IN THE MATTER OF YUKON ENERGY 2017/2018 GENERAL RATE APPLICATION – 2nd COMPLIANCE FILING

REPLY ARGUMENT

YUKON ENERGY CORPORATION

November 5, 2019

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1.0 OVERVIEW

On February 25, 2019, Yukon Energy Corporation ("**Yukon Energy**" or "**YEC**") filed with the Yukon Utilities Board ("**YUB**" or the "**Board**") its 1st Compliance Filing regarding the 2017/18 General Rate Application ("**GRA**") and Board Order 2018-10. On March 18, 2019, the Board issued Order 2019-01 setting a process for Compliance Filing review with interrogatories (IRs) to Yukon Energy as well as Intervenor Argument (April 19, 2019) and YEC Reply (May 1, 2019).

Order 2019-04 was issued September 12, 2019 directing Yukon Energy to submit a 2nd Compliance Filing in accordance with the directions set out in Appendix A of the Order. Yukon Energy provided its 2nd Compliance Filing on September 23, 2019 and Order 2019-06 was issued outlining a process for review of the 2nd Compliance Filing. This included a technical session, information requests and responses from Yukon Energy, Intervenor Argument and Yukon Energy Reply.

Final arguments with regard to Yukon Energy's 2017/18 GRA September 23, 2019 Compliance Filing (the "**2nd Compliance Filing**") were provided on November 1, 2019 by ATCO Electric Yukon ("**AEY**"), City of Whitehorse ("**CW**"), and Utilities Consumers' Group ("**UCG**").

Yukon Energy's Reply Argument addresses intervenor arguments separately for the following three sets of issues related to the 2nd Compliance Filing:

1. Revenue Requirement and Rates;
2. Low Water Reserve Fund ("**LWRF**"); and
3. Other Issues Raised by Intervenors

2.0 REVENUE REQUIREMENT AND RATES

UCG is the only intervenor that raised any issue in Argument regarding revenue requirement and rate issues.

UCG asserts (para 4-9) the YUB decided that the cost of debt to be included in the 2017 and 2018 revenue requirements to be recovered through YEC's rates would be based on an overall rate of 2.15%; that in YEC's response on this matter "there was no specific reference provided [by YEC] as to where in its Order 2018-10 Reasons for Decision the YUB specifically said that the allowed 2.15% was only associated with the new debt"; that 2.15% should be the rate used to determine the revenue requirements and the rate riders to be implemented by YEC; and that the proposed revenue requirements and rate riders must be reduced to reflect the lower allowed cost of debt.

Yukon Energy outlined its explanation regarding the new cost of debt included in the 2017 and 2018 revenue requirement in the 2nd Compliance Filing and in response to UCG-YEC-1-7. The clarifications provided confirm that there is no basis for YEC to change the overall mid-year long

term debt interest costs for 2017 and 2018. On the matter of specific references to the Board's direction in Appendix A of Board Order 2018-10, the following are noted:

- At para 237, the Board's approval of 2.15% interest as applied for by YEC specifically related to the YEC Application's "forecast market rate for YEC's costs of debt of 2.15% for each of the 2017 and 2018 test years".
- To provide further clarity on this matter, it is noted that the Board had previously (para 229 of same Order Appendix A) stated that the Application's forecast interest rate of 2.15% for these test years related to YEC's original Application forecasts of "**additional** long-term debt (LTD) of $23.828 million for 2017 and $7.004 million for 2018" (emphasis added).

In summary, there is no basis for UCG's assertions that the Board directed YEC in 2017 and 2018 to use 2.15% interest on all existing LTD as well as on additional LTD forecast for each test year.[1] The Board in Order 2018-10 approved an interest rate of 2.15% for new long term debt issued in the 2017 and 2018 test years as proposed by YEC in the original application; YEC's 1st Compliance Filing complied with the Board's direction. UCG's position is without merit and should be rejected by the Board.

