Utilities Consumers' Group
(UCG)

REFERENCE: Low Water Reserve Fund Report Table 1 Calculations DCF and Table 2 DCF Continuity
Schedule 2013-2017(Preliminary)
Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2 LWRF Continuity
Schedule 2017 and 2018
Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity
Schedule 2019 and 2020, April 2021

QUESTION:

a) Is Yukon Energy aware that the Board ordered you to file at each years end a LWRF Report?

b) Why is that Yukon Energy did not do so?

c) Will Yukon Energy comply going forward?

d) As the continuity schedule for 2020 exhibits a negative ending balance of $4.272 million, when and how will Yukon Energy recover this?

e) With high water levels this year, does Yukon Energy forecast a positive return to the LWRF in 2021?

f) If yes, do you have a conservative estimate?

g) Does the table and schedule listed April 2021 comply with the OIC 2021-16, (7) (a) or (b)? If not, why not?

h) Do these above tables and schedules listed comply with ALL the Board directions on the LWRF? If not why not?

ANSWER:

(a), (b) and **(c)**

YEC acknowledges that the LWRF Term Sheet as last reviewed by the Board (i.e., the updated Term Sheet and Annual Reports for 2017 and 2018 filed on December 10, 2019) included provision for annual reporting, and for related direction of the Board on the additions and deletions to the Fund and on any proposed rate rider.

The Board's last review of an annual LWRF filing (i.e., the Board's letter of March 19, 2020 regarding the updated Term Sheet and the 2017-2018 LWRF Annual Filing) acknowledged receipt of correspondence from YEC dated December 10, 2019 but did not approve the updated Term Sheet or the Annual LWRF filings. The Board stated "any future issues regarding the term sheet are to be addressed in the next YEC GRA". YEC accordingly deferred further LWRF filings until the next GRA, at which time the relevant term sheet issues would be reviewed.

As reviewed in Tab 1 of YEC's 2021 GRA Application, YEC's next GRA filing after the 2017-18 GRA was not feasible until the current filing for 2021.

YEC anticipates that an updated LWRF Term Sheet will be approved by the Board as part of the current proceeding; after this proceeding is complete, YEC intends to resume regular LWRF annual filings as directed.

(d), **(e)** and **(f)**

The LWRF Term Sheet provides for rate changes related to the account balance only when the Fund exceeds the approved caps, which currently are +/-$8 million as last approved by the Board in Board Order 2015-01. Accordingly, no action is to be taken at this time regarding the account balance of negative $4.272 million as at the end of 2020.

YEC expects a positive impact on the LWRF balance from the 2021 fiscal year, given that water availability is above the long-term average.

YEC does not have any estimate at this time of the LWRF balance expected to occur as at the end of 2021.

(g) and **(h)**

The April 8, 2021 LWRF filings comply with OIC 2021/16 (including the provisions of subsection 9(7) (a) or (b)) and with past Board directions, subject to any changes to these directions that are required to comply with OIC 2021/16.

REFERENCE: OIC 2021-16 Section 9 (1-10)

QUESTION:

a) Does Yukon Energy see any changes resulting from the above OIC as to what was determined by the Board in Order 2019-08 Reason for Decision for the Low Water Reserve Fund (LWRF) going forward past November 1, 2020? Please explain.

ANSWER:

(a)

Yes, the Board's mandate in relation to the LWRF has changed and now the LWRF must comply with OIC 2021/16. The 2019-2020 LWRF Annual Report schedules comply with directions under Section 9 of OIC 2021/16, given that the relevant filing was made in the first instance to the Board after November 1, 2020 and that no order has been issued with regard to this filing under section 27 of the Act prior to February 11, 2021.

See also YEC answer to UCG-YEC-2-9.

REFERENCE: **3.3 Low Water Reserve Fund**

Appendix A to Board Order 2019-08 — Reasons for Decision 9 30. With respect to the DCF, the Board concluded that, given the isolated nature of the Yukon environment, the ramifications that low water events can have on electricity prices and the need to mitigate those impacts, a DCF-type of mechanism was required. The Board stated that a simpler mechanism for adjusting for variances between the approved forecast for hydro generation and thermal generation and actual hydro generation and thermal generation in a test year is needed. However, the Board found that the DCF is complex and that it does not show the hydro generation and thermal generation in a given year when actuals are determined because the actuals are based on modelled results. **Therefore, the Board directed YEC to create a deferral account that reconciles forecasts with actuals, not modelled results. Further, the onus is on YEC to adequately explain any variance between actual results and its forecast amounts. For these reasons, the Board directs YEC in future GRA filings to show actual hydro and thermal generation results when comparing previous and forecast test years.**

QUESTION:

a) Does Yukon Energy Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2 LWRF Continuity Schedule 2017 and 2018 and Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021 comply with these directions? Please explain.

ANSWER:

(a)

YEC's 2017-18 LWRF Annual Report schedules as filed with the Board on December 10, 2019 have been acknowledged by the Board's letter of March 19, 2020. YEC believes this filing complied with Board directions applicable at that time.

Appendix A to Board Order 2019-08 as quoted above in this IR set out directions for future YEC GRAs. OIC 2021/16 has now provided direction for LWRF determinations related to the current 2021 (wherein 2019 and 2020 LWRF reports are to be addressed) and future GRAs. YEC hydro and thermal generation forecasts for GRA purposes continue to be based on long-term average (LTA) water availability. Tab 2 of the 2021 GRA (Table 2.2), and Table 2.1-1 of the 2019-2020 LWRF Annual Report, show actual and forecast hydro and thermal generation results as applicable and available for the years addressed.

