, but only masks it. The material change is the rate increase – which still happens. YEC's strategy is to hide this from customers who are likely unaware of the specifics of the operations of Rider F and the expiration/removal of Rider J1 and would be unaware that rates were set to decrease as originally planned with these conditional and temporary riders. I do understand that YEC prefers to hide this information from ratepayers, however trying to claim that this is a benefit to customers is a bit of a stretch. I do not see that protecting customers from having lower rates while the final rates are being determined is in the interest of the customer.

B. Factors Driving 2021 Revenue Requirement Increase

1. Load growth and growth in peak demand: (YEC Arg p.4)

25. In this section YEC states that “The evidence has confirmed that the only feasible solution for 2021 is YEC’s action to connect diesel rental units in Whitehorse and Faro...”

26. The evidence has confirmed only that YEC failed to think of or consider any other options, and that YEC continues to dismiss anything other than rental diesel. There has not been any attempt to seek or examine other possible solutions by YEC. It is reasonable to assume that YEC will not realistically consider any alternatives, as they are more committed to saying that rental diesel was the “only option” than they are to seeking a better solution. Saving face no matter the cost to others.

27. At the hearing YEC made it clear that they had not and would not make any attempt to evaluate any variations on the rental theme such as purchasing some of the rental generators. This is a solution that clearly likely would have been feasible, but was dismissed by YEC without even asking the price. “But, honestly, Mr. Fortin, we never really considered it at the time.” (Transcript 29th p. 431 line 12) Rental was the only option considered at the time, but it was not the only option.

28. Had YEC inquired about the purchase of the units, and had this price been unreasonable YEC would have better standing to claim that the cost of the rentals was prudent.

29. Failure to look for other solutions does not mean that they do not exist. Along with the foresight to prevent big issues before they occur, finding innovative solutions to problems is one of the factors that separates successful organizations from failures.

2.2.2 PRODUCTION EXPENSE

2021 N-1 Dependable Capacity Shortfall

Rented Diesels only Feasible Option to address 2021 Capacity Shortfall (YEC Arg p.20-21)

30. YEC seems to believe that it is beneficial to repeat that the rentals were the only feasible option, and in this section seems to try to support this statement by pointing out that while it did study and attempt other solutions, the prioritized options were not successful and would not have been completed in the required time frame anyway.

31. While YEC does show that it failed to address the dependable capacity gap in a timely manner, and no longer considers options other than rental diesel, it is unclear how this supports the idea that rental diesels were the only feasible option.

Renting Option for 2021 is Preferable to Possible Ownership (YEC Arg p.22)

32. YEC’s heading in this section, in stating that renting option is preferable to ownership makes clear again that renting was not the only option, contradicting the heading of the previous section.

33. In this section YEC had chosen to reprint a couple of pages of the transcript, where Mr. Hall discusses the difficulty of buying and selling the diesels every year. It is unclear why this would be necessary.

34. This particular aspect of the ownership option appears to be original to Mr. Hall, and seems to be designed to be impractical. It was not and has not previously been suggested by anyone.

35. In showing the impracticality of this invented scenario, Mr. Hall manages to show that he can conceive of a system of ownership that would be worse than renting. What was the point of this?

36. Ideally, YEC would attempt to come up with better solutions than rental diesel. Instead, Mr. Hall has apparently spent some time and effort coming up with a creative solution that is intentionally worse, seemingly in order to make the rental diesel solution look better.

37. It is unclear why YEC refuses to consider any actual suggested alternatives to rental diesel such as a combination of ownership and rental. It is unclear why YEC has declined even to ask for a purchase price. Does YEC have any reasonable explanation? Or is this YEC diving deeper into costly mistakes in order not to admit that mistakes have been made?

2021 Feasibility to Operate Rented Diesels if required for N-1 Event (YEC Arg p.2)

38. YEC starts by misstating one of the issues raised by my evidence. I did not question YEC's ability to operate the rental diesels. I did question YEC's authorization to operate the rental diesels. This is an important distinction. The ability to do something is not authorization to do it, just as the ability to drive a car fast does not authorize ignoring the speed limit.

39. YEC claims again that no permit is needed to install diesel capacity, ignoring the fact that an air emissions permit is needed to operate. Even YEC's claim was assumed to be true, it is unclear how installing inoperable capacity provides any benefit.

40. YEC notes that in cross examination that Ms. Milojevic confirmed "*that an air emissions permit simply sets the production capacity at the site, i.e., the production capacity permitted for normal operation – it is not tied to specific units*"

41. This so called confirmation is in direct conflict with the text of air emissions permit which explicitly ties operating capacity and conditions of operation to specific units. (C-4-8 p. 21-22 Part 9) YEC has provided no evidence that the air emissions permit is to be interpreted other than as written. Additionally, the permit confirms that the wording in the permit is the final authority. *Where conflicts exist between this permit, the permit application or any plans, this permit shall prevail.* (C-4-8 p.19 Part 6)

42. "*She also testified that as a result of s. 49 of YESAA YEC also has ability under an N-1 emergency event to operate any available diesel generating capacity connected to the system.*"

43. Section 49 allows a proponent to undertake a project without an assessment in response to an emergency event. It does not give any authority to operate capacity that has not been approved by the regulator and does not appear in the air permit.

44. In these claims, YEC fails to make the distinction between the roles of the regulator and YESAA.
-The regulator confirms if a YESAB assessment is required as part of the process of issuing or amending an air emissions permit.

-YESAA section 49 states that in response to an emergency, the proponent can bypass the assessment process in the undertaking of the project.