Accordingly, the revenue requirement and rates outlined in Yukon Energy's October 22, 2019 correspondence to the Board can be approved. Yukon Energy requests that this be done as soon as possible in November 2019 in order to enable rates to become effective December 1, 2019 and thereby prevent further added true up cost impacts on final rates.

3.0 LOW WATER RESERVE FUND (LWRF)

Intervenor arguments regarding the LWRF generally focused on recommendations for future Yukon Energy GRA filings, and did not provide many specific points within the scope of the current proceeding.

Yukon Energy's Reply focuses below on issues related to the LWRF to be approved by the Board as part of the current proceeding, and specifically the following:

(1) Low Water Reserve Fund (LWRF) principles;

(2) Order 2019-04 direction to separate forecast and actual load; and

(3) Other LWRF Implementation Issues (Fixed Change Factor, LWRF Fuel Mix, UCG Recommended YUB Role).

[1] As noted in YEC's 2nd Compliance Filing, no interest is applicable in 2018 on LTD added in that years as the debt is assumed to be secured effective the end of the year. The additional debt in 2017 similarly only resulted in forecast interest expense in 2018. The 1st and 2nd Compliance Filing also adjusted the forecast additional LTD for 2017 ($21.940 million) and for 2018 ($5.776 million). (See 2nd Compliance Filing, section 3, Schedule 11, lines 13 and 14).

3.1 LOW WATER RESERVE FUND (LWRF) PRINCIPLES

Intervenor Arguments

AEY states (para 3)[2] that it does not "oppose approving the proposed [LWRF] mechanism for the test period", while maintaining its concerns (para 4) regarding the mechanism being "overly complex, increasing regulatory burden"; "based on forecasts from an untestable model" and "unpredictable, retroactive rate adjustments that could be material." AEY recommends (para 5) that the Board only approve the proposed LWRF mechanisms for the 2017/18 test period. Most of AEY's argument (para 7 to 27) is then directed at proposing redesign of LWRF mechanisms for the next GRA. AEY's alternative (para 26-27) would reject (as not feasible to achieve with confidence) the "key requirement" to retroactively parse load variability and water availability impacts, and instead advocates that "a better solution would abide by realistic & achievable principles, provide relevant price signals, and value simplicity over complexity".[3]

Aside from CW supporting (para 2 and 10) the use of a LTA in the determination of the base for the LWRF, no other intervenor provided argument on LWRF principles.

YEC Reply

While AEY's Argument accepts the LWRF for 2018, it effectively rejects for years after 2018 the key principles as approved by the Board and recommends eliminating the LWRF as currently established in Yukon Energy's next GRA proceeding.

A distinctive feature of the Yukon grid is its degree of vulnerability to drought conditions.[4] Yukon Energy therefore has serious concerns about AEY's recommendation. These concerns are addressed below under three separate headings:

- Basic LWRF Principles;
- Issues re Separating Load Change and Water Availability Impacts; and
- Rate Smoothing versus Short-Term Pricing related to Water Availability Impacts.

Basic LWRF Principles

The basic principles underlying the LWRF have been subject to extensive review by the Board and intervenors over a number of recent (as well as earlier) proceedings including: the 2012/13 GRA, the 2014 DCF/ ERA Proceeding and the 2017/18 GRA and its related ERA and Two Part Application.

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[2] AEY Argument page 1, para 3 notes "with the understanding that: A. YEC has not changed its ERA forecast charge for the 2017 and 2018 test periods, and the expected ERA charge is zero; and B. if any ERA amounts are invoiced to AEY, then these amounts will be recovered from ratepayers via AEY's approved purchase power deferral account and associated Rider S then AEY does not oppose approving the proposed mechanism for the test period."

[3] AEY Argument, page 7, para 26-27; AEY's Argument supporting shorter-term price signals is at para 16.

[4] See Yukon Energy Final Argument, August 9, 2018, page 7 for details.