REFERENCE: **3.3 Low Water Reserve Fund**

Appendix A to Board Order 2019-08 — Reasons for Decision 9 40. YEC filed a revision to its LWRF on February 25, 2019. In Board Order 2019-04 (first compliance filing decision), the Board did not accept YEC's revised LWRF. In that decision, the Board noted that YEC accepted the forecast risk for incremental generation costs for incremental loads in excess of the approved forecast. 41. In the first compliance filing decision, the Board recognized there are two regulatory principles to be met. First, YEC bears the risk of revenue requirement items varying from approved GRA forecasts. Second, costs due to variances from forecast thermal generation fuel volumes should be assigned to the utility when those costs are due to variances from forecast load or maintenance requirements. The Board found that the steps to separate thermal generation changes due to overall load changes from thermal generation changes due to water conditions included in the LWRF deferral account proposal did not adequately reflect these two regulatory principles. **42. Accordingly, the Board considered it necessary to preserve the principle that costs should be assigned to the utility when total load varies from forecast load.** YEC's proposal in the compliance filing created an asymmetrical risk profile whereby YEC imposed certain risks – e.g. incremental generation costs to customers – and yet there is no offsetting of potential benefits that YEC would gain, and those benefits would not be shared with customers – e.g. incremental sales and amortization of costs over greater sales volumes. **Therefore, the Board considered that incremental generation due to incremental load must be removed from the LWRF calculations because this is a risk borne by the utility.**

QUESTION:

a) Does Yukon Energy Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2 LWRF Continuity Schedule 2017/2018 and Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021 comply with these directions? Please explain.

ANSWER:

(a)

YEC's 2017-18 LWRF Annual Report schedules as filed with the Board on December 10, 2019 have been acknowledged by the Board's letter of March 19, 2020 and complied with Board directions applicable at that time.

The 2019-2020 LWRF Annual Report schedules comply with directions under Section 9 of OIC 2021/16, given that the relevant filing was made in the first instance to the Board after November 1, 2020 and that no order has been issued with regard to this filing under section 27 of the Act prior to February 11, 2021. As reviewed below, the above Board Order 2019-08 directions to remove from the LWRF calculations the incremental generation due to incremental load are not consistent with OIC 2021/16 directions.

In summary, OIC 2021/16 directs that the low water deferral account annual determinations after each financial year of YEC are to be based on the difference between (a) fuel costs for thermal generation needed to meet actual customer requirements (as a result of any shortfall between actual renewable generation and actual customer requirements), and (b) fuel costs for thermal generation that would have been needed to meet actual customer requirements for the financial year if renewable generation had been consistent with long-term average annual renewable source availability.

Accordingly, the 2019-2020 LWRF Annual Report schedules do not comply with the above Board Order 2019-08 directions.

REFERENCE: **3.3 Low Water Reserve Fund**

Appendix A to Board Order 2019-08 — Reasons for Decision 9 41. A second compliance filing was directed by the Board. **3.3.2 YEC's 2017-18 GRA Second Compliance Filing** 43. YEC submitted its second compliance filing on September 23, 2019, and provided further changes to its proposed LWRF. YEC provided details of the changes to its LWRF in Appendix 2.1 and Attachment 2.1-1 (LWRF Term Sheet) of its September 23, 2019, second compliance filing. Included as part of the application is a revised Attachment 2.1-1, the LWRF term sheet which retains the general structure of the previously approved term sheet and fund procedures. Of the five items listed in the term sheet, the fifth on the list states: The new mechanism proposed in the 2017-18 GRA to provide that costs for YEC thermal generation savings (excess) are calculated so that YEC's final fiscal year expense for the total expected thermal generation (i.e. YEC expense after all transfers) is 90% LNG and 10% diesel as assumed in the GRA forecast, subject to the constraint that the LNG share of any transfer into or out of the LWRF cannot exceed 100%. **Views of the Board 3.3.2.1** Current test period 47. Board Order 2019-04 required YEC to determine what the actual thermal generation with water availability impacts would have been at the forecast (rather than the actual) level of load. To test YEC's assumptions, the Board requested in YUB-YEC-1-4 an explanation of YEC's separation of changes in thermal generation costs due to changes in water conditions and due to changes in load (actual load). ***The questions included: c) For a test period in which a load forecast has been determined, at the start of that test year would YEC expect the forecast load to equal its forecast?*** *48. The Board was seeking to determine if the generation mix (hydro and thermal) is expected to incrementally change as the expectation for load changes. For example, at the time of the forecast, YECSIM modelled generation output for the forecast load level.* ***However, as the expectation for load changes, in this case, an upward change, does the incremental generation mix change (i.e. weight more heavily to thermal) versus hydro generation? If the generation mix changes on an incremental basis, how is this phenomenon reflected in***

YEC's separation of load and water level effects on the LWRF? *Also,* ***if there are differences, would they be material?***

QUESTION:

a) From the preamble above: Please answer all the above questions in bold/italics for the Low Water Reserve Fund Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021? Please explain each answer.

ANSWER:

(a)

YEC's response to the original Board IR (YUB-YEC-1-4(c),(d) and (e) in the 2017-18 GRA proceedings related to compliance filing issues[1]) is copied below in response to the questions being repeated. In general, responses provided here on LTA forecasts with regard to LWRF determinations for 2018 will apply equally to LWRF determinations after any other financial year for which a GRA had been concluded. LTA renewable resource forecasts are required for the 2021 GRA in accordance with directions under Section 9 of OIC 2021/16.