-Invoking of section 49 would also allow the regulator to issue an air emissions permit or amendment to a project that would otherwise require a YESAB assessment and a corresponding Decision Document.

-Section 49 does not authorize the operation of anything, and only provides the option to skip the YESAB assessment process in response to an emergency.

-The end results of a YESAB assessment is a Decision Document. While it might be a necessary step in securing an air emissions permit, it is not an air emissions permit.

-Permission from the regulator (typically expressed in an air emissions permit or amendment) is still needed for operation, even in N-1 conditions, as evidenced by YEC's current air emissions permit. (C-4-8 p.21-22 part 9)

45. YEC followed the required elements of this process for the first six rentals in Whitehorse. The regulator did not find that an assessment was required as the new generators were specified for emergency-only use and this N-1 only usage was reflected in the amended air permit.

46. Continuing along in YEC's evidence, YEC lists "*four points that need emphasizing...*" (YEC Arg p.24-25)

47. It is noted that none of these YEC emphasized points make any claim that the generators have been permitted by the regulator for usage, even in an N-1 emergency.

48. YEC's first point: "*1. For the additional N-1 dependable capacity requirements arising from the January 2020 peak – YEC needed to have connected (i.e., ready to operate) by winter 2020/21 the rental diesels located at Faro.*"

49. YEC's need to connect the generators to meet N-1 capacity does not release YEC from the burden of permitting and assessment. Back to the driving analogy, needing to get somewhere quickly does not relieve one of the burden of speed limits and having a valid drivers license.

50. YEC's application to connect the generators for emergency N-1 usage in Faro was rejected pending a YESAB assessment. YEC's approved application allowed for the connection of only 3 of the 7 rentals. Of the other 4, one was the "unconnected spare" and the remainder were listed as "Connected for N-1 emergency-only back-up***following future review and approval." to reflect the regulator's observation that a YESAB assessment would be required to authorize connection of these generators. Compare the rejected (B-17 p.9) and the approved (B-18 p.6) for verification.

51. YEC's non-emergency operation of the of the generators in 2020-2021, in direct disregard of the regulator could not be considered prudent.

52. YEC's second point: "2. The permitted production capacity for Faro for normal operations was 10.6 MW. YEC has applied to amend the existing permit to increase this to 15.5 MW."

53. It is noted that the most recent YESAB assessment for Faro was in 2014 and was for an operating capacity of 8.15MW. This continued to be the capacity limit until October 2020, when at the suggestion of YEC, the regulator allowed the YESAB decision document from 2011 to take precedence over the 2014 document and the 10.6MW limit was adopted. (C-4-8 p.10, 11, 15) This was a convenient way to bypass public comment on this portion of the project. If you had any objections to YEC's expansion of the Faro facility in 2020, they had to have been submitted in 2011. 2014 would have been too late! While it appears that this authorization may be valid, it is below the ethical standards that should be expected of a public company.

54. It is confirmed and agreed that YEC has initiated a YESAB assessment to increase capacity at Faro. This assessment is still in process at the time of writing.

55. YEC's third point: "3. Until the amendment is granted YEC had and continues to have the capability to operate diesels in Faro beyond 10.6 MW (in the unlikely event that YEC required more capacity from Faro beyond 10.6 MW to meet an N-1 peak load in the coldest part of winter because of an unexpected loss of the Aishihik facility) 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")."

56. The first half of this point seems to state that despite having an authorized capacity limit of 10.6 MW, more is connected and ready for use in the event of an N-1 emergency. This is similar to YEC's first emphasized point above.

57. It is notable that YEC claims again (and again) the "capability to operate" and not the "authorization to operate." This is similar to saying "I can drive at 165 km/h" (capability) despite a speed limit (authorization) of 100 km/h. Is this prudent?

58. It is important at this point to note again that YESAA and the air emissions permit are related but are not the same thing. While section 49 does allow YEC to undertake a project in response to an emergency without a YESAB assessment, YESAA has no provision that would allow YEC to operate generators without an updated air emissions permit.

59. The invoking of section 49 in this situation seems to serve no purpose, given that the regulator can (and has) authorized emergency-only operation of rental generators without a YESAB assessment. This was done for the first six of the Whitehorse rentals in (C-4-8 p. 21-22 Part 9)

60. It is noted again that YEC asked the regulator for temporary emergency only authorization for the Faro generators, similar to what was granted for the six in Whitehorse and this was denied. (C-4-8 p5,10)

61. YEC's fourth emphasized point "4. If required to deal with an N-1 emergency event in winter 2021/22, the 17 rented diesels installed at Whitehorse and Faro will ensure that YEC has full capability to respond to the emergency as required."^{51,52}

62. This appears to be a repeat of previous assertions that YEC has installed generators to meet N-1 requirements, not mentioning that there is no authorization to operate them.

63. In footnote 51 of this fourth point, YEC claims that “*YEC also has an explicit permit authorization for an added 12 MW diesel capacity operation at Whitehorse under emergency conditions.*” This conveniently edits out the specific and explicit information.

64. The actual text of the air permit (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.*

65. There is no provision in the permit to run the rental generators other than in an N-1 event or to confirm readiness. There is also no provision for more than six of the 10 generators that YEC has installed.

66. It is noted that YEC’s claims about the air permit are always accompanied by an incomplete and edited version of the permit.

67. YEC closes this section claiming that rental diesel cost is “reasonable” but stops short of claiming that this expense is prudent.

Respectfully submitted,

Nathaniel Yee
October 19, 2021