As part of this process the Board has in its past orders outlined the following core principles for this deferral account fund:

1. The risk of low water conditions, with respect to added costs for thermal generation, should be borne by the customers of the utility (Order 2018-10, para 318).[5]
2. 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 is required (Order 2018-10, para 319).
3. The LWRF (or earlier DCF mechanism) is a fund for "customers to smooth rate impacts for those occasions when hydro generation is less than LTA or to build up the fund when hydro generation is greater than LTA."[6]
4. A +/- $8 million cap for the DCF/ LWRF was considered an acceptable balance between frequency of rider applications and ability to handle material (drought) changes in hydro availability.[7]

The evidence provided by Yukon Energy over the past several years also has been that these principles are consistent with past practice in Yukon and with regulation of other hydro utilities across Canada.

Accordingly, there is no basis in the current proceeding on the 2nd Compliance Filing to be re-arguing these principles.

Further, any option to simplify the LWRF must still continue to meet the principles and specified objectives for the LWRF.

The DCF approach outlined by Yukon Energy in its 2017/18 General Rate Application, and the LWRF outlined by Yukon Energy in its 1st Compliance Filing adhere to the above core principles.

No intervenor has provided any alternative to the DCF/ LWRF that meets the above-noted core principles.[8] AEY, however, has once again argued to set aside these principles. There is no merit in AEY's effort to re-argue these basic principles, and the Board should reject AEY's recommendations.

Issues re: Separating Load Change and Water Availability Impacts

AEY asks the Board (para 13) to "reconsider the 'key requirement' to allocate thermal generation variances to hydro availability or to load." AEY notes (para 14) that "if the requirement to differentiate between 'thermal variance due to load' and 'thermal variance due to water

[5] The Board also notes in Order 2018-10, para 319 "in Yukon the risks related strictly to low water events have been borne by ratepayers. No evidence has been provided in this proceeding to change the Board's view that ratepayers bear this risk."

[6] Order 2015-01, page 14.

[7] Order 2015-01, page 15.

[8] YUB-YEC-1-1 notes "while parties have made complaints regarding the complexity of this approach, during this extensive proceeding no one has offered any options that meet the desire for more simplicity while reasonably meeting the LWRF risk allocation objectives.

availability' is relaxed or removed, then AEY believes simpler mechanisms can be investigated". By removing this "key requirement" AEY is effectively removing the underlying premise of the LWRF. The deferral account would no longer attempt to separate load change and water availability impacts.

AEY's recommendation would effectively result in creation of a simple diesel deferral account similar to the DDA advanced by AEY in the 2014 DCF/ERA proceeding and rejected by the Board in Order 2015-01[9]. Such "simplifications" achieved through "reconsideration of the key requirement" for the fund would effectively result in passing all thermal-related risk (whether related to water, load changes or other events) to ratepayers.[10]

AEY already views itself to be fully protected in this regard for any ERA charges, whether such charges are due only to load changes (as per past mechanisms) or also include water-related impacts (as would occur with new mechanisms required to implement Board Order 2019-04 with water availability impacts limited to forecast load). Assuming that water availability risk must continue to be borne by ratepayers, AEY's recommendation regarding the future LWRF would in effect require all YEC load risk also to be passed to ratepayers (given the proposal to stop separating load and water risks).

The main basis that AEY provides for its recommendation (para 11) is that "there is no evidence to suggest that this 'key requirement' [to separate load and water risks] is met (or can be met)". AEY argues (para 10) that "YEC has not proven that it can accurately isolate changes in thermal generation due to load or hydro availability" and that "no intervenor can disprove that YEC has not accurately isolated changes".

To justify abandoning LWRF principles that were first established by the YUB in the early 1990s and have been sustained in all recent YUB decisions, AEY would need to prove that the LWRF mechanism clearly fails to separate thermal generation changes due to water availability, and, further, that this failure is of sufficient magnitude to justify the YUB abandoning its prior directions on this matter. AEY has failed to provide any such proof.