YEC is unclear as to what is being asked in question (c). Forecasts are subject to change continuously, particularly for load which can be affected by numerous factors (e.g., customer counts, weather, water supply, economic activity, etc.).

The LWRF for 2018 must address the LTA hydro and thermal generation forecast approved for GRA purposes. YEC's operation "short-term" hydro and thermal generation forecast for 2018 were not used for the GRA forecast, and therefore have no bearing on LWRF determinations for 2018. Therefore, how and when YEC updates operational short-term forecasts has no bearing on LWRF determinations for 2018.

[1] YUB-YEC-1-4 (c),(d) and (e) was filed in response to IRs on the 2nd compliance filing (IR responses provided on October 21, 2019).

In the event that short-term forecasts were reconsidered in future GRAs, additional information is provided below on YEC's internal short-term forecasts for ongoing operations.

A test year forecast is often (but not always) developed prior to the start of the test year. As events unfold after the forecast is made, YEC will adjust its internal short-term forecasts accordingly in response to new information, i.e., there is no reason to assume that YEC will not change its internal forecast prior to the start of the test year.

Moreover, short-term operation forecast estimates will continue to change as required throughout a test year, i.e., there is no set dates/ times within the year for making such changes, beyond normal spring hydro updates based on winter snow load information. Hydro generation forecasts in particular are changed when needed during the year in response to new water supply information as well as new load information. Experience in the early 1990s highlighted a case where water supply was suddenly greatly enhanced by above normal rainfall at Aishihik Lake in late summer. Experience in 2019 has highlighted changes throughout the summer in expected water conditions at both Aishihik Lake (more than was expected pre-summer) and Mayo Lake (lower than expected pre-summer).

Such operational forecast changes at any time during a test year, however, typically have no bearing on what forecast will in fact be approved by the Board in a GRA for that test year, and certainly do not affect LTA forecasts used for GRA and LWRF determinations.

The 2018 GRA approved load forecast is a simple example in this regard. Evidence provided during the GRA proceeding indicated updated information with regard to this load forecast, including the updated expectation that it would materially exceed the initial GRA forecast of approximately 420 GWh. The final GRA approved forecast nevertheless, in accordance with past GRA practice, did not materially change the 2018 load forecast (beyond reflecting the fact that Minto's load was expected to decline somewhat). And short term hydro and thermal generation forecasts for test years were reviewed and not adopted for 2017-18 test year GRA purposes.

In contrast, the Board approved actual load results for the 2017 GRA test year, reflecting the extent that the proceeding had been extended well beyond that test year.

REFERENCE: **3.3 Low Water Reserve Fund Reference**

Appendix A to Board Order 2019-08 — Reasons for Decision 9 49. YEC responded that these question was in effect asking to rerun the model after each year, assuming forecast load and actual water conditions, in order to estimate actual thermal generation for the forecast load. YEC stated that this was not achievable with the current model. 50. YEC has previously provided testimony that the results of the model cannot be retrospectively verified and that the Board has previously identified its concerns with the verifiability of the model in Board Order 2015-01 and Board Order 2015-06. The Board remains concerned that the estimate provided by YEC does not accurately reflect the generation costs for the incremental load and questions if the generation costs are muted by the modelling of the total load. 51. With respect to the second compliance filing term sheet, the UCG argued that the use of the term sheet increases the LTA thermal generation estimate used at the actual 2018 generation load. After preparing responses to information requests and the technical session, YEC concluded that the term sheet approach provides a more accurate result and can be considered more straightforward to implement. 52. The Board agrees that the term sheet provides a more straightforward result than an estimate (the fixed change factor estimate) based on the term sheet. For the 2017-18 test period, the Board directs YEC to use the term sheet and to amend the paragraph that refers to the fixed change factor to remove fixed change factor references from the term sheet. **Further, as the Board has ruled that the LWRF is only applicable up to forecast load, the Board only approves term sheet calculations that are equal to or below the forecast load.**

QUESTION:

a) Does Yukon Energy Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2 LWRF Continuity Schedule 2017/2018 and Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021 comply with these directions? Please explain each.

ANSWER:

(a)

YEC's 2017-18 LWRF Annual Report schedules as filed with the Board on December 10, 2019 have been acknowledged by the Board's letter of March 19, 2020 and complied with Board directions applicable at that time.

The 2019-2020 LWRF Annual Report schedules comply with directions under Section 9 of OIC 2021/16, given that the relevant filing was made in the first instance to the Board after November 1, 2020 and that no order has been issued with regard to this filing under section 27 of the Act prior to February 11, 2021. As reviewed below, OIC 2021/16 includes directions that are not consistent with the above Board Order 2019-08 directions to remove from the LWRF calculations the incremental generation due to incremental load, i.e., to approve only term sheet calculations that are equal to or below the forecast load.

In summary, OIC 2021/16 directs that the low water deferral account annual determinations after each financial year of YEC are to be based on the difference between (a) fuel costs for thermal generation needed to meet actual customer requirements (as a result of any shortfall between actual renewable generation and actual customer requirements), and (b) fuel costs for thermal generation that would have been needed to meet actual customer requirements for the financial year if renewable generation had been consistent with long-term average annual renewable source availability.

Accordingly, the 2019-2020 LWRF Annual Report schedules use term sheet calculation without reference to the earlier "fixed charge factor", but these term sheet calculations do not comply with the above Board Order 2019-08 directions to approve only term sheet calculations that are equal to or below the forecast load.

REFERENCE: **3.3 Low Water Reserve Fund**

Appendix A to Board Order 2019-08 — Reasons for Decision 9 53, The Board, in IR YUB-YEC-1-8, inquired about a paragraph in the term sheet concerning the thermal fuel mix. YEC responded that the paragraph was required as it establishes rules for addressing fuel mix to LTA thermal generation transfer costs. It should be noted that the Board previously accepted the fuel mix as part of YEC's 2017-18 GRA and that no further direction was given for YEC to comply with on this issue. However, further information on fuel mix has been provided in YEC's second compliance filing. The Board will not reopen this issue in the compliance filing. **However, due to the concerns the Board has regarding YEC's fuel mix calculations and the unverifiable nature of the results of those calculations provided in the second compliance filing and the resulting thermal fuel costs, those calculations will not be accepted by the Board for use in future GRAs.**

QUESTION:

a) Does Yukon Energy in the Low Water Reserve Fund Report Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021 comply with these directions? Please explain.

ANSWER:

(a)

The above quote from Board Order 2019-08 states that the Board will not accept thermal fuel mix calculations for use in future GRAs, without providing any direction as to what thermal fuel mix is to be provided.

The IR response referenced in the above quote from Board Order 2019-08 addressed the LWRF Term Sheet rules for addressing fuel mix to determine LTA thermal generation transfer costs. The IR response re-iterated the necessity to specify fuel mix in order to translate energy impacts (kWh) to dollars that adjust YEC fuel cost and LWRF account balances, i.e., removal of the LWRF provision without a replacement would render the

LWRF inoperable. Fuel mix rule options in the LWRF have a direct impact on YEC final thermal costs (i.e., after all LWRF transfers) for a completed fiscal year. The stated objective as noted in the earlier IR response is to end up with YEC actual fuel mix costs unchanged from the GRA forecast (based on 90% LNG and 10% diesel, using GRA forecast fuel prices).

The 2021 GRA retains long-term average (LTA) forecast renewable and thermal generation to meet forecast customer requirements, and the forecast 90/10 LNG/ diesel fuel mix for the LTA forecast thermal generation.

Use of LTA forecasts for hydro and other renewables (and the resulting LTA thermal generation forecast) is consistent with OIC 2021/16 direction in subsection 9(3) that forecast fuel costs to be recovered in rates of YEC are to be determined by forecasting the amount of renewable generation available to contribute to meeting forecast customer requirements based on long-term average annual renewable source availability. Experience confirms that fuel mix can vary depending an actual versus LTA renewable resource availability, i.e., actual LNG share of fuel mix may be less than 90% when renewable resource availability exceeds LTA, and vice versa when renewable resource availability is less than LTA. The 90/10 LNG/ diesel fuel mix is YEC's best available estimate of fuel mix applicable to LTA annual renewable source availability.

The updated LWRF Term Sheet filed on April 8, 2021 provides that costs for YEC thermal generation savings (excess) for annual LWRF determinations after the end of a YEC financial year are to be calculated so that YEC's final fiscal year expense for the total expected thermal generation (i.e., YEC expense after all transfers) equals the last GRA approved LTA fuel mix, subject to the constraints noted in Table 1.1-2 of the Term Sheet and in footnote 6 of the Term Sheet. These provisions are consistent with prior LWRF provisions on required fuel mix determinations.

Please also see response to YUB-YEC-2-4.

REFERENCE: **3.3 Low Water Reserve Fund**

Appendix A to Board Order 2019-08 — Reasons for Decision 9
3.3.1 Term Sheet 55. In response to a Board IR concerning quarterly and annual reporting, YEC responded… the LWRF implementation at fiscal year-end requires prior completion of a GRA process. Accordingly, LWRF determinations for GRA test years cannot be concluded until the GRA is concluded – and can be addressed therefore as part of the process for a GRA. After GRA test years have been addressed, the LWRF determinations should proceed on an annual basis until the next GRA test years occur. 56. The Board agrees with the quarterly and yearly reporting being added to the term sheet.

QUESTION:

a) Has Yukon Energy complied with quarterly and yearly reporting from this determination?

ANSWER:

(a)

YEC included the above reporting provisions in the updated LWRF Term Sheet provided to the Board on December 10, 2019, along with YEC's 2017-18 LWRF Annual Reports.

The Board's March 19, 2020 review of the updated Term Sheet and the 2017-2018 LWRF Annual Filing (as provided by YEC on December 10, 2019) acknowledged receipt of correspondence from YEC dated December 10, 2019 but did not approve the updated Term Sheet or the Annual LWRF filings. The Board stated "any future issues regarding the term sheet are to be addressed in the next YEC GRA". YEC accordingly deferred further LWRF filings until the next GRA, at which time the relevant term sheet issues would be reviewed. YEC's next LWRF filing, as provided on April 8, 2021, included Annual Reports for 2019 and 2020.