In summary, the Board has no basis today for abandoning this key requirement, or for reversing its past decision to reject AEY's proposed Diesel Deferral Account. Accordingly, AEY's argument on this matter should be rejected by the Board.

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[9] In Order 2015-01 the Board noted the following concerns with the Diesel Deferral Account as proposed by AEY (page 27 of Order 2015-01):

1. The DDA did not address water level variances and merely accounted for changes from forecast to actual for diesel volumes, regardless of the cause.
2. The DDA shifts forecast risk for diesel volume from the utilities to ratepayers. The Board found it unreasonable in these circumstances to accept a proposal that shifts risks that are appropriately borne by the utility to ratepayers.
3. It was not clear that the DDA was limited to the hydro grid. If the YECL proposal extends beyond the hydro grid, then the shifting of risk from the utility to the ratepayer was even more unreasonable.

[10] See response to YUB-YEC-1-1 which notes "The central challenge to this issue is the need to separate thermal generation into costs attributed to water-related risks, and those costs that relate to other risks that are properly attributed to the utility. The DDA approach was correctly rejected by the Board because it made no attempt to differentiate between these risks and simply attributed all costs to rate payers."

Rate smoothing versus short-term price related to water availability impacts

AEY's argument attacks the premise that the LWRF should operate to smooth rates over time, asserting (para 16) that "most of the electricity utility industry is moving toward shorter-term price signals via time-of-use (TOU) rates" and that "shorter-term price signals are superior to 'long-term average' price signals when considering hydro availability." Further, AEY submits (para 17) that "ratepayers should receive a contemporaneous, transparent and representative price signal" when water is forecast to be low or is low and thermal generation is forecast to be used or is being used.

Not only is AEY's argument on short term pricing versus the approved rate smoothing approach far outside the scope of the 2nd Compliance Filing it ignores completely evidence relevant to hydro jurisdiction utilities in general as well as to YEC's situation on the isolated Yukon grid.

However, given AEY's argument and the importance of the basic LWRF principles being challenged, Yukon Energy reviews below the substantive issues regarding rate smoothing versus short-term price signals relating to water availability.

First, on the matter of LTA versus short-term pricing and AEY's assertions that the Board should consider that "most of the electric utility industry is moving toward shorter-term price signals via time-of-use (TOU) rates":

- There is no evidence on the record to support AEY's broad statement that the electric utility industry is moving toward shorter-term price signals via TOU rates.
- Further, the statement fails to address how hydro-based electric utilities in Canada that are relevant to YEC's situation are addressing pricing as it relates to water availability. The evidence is that these utilities continue to use long-term water availability when developing forecast revenue requirements for rate setting purposes.
- CW, in its argument (para 2 and 10), concludes that it "supports the use of a long term average in the determination of the base for the LWRF as it appears likely that the use of a short term average would cause unwanted fluctuations in rates".
- The Board in this proceeding approved LTA forecasts for the 2018 test year, and YEC has not been directed to file short-term forecasts once again for its next GRA.
- In short, there is no evidence before the Board to support AEY's assertion, or to refute the extensive evidence on the record that LTA pricing continues to be the appropriate approach for YEC. The Board should accordingly ignore AEY's assertions on this matter.

Similarly, AEY's assertion at para 16 that "shorter-term price signals are superior to 'long-term average' price signals when considering hydro availability" fails to address extensive evidence to the contrary.

UCG-YEC-1-4(b) to (d) summarizes evidence reviewed in the current proceeding (including the Two Part ERA Application and during the 2017/18 GRA) regarding short term versus long term

average forecasts, price signals and intergenerational equity.[11] Several of the referenced IRs address rate instability impacts of ST versus LTA forecasts. See in particular YUB-YEC-2-13 which reviews issues related to price signals and intergenerational equity and fair treatment as regards ST versus LTA hydro forecast use for setting rates.