REFERENCE: 3.3 Low Water Reserve Fund

Appendix A to Board Order 2019-08 — Reasons for Decision 9
Views of the Board

95. Going forward, the Board provides the following summary on its findings in this decision and future directions for YEC regarding the LWRF:

a) For forecasting hydro generation for GRA purposes, the Board's focus in determining the revenue requirements for these and future test years will continue to be on the reasonableness of YEC's forecasts and forecasting accuracy.

b) The Board has previously approved the use of LTA by YEC to forecast its GRA hydro generation requirements. Consideration of future trends due to phenomenon such as climate change will be evaluated by the Board in subsequent proceedings when assessing the forecasting accuracy of hydro generation. This allows YEC the option to continue to use LTA for its hydro generation forecasts.

c) The approved LWRF will continue to cover variances due to deviations from forecast water levels up to forecast load levels. This is expected to reduce the risk to YEC of changes in hydro generation due to changes in water levels up to forecast load levels. As stated in Board Order 2019-04, this maintains the principle that ratepayers carry the risk for changes in water levels that was established when the LWRF was initially established (with the recognition that costs for generation for loads above forecast are a utility risk). YEC has stated that this should be trued up on an annual basis when there is not a GRA before the Board and as part of a GRA when there is such an application before the Board. Although this proposal is not optimal in that it does not result in an annual true-up, the Board accepts that this will provide a better price signal to customers than the previous LWRF submitted by YEC. As the LWRF will be for actual values compared to forecast values up to the load forecast, this should resolve the issues with respect to fuel mix ratios as the deferral account will reflect actual fuel mix.

d) The Board will not accept YEC's use of the expected long-term cost of power in its LWRF calculations. As stated, this is redundant to

accrual and depreciation accounting and creates unnecessary complexities.

e) The Board will not accept YEC's thermal fuel calculations for the reasons cited earlier in the decision. In its future GRAs, YEC is directed to compare actual fuel costs (for up to forecast load) to forecast fuel costs for LWRF and GRA purposes.

f) YEC should consider the Board's comments in paragraphs 80 and 81. The Board recognizes that the directly focused LWRF above does not provide customer protection in years of drought. Therefore, the Board suggests that YEC examines whether a drought deferral account could be established to mitigate the effects of any future drought event(s). In its review of this issue, for example, YEC could consider the possibility of establishing a rate rider, on a cents/kWh basis, to build up the account and apply to the Board when it recognizes a drought situation and requires mitigation from this account.

g) The Board directs YEC to address intergenerational equity issues with respect to the LWRF in the next GRA.

QUESTION:

a) Does Yukon Energy comply with all of the a) to g) directions as to what was determined by the Board in Order 2019- 08 Reason for Decision for the Low Water Reserve Fund in the filing of Low Water Reserve Fund Report Table 1 Calculations LWRF and Table 2: LWRF Continuity Schedule 2019 and 2020, April 2021? Please explain for each question.

ANSWER:

(a)

The Board's mandate in relation to the LWRF has been modified by OIC 2021/16. The 2019-2020 LWRF Annual Report schedules comply with directions under Section 9 of OIC 2021/16, given that the relevant filing was made in the first instance to the Board after November 1, 2020 and that no order has been issued with regard to this filing under section 27 of the Act prior to February 11, 2021. Accordingly, the directions outlined above are no longer applicable given the principles outlined in OIC 2021/16.

See also YEC's responses to UCG-YEC-2-2 through UCG-YEC-2-8.

REFERENCE: Rate Schedule 39

QUESTION:

a) Please provide the total amount of money forecast to be collected via Rate Schedule 39 for the 2021 test year.

b) Please provide how any new money from this schedule will adjust the revenue requirement requested for the 2021 test year.

c) Do all the mines on the integrated grid pay portion of the costs of the C/S transmission line, substations on this line, as well as all other associated costs to this line? If no, please explain why not? If yes, please explain how much each mine pays in percentage to usage (i.e. 85% or?) and amount in $?

d) Please give the total load forecast for each mine on the Mayo/Keno grid for the 2021 test year?

e) Please give the total amount of power forecast for all other customers on the Mayo/Keno grid for the 2021 test year?

f) Please explain how Yukon Energy determined that 85 per cent of the costs of the Mayo/McQuesten transmission line and StatCam was allocated to the two mines to determine the Interim Rate Schedule 29. Please do not give the old out-dated answer of “that's how it has always been done in the Yukon, so this is how we do this now.”

g) Please give the forecast load for the Minto mine in the 2021 test year?

h) Please give the amount of dollars forecast to be collected from the Minto mine in the 2021 test year.

ANSWER:

(a)

Total forecast industrial revenues for the 2021 test year with the proposed rates equal $15.229 million, based on the following:

- **Forecast base rate revenues in the GRA application with estimated Fixed Charge at the time of filing the GRA:** Forecast industrial revenues for the 2021 test year at base rates [excluding Rider J] with the inclusion of the estimated Fixed Charge [$0.428 million as noted in Appendix 4.3, Table 4.3-2] are outlined in Tab 2, Table 2.1 at $11.535 million.

- **Adjusted Fixed Charge:** Board Order 2021-09 approved an applicable interim Schedule 39 Fixed Charge increase for 2021 based on applicable added rate base of $3,993,118 and added depreciation of $57,787.[1] The adjusted Fixed Charge for 2021 is $0.285 million[2] [based on $31,656/month for nine months effective April 1, 2021] which is $0.143 million lower than the amount included in the GRA [$0.428 million less $0.285 million].[3] Total revised forecast base rate revenues at $11.392 million.

- $3.837 million Rider J revenues with 2021 GRA proposed rider for industrial rates at 33.68% [applied to base revenues].

(b)

The revenue requirement for the 2021 test year is based on forecast YEC costs, and is not affected by rate adjustments such as the adjustments to the Fixed Charge applicable to VGC Group and Alexco.