On the matter of being able to send water-related price signals, AEY's proposal would result in GRA or other proceedings being used to send price signals to ratepayers in order to modify consumption in response to high versus low water conditions. However, the idea that YEC can forecast drought and then send price signals in advance is nonsense. YEC's past responses have shown that rate changes to forecast a drought are simply not possible. YEC's evidence shows that rate riders after the fact to accommodate drought impacts are likely given the likely cap limits on the LWRF - however, such after-the-fact rate riders have no relevance as "price signals".

Attachment 1 summarizes evidence in this proceeding on why short-term pricing for YEC water availability impacts on thermal generation is not feasible or consistent with basic LWRF principles.

In conclusion, the Board has no basis today for abandoning its approval of LWRF use for rate smoothing, or for reversing its past decision to reject proposals for a lower DCF/ LWRF cap to increase reliance on rate riders.[12] Accordingly, AEY's argument on this matter should be rejected by the Board.

3.2 ORDER 2019-04 DIRECTION TO SEPARATE FORECAST & ACTUAL LOAD

Intervenor Arguments

AEY does not oppose approving the proposed LWRF mechanism for the test period only on condition that any ERA amounts invoiced to AEY "will be recovered from ratepayers via AEY's approved purchase power deferral account and associated Rider S" (para 3).

YEC Reply

AEY's condition in principle asserts that AEY should recover all YEC thermal generation costs charged via the ERA for load forecast changes. If this principle is supported, Board Order 2019-04 direction to change the LWRF will discriminate against Yukon Energy relative to AEY.

Board Order 2019-04 directs YEC to change the LWRF determination for 2018 so as to limit the LWRF only to the forecast load. Specifically, the LWRF would be applicable only for load up to the latest approved forecast level and not for loads that vary from forecast levels. To implement this

[11] Yukon Energy's Two Part ERA Application provided a ST Alternative GRA Forecast for 2017 and 2018, and included an assessment of adopting ST versus LTA hydro forecasts for GRA purposes. These alternatives were reviewed in round 2 of the 2017/18 GRA IRs. See for example responses YUB-YEC-2-11 through 25. See also Yukon Energy's Final Argument for the 2017-18 GRA, pages 11-12.

[12] See Order 2015-01, page 14-15, "In terms of "caps" for the DCF, the Board is of the view that the +/- $2-million level proposed by YECL is too low and would require frequent rider applications before the Board. The +/- $5-million level as proposed by UCG would have minimal impact in the case of a severe drought. Thus, the Board accepts the level of +/- $8 million as proposed by YEC as an acceptable balance between frequency of rider applications and ability to handle material (drought) changes in hydro availability."

change, YEC was required to determine what portion of the actual thermal would have been required to supply only the forecast load – the LWRF would then be assigned the difference between this number and the LTA GRA forecast thermal.[13]

Yukon Energy has several concerns with the direction to limit LWRF determinations only to the forecast load, including the resulting difference in treatment of YEC and AEY as regards ratepayers cost impacts for water availability risks related to any changes from the forecast load. These concerns are addressed below.

Options to Comply with Direction

YEC's 2nd Compliance Filing in September 2019 sought to comply with the Board's directions; however, the additional analysis provided in the October 8, 2019 Technical Session outlines how compliance with this Board direction will result in a fundamental change in the principle that water availability is a ratepayer risk. More specifically, water variance thermal cost risk for load changes would now be borne by YEC.

Yukon Energy's proposed method in the 2nd Compliance Filing for complying with Board Order 2019-04 was reviewed in several IRs.[14]

- Overall, there is no acceptable method available to use YECSIM or other models to estimate directly (without reference to actual load results for the year) the "actual thermal generation" that would have occurred for the forecast load under actual water conditions.[15]
- Accordingly, YEC has proposed an approach in the 2nd Compliance Filing that uses established LWRF procedures to assess actual thermal (for the actual load) as a percentage of LTA thermal for that same load, and then uses this percentage to estimate actual thermal relative to LTA thermal for the approved forecast load. Yukon Energy submits that its proposed approach should be approved by the Board if the direction is retained to restrict the LWRF only to forecast load.

Conflicts with Basic Principles

On the matter of this specific direction, Yukon Energy's submission is that there is no reasonable basis consistent with normal regulatory principles to revise the LWRF to separate water availability related thermal cost for forecast load from actual load.

The principle as regards water availability and fuel price change risks is that ratepayers bear thermal cost risks for water availability as well as fuel price change - and this principle for water

[13] See October 8, 2019 Technical Session, YEC's Presentation – Background Notes, for review of steps proposed by YEC in to address this new requirement.

[14] See response to YUB-YEC-1-1; YUB-YEC-1-4(a) and (b); YUB-YEC-1-5; YUB-YEC-1-12 and YUB-YEC-1-13.

[15] See response to YUB-YEC-1-4 and YUB-YEC-1-5.

availability as well as for fuel price change applies to all load supplied by the utility and not only to the GRA forecast load.[16]

Changing the LWRF as directed in Order 2019-04 results in added complexity as well as inequitable outcomes as between customers and YEC depending on whether actual loads exceed versus fall below forecast and whether water available exceeds or fall below LTA.[17] Further, it is also inequitable for YEC to be required to bear any water-related risks as regards load change volumes while AEY (through the ERA and its own deferral account) is allowed to pass all such risk back to ratepayers.

Conclusion

In summary, as noted in YUB-YEC-1-1, while the requirement to restrict LWRF operation to only the forecast load, as outlined by the Board in Order 2019-04, may be seen as a "simplification" it actually adds new complexities to the LWRF determinations. YEC has expressed its serious concerns at the Technical Session and in IR responses with this requirement's consistency with LWRF principles (as outlined in Section 3.1 of this Argument) and objectives as addressed in paragraphs 321 and 322 of Appendix A to Board Order 2018-10 and in YEC's response to IRs related to the 1st Compliance Filing.[18]

3.3 OTHER LWRF IMPLEMENTATION ISSUES

3.3.1 Fixed Change Factor

Order 2018-10 directed Yukon Energy to simplify the LWRF. In order to comply with this direction, the LWRF Term Sheet included a Fixed Change Factor to simplify the determination of LTA forecast thermal generation at actual YIS load for any fiscal year.[19]

- **CW** notes that it "supports use of variable conversion factor similar to that shown on PDF page 10 of 22 of the Technical Notes".[20]

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[16] See response to YUB-YEC-1-1 which notes "Board Order 2019-04 states (at page 11 of Appendix A) that "it was YEC's submission that the utility bore the risks with costs associated with incremental load". On this specific matter, YEC's responses and submissions have consistently affirmed that cost impacts due to water and wind availability and fuel price risk are borne by ratepayers – and that this principle applies to actual loads supplied by the utility, i.e., costs due load change from GRA forecast that are to be allocated to the utility are based on GRA fuel prices and GRA hydro water conditions (e.g., LTA hydro generation for 2018)." See also YUB-YEC-2-1 (g and h) which notes "Based on normal regulatory principles, none of the risks related to water variance are borne by the utility."

[17] See October 8, 2019 Technical Session, YEC's Presentation – Background Notes, pages 15-18 for review of how impacts vary depending on load changes and water availability. See also YUB-YEC-1-12 and YUB-YEC-1-13.

[18] See April 9, 2019 responses to YUB-YEC-1-14, YUB-YEC-1-17 and YUB-YEC-1-20 which also reference prior IR responses as relevant.

[19] YUB-YEC-1-1 notes that after review of the Board's direction in paragraph 320 of Board Order 2018-10, the Fixed Change Factor was identified as one possible simplification for consideration by the Board; and that YEC was not able to identify from the Board Order or submissions of parties, or from YEC's independent review, any other options in this regard that would meet the principles and objectives of the LWRF.

- **UCG** supports use of the term sheet approach as opposed to the Fixed Change Factor, stating "the Fixed Change Factor is not considered a simplified approach from the ratepayer perspective when using the term sheet gives a more accurate outcome and excludes the added stage of determining this Fixed Change Factor".[21]
- **AEY** does not comment on the use of the Fixed Change Factor or the term sheet approach.