[1] YEC limited scope application of March 23, 2021; Table 2, New Transmission Facilities (net of contributions), rate base and depreciation for 9 months.

[2] Calculated based on 2017/18 GRA approved Weighted Average Cost of Capital (WACC) of 4.82%. The final Fixed Charge will be calculated based on 2021 GRA WACC when the YUB issues the final GRA order. Any variances between forecast Fixed Charge and final Fixed Charge will be collected from/refunded to two industrial customers [VGC Group and Alexco].

[3] The adjustments to the Fixed Charge from the initial Appendix 4.3 estimate reflect delay in facilities commissioning (9 months versus 12 months for Fixed Charge in 2021) and reductions to estimated applicable costs.

(c)

All customers, including all industrial customers, share in paying for all associated Yukon Energy costs of the Carmacks-Stewart Transmission and related substations, as well as similar costs for the Whitehorse-Aishihik-Faro transmission line and the Mayo-Dawson transmission line. No ongoing fixed charge is allocated to any industrial customers with regard to fixed costs for any of these three transmission facilities.

YEC has not developed a cost of service assessment of the percentage of the 2021 GRA forecast costs (for these transmission facilities or other facilities) allocated to each customer class, and therefore cannot provide an estimate of the percentage or amount allocated to each mine customer.

(d)

See Tab 2, Table 2.1 for the 2021 test year industrial sales forecast. Table 2, Section 2.2.2 notes as follows:

- The forecast sales to Victoria Gold in 2021 is 43.1 GW.h.
- The forecast sales to Alexco as a Major Industrial Customer is 24.1 GW.h.

(e)

Retail customers at Keno City and on the Mayo-Keno transmission line are served by AEY, and therefore YEC only has a 2021 forecast for the industrial customers served on this transmission line (67.2 GW.h as reviewed in “d” above). YEC retail sales in Mayo are forecast at 6.8 GW.h for 2021.

YEC’s Stewart-Keno City Transmission Project YESAA Project Proposal Chapter 6, Page 6-3 Footnote 1 noted that there are approximately 23 non-industrial customers currently connected to the line between Mayo and Keno City (L250).

(f)

The question references “Interim Rate Schedule 29” and “StatCam” – however, it is assumed this question is referencing Rate Schedule 39 and SVC/StatCom.

The question asks how Yukon Energy determined for the Interim Rate Schedule 39 that 85 per cent of the costs of the Mayo/McQuesten transmission line and SVC/StatCom was to be allocated to the two mines. Yukon Energy made this determination based on compliance with the PPA for each mine, as approved by the Board.

Further background is provided below.

This issue was reviewed in detail during the Alexco mine PPA proceeding and the Victoria Gold PPA proceeding. In each case Yukon Energy reviewed in detail the basis for its approach and the Board provided an Order accepting the approach for each PPA.

Order 2010-14 regarding the Alexco PPA, Appendix A, page 5-6 notes:

> The Board concludes that the precedents cited by YEC provide some support for the direct transmission allocation (85%) as applied for. Most of the cases cited refer to cost of service and not the fundamental basis or appropriateness for the establishment of fixed charges to industrial customers. The Board notes that no other alternatives have been presented (in terms of allocation of transmission costs through fixed charges) in this proceeding. The comparison to the Faro situation when determining fixed charges for transmission line costs is the best available evidence for this proceeding. Furthermore, the Board accepts the information with respect to calculations provided by YEC in Attachment B to YUB-YEC-1-3(b) and approves the fixed charge to Alexco of $7,289 per month. The Board also concludes that the single fixed charge will apply to what is defined in the PPA as the District, that is, independent of the number of Points of Delivery.

This was also reviewed in detail during the Victoria Gold PPA proceeding in Order 2018-04, Appendix A, at pages 10-13. At para 54 and 55 (page 13 of Appendix A) the Board notes:

> 54. The Board is of the view that a cost-based approach is the best approach to determine fixed-cost charges for Rate Schedule 39. However, at this time, costs and revenues are not linked in Rate Schedule 39. For the VGC Group PPA, the only evidence on the record of this proceeding is the 1985 NEB report used to support an allocation of 85% of the fixed costs, the Alexco PPA, and YEC's assertion that the revenue-to-cost ratio for the Industrial Rate class exceeds unity. Further, the Board considers that no evidence was presented that would lead the

Board to treat the VCG Group PPA differently than the Alexco PPA, as neither are based on a COSS. For these reasons, the Board accepts an allocation of 85% of the fixed costs in the VGC Group PPA.

55. However, in future PPA applications, YEC is directed to provide cost-based studies that demonstrate that the industrial customer costs are being fully covered by the proposed rates, including the fixed charges. In addition, YEC is directed to provide detailed rationale on how the fixed cost level is established and why it applies.

(g)

See Tab 2, Section 2.2.2 which notes the Minto mine forecast for the 2021 test year at 35.7 GW.h.

(h)

The revenue forecast from Minto mine for the 2021 test year is $5.373 million, including Rider J revenues at proposed industrial customer rate 33.68% as shown in Table 4.2 of the Application.

REFERENCE: YUB-YEC-1-48 Table 1 p.2 of 4

QUESTION:

a) How are the differences/variances in this table accounted for going forward?

ANSWER:

(a)

The full cost to complete a capital project is included in YEC capital accounts on the balance sheet (Property plan and equipment, intangible assets or deferred assets). Asset depreciation commences in the month the asset is placed in service; however, no rates are collected for these assets until the YUB has completed a prudency review and approved inclusion in rate base at the next GRA.

REFERENCE: UCG-YEC-1-22 Cost of Debt

QUESTION:

a) How is the 120 basis points added to Bond rate determined?

b) Does the YUB determine the interest rate to be charged for each GRA?

ANSWER:

(a)

The 120 PBS adder was determined in the early 1990s as a proxy for interest cost on intercompany debt. The YUB confirmed this approach in its direction on GRA 2012/13 in response to a recommendation from CW (para 194 of Appendix A to Order 2013-01), and reconfirmed this in the 2017/18 GRA Order 2018-10 (para 238, Appendix A).

The response to UCG-YEC-1-22(b) quotes Board Order 2018-10 direction regarding the 120 basis points to be used in forecasting future costs of debt, i.e., long-term Canada bond interest rate plus the 120 basis points.

As described at page 3-27 of the Application, the rate of 2.19% used for new long-term 2020 and 2021 debt equals 120 basis points plus Government of Canada Long-Term Bond Benchmark at 0.99% as of June 30, 2020.

(b)

The YUB does not “determine” the interest but they do direct the utility in its approach to forecasting test year interest costs. From this direction, YEC estimates the interest rate for GRA test years based on current market conditions, and the YUB reviews and approves the test year revenue requirement that includes interest costs. In the 2017-18 GRA, the YUB directed in Order 2019-10 that YEC should continue to use the formulaic approach to forecast the cost for new debt as directed previously in Board Order 2013-01.

REFERENCE: **YUB-YEC-1-49 Table 6 and YUB-YEC-1-50**

YEC states in response to YUB-50 that "The Faro rental site was commissioned and in service December 1, 2020. The construction of the site was primarily carried out by YEC staff. Construction support was provided through existing vendor service contracts." In response YUB-49 YEC provides a table with unelaborated breakdown of costs.

QUESTION:

a) Please provide a further breakdown of each of the 5 major listed costs in Table 6 to clearly demonstrate a business case for the cost of this project.

b) Explain the total cost difference from Table 6 of $2.446 million and the cost from Tab 5 of the Application of $2.037 million.

ANSWER:

(a)

The business case for this project is the requirement for YEC to provide continuous service to customers under the N-1 capacity planning criteria. There was no viable short-term solution available to YEC to meet these criteria other than upgrading equipment in Faro to connect 7 rental mobile diesels. The cost components reflect the standard approach to cost accounting for a project of this nature and are consistent with YEC historical project budgeting and reporting. It is unclear what additional detail is requested, or how additional detail would inform the Board's prudency assessment given the stated business case.

(b)

The figure in the application ($2.037 million) was an estimate based on information available at the time of application preparation (approximately Sept/Oct 2020); the project was completed in late November and final project costs were not known until after GRA filing. The extra cost was related to additional civil site requirements and additional equipment needs to accommodate 7 rental mobile diesels.

REFERENCE: **UCG-YEC-1-26 (c) and (d) In this request UCG asks c) Explain why the vice president cannot do the job of FN relations? and d) What exactly is the VP job description? YEC responds as which VP?**

QUESTION:

a) Please answer both question with VP of Business and Corp. Development as the target.

ANSWER:

(a)

The staffing of a VP, First Nations Relations was a direction of the Board of Directors. Previously, the VP Business and Corporate Development (BDC) would handle some of these duties, but the contact was transactional and only where required for specific projects. The Board recognized that establishing and maintaining on-going relationships with Yukon First Nations in whose territory we operate is critical for YEC to be successful in any projects in the territory. The time required to develop and maintain these relationships, as well as participation in project engagement and project agreements is well beyond the capacity of the VP, BCD. This position already has lead responsibility for Information Technology, Human Resources and Health and Safety as well as governance roles in the IPP development and Yukon Government relations.

The job description was provided in response to UCG-YEC-1-26(b); that response is copied below for convenience.

- **Vice-President, Business and Corporate Development -** In conjunction with the President, liaises with key stakeholders to promote positive relationships and strong partnerships for the benefit of the corporation. Ensures that the Human Resources, IT, Health and Safety and Communications departments corporate objectives are met and in line with Yukon Energy's mission and vision. Contributes in the development of corporate goals, business plans, and strategies to ensure the effective planning and delivery of programs and services to achieve the Corporate mandate Contributes to the vision, mission and values of Yukon Energy through responsible, accountable and effective work performance. As a key

member of the senior management team is accountable for overall organizational performance.

REFERENCE: **In UCG-YEC-1-53 (e) for WH 2 project, YEC responds: "Internal work includes: YEC engineering, Project Management, procurement, health and safety, operations, and site construction monitoring support. The estimated cost of YEC internal support is $500,000."**

QUESTION:

a) Please provide a breakdown of each portion referenced above with costs associated for each and what work was done for each.

ANSWER:

(a)

The estimated cost of $500,000 was not broken out at the outset for the above components. An estimate of the breakdown by these components is provided below:

YEC engineering – $50,000

- Provides engineering support duties include: Review of IFC drawings, performing Quality Control checks, Involved in Factory Acceptance tests (FAT), management of the YEC Owners Engineer.

Project Management – $150,000

- Provides Project Management Services, duties include development of project management plans, RASCI tables, risk registers and management of scope, schedule and budget.

Procurement – $10,000

- Provides procurement support, duties include, drafting, finalizing and releasing RFP, contract development, negotiation and verification of adherence, processing change orders.

Health and safety – $10,000

- Provides Health and Safety support, duties include, supports the development of Project Safety Plans, provides safety site monitoring and spot checks, ensuring

adherence to YEC corporate policies, involved in investigating health and safety incidents.

Operations – $30,000

- Provides operational support, duties primarily include involvement in commissioning.

Site construction monitoring support – $250,000

- Provides site construction monitoring support, duties primarily include on site management of the contractor, coordinating onsite activities and management of multiple contractors simultaneously, ensuring daily health and safety requirements are met, involvement in disassembly and reassembly of the unit, supporting the PM to manage scope, schedule and budget, involvement with commissioning.

REFERENCE: **Application Tab 5.4.1.1 p. 5-28 and Response to YUB-YEC-1-70**

In response to YUB-YEC-1-70, Yukon Energy states: "EAM implementation is a separate project from Asset Management Framework (AMF) and PAMMS."

QUESTION:

a) Please give the total cost of the Asset Management Plan from 2013/14 until today. Include all costs for Enterprise Management (EAM) System Purchase, Enterprise Management (EAM) Implementation, Asset Management Framework (EMF), PAMMS and the Enterprise Resource Plan (ERP) with 2019 Upgrade. Break into component costs and then give total.

b) Are these plans now all in place and operating?

ANSWER:

(a) and **(b)**

There appears to be confusion regarding the projects in this question; YEC does not have a project called 'Asset Management Plan'. Based on the references in the question, YEC believes UCG is asking about the following individual projects:

- Asset Management Framework (AMF)
- ERP System Upgrades
- Enterprise Asset Management (EAM)

Actual costs from 2013 to 2020 and updated 2021 forecast costs are as follows:

($ Million)	2013	2014	2015	2016	2017	2018	2019	2020	2021
Asset Management Framework	-	-	-	-	-	0.439	1.349	1.530	0.946
ERP System Upgrades	-	-	-	0.066	-	-	-	0.158	-
Enterprise Asset Management	-	-	-	-	-	0.276	0.534	2.972	0.875

Asset Management Framework is a multi-year project that is expected to be in service in 2022, therefore, YEC is not asking for this to be approved and added to rate base in this Application.

ERP Upgrades are single year projects and were completed in 2016 and 2020. These projects were upgrades to the utilities core financial system (Microsoft Great Plains and related modules) and are not related to the Asset Management projects.

Enterprise Asset Management is a multi-year project that was put in-service in the first half of 2021.

See also YUB-YEC-2-25 for explanation of the objectives of the asset management projects.

REFERENCE: Yukon Energy response to YUB-YEC-1-47 (a to d)

QUESTION:

a) Is YEC now planning to add all past DSM cost to rate base?

b) Exactly what are YEC's current DSM programs?

c) Demonstrate how YEC has validated the cost to benefit for each program.

ANSWER:

(a)

No. Historic DSM costs were written off when YEC lost its court of appeal challenge.

(b)

Yukon Energy is currently delivering the Residential Demand Response Pilot (Peak Smart), which is funded by Natural Resources Canada, AEY and Yukon Development Corporation.

(c)

The goal of the Residential Demand Response Pilot is to test the effectiveness of this new demand response technology in reducing the morning and winter peak as well as the acceptance of participants of utility control of their appliances. YEC sought funding to complete this pilot study. Cost effectiveness tests are not being conducted for the pilot study given the level of funding available for the project. If the results of the pilot are favorable, a full DSM program could be designed and launched to the public. If this is the case the standard cost to benefit tests would be forecast and completed for the program.

REFERENCE: Yukon Energy response to YUB-YEC-1-48 Table 1

QUESTION:

a) How does Yukon Energy handle the differences/variances of these projects when applying them into the books for rate base?

ANSWER:

(a)

See response provided to UCG-YEC-2-11.

REFERENCE: Yukon Energy Response to YUB-YEC-1-51 p.6 Table 2
Costs for STATCOM/SVC and Syn. Cond. for SkTP/MMTL

QUESTION:

a) Do you now have an updated costs on each of these projects? If yes, please give.

ANSWER:

(a)

Please see response to YUB-YEC-2-17 for the updated cost information.

REFERENCE: **Yukon Energy response to YUB-YEC-1-51 p. 7 Table Preliminary Cost Budget SKTP and (k) states L180 to be completed and energized March 2021**

QUESTION:

a) Is this now complete and energized?

b) Please give updated cost of this complete project compared to budget.

ANSWER:

(a)

The Transmission line was energized and in service in March.

(b)

Please see response to YUB-YEC-2-17.

REFERENCE: Yukon Energy Response to YUB-YEC-1-64

QUESTION:

a) Considering the business plan explained in this response, how will Yukon Energy track and demonstrate tangible benefits? Explain.

ANSWER:

(a)

The focus to date has been on bringing the project live on schedule this year. YEC will now determine metrics for the tangible benefits which will allow for tracking of results on a go forward basis. YEC will determine what metrics will be put in place and will implement in 2022 on a go forward basis.

REFERENCE: Yukon Energy response to YUB-YEC-1-99
Whitehorse Diesel Substation improvements

QUESTION:

a) Please explain exactly what work Yukon Energy completed for this $100k improvement.

ANSWER:

(a)

An engineered wooden structure was erected which holds multiple disconnect switches to allow for isolation of the rental generators; this ensures workers can safely work on units. A ground grid and fencing for safety was also included in the project.