YUB-YEC-1-7 provides a detailed review of the Fixed Change Factor compared to the LWRF term sheet approach as used in the past.

In UCG-YEC-1-12(e) Yukon Energy has noted that either the Fixed Change Factor or use of the earlier Term Sheet would be acceptable as a simple approach to implementing the LWRF.[22] However, YUB-YEC-1-7 clarifies that it is necessary to specify LTA generation at the actual load in order to proceed with year-end LWRF determinations for Board Order 2019-04 requirements (i.e., the Fixed Change Factor cannot be removed without replacing it with the Term Sheet approach).[23]

After review of IRs and the Technical Session discussion, it now appears that the term sheet approach provides a more accurate result and can be considered more straight-forward to implement.

3.3.2 LWRF Fuel Mix

LWRF fuel mix determinations were the subject of several IRs and discussion at the October 8 Technical Session.[24] CW's recommendations in particular were focused on information to be provided as part of Yukon Energy's next GRA (i.e., evidence that the 90/10 fuel mix remains optimal from a cost and environmental perspective).[25]

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[20] CW Argument, page 2. It is not entirely clear what CW means by the "variable conversion factor" but the reference to page 10 of 22 of the Technical Notes seems to indicate the "Fixed Change Factor" is being referenced.

[21] UCG Argument, page 5, para 18.

[22] UCG-YEC-1-12(e) notes "The term sheet approach is more accurate in addressing updated LTA thermal generation for actual loads that vary from the GRA forecast load – however, if the sole LWRF requirement is to use the actual load LTA thermal generation to estimate actual thermal generation at the forecast load, the Fixed Change Factor may be a more accurate approach (simply because it avoids considering how LTA thermal percent of incremental load rises as load increases)."

[23] See YUB-YEC-1-4 – the LWRF calculation in the 2nd Compliance Filing includes water condition changes for actual load in order to assess, using established and tested methods, the extent that actual water conditions resulted in actual thermal generation varying from the LTA water conditions assumed for the approved GRA thermal generation forecast.

[24] See Technical Notes part 6 pages 20-22 and YUB-YEC-1-2; YUB-YEC-1-8; YUB-YEC-1-14; YUB-YEC-1-15; AEY-YEC-1-4 and CW-YEC-1-3. See also April 9, 2019 response to YUB-YEC-1-12 and YUB-YEC-1-3 for review of GRA proceeding evidence on this matter.

[25] CW in argument at page 2 notes "it may or may not be optimal to maintain a 90/10 mix. Further, the use of various fuels may have different environmental impacts."

YUB-YEC-1-15 reviews how YEC accounts for actual fuel mix differences from the GRA forecast, based on final Board directions for the LWRF. The accounting for LWRF transfer addresses only net costs, without reference to specific fuels or fuel mix.

Fuel mix for GRA forecasts assumes LTA thermal generation (and not any forecast of actual thermal generation at the forecast load). There is therefore no reasonable basis for assuming that LWRF transfer costs should be tied to actual fuel mix – and use of the GRA forecast fuel mix for the LWRF results in GRA average fuel costs being retained for YEC final actual (i.e., after LWRF transfers) thermal generation subject to LWRF transfers. (See YUB-YEC-1-14.)

The October 8, 2019 Technical Session (see YEC Presentation – Background Notes, Part 6 at pages 20-22) reviewed LWRF thermal ratio issues and options for a range of scenarios with and without Board Order 2019-04 - including options that no longer require that LWRF transfers constrain the LNG share to not exceed 100% of the transfer.[26]

Yukon Energy has noted (YUB-YEC-1-2(b)) that LWRF rules regarding the thermal ratio can be simplified from those proposed in the 2nd Compliance Filing to ensure that the thermal ratio for final YEC costs after all LWRF transfers is the same as approved for the GRA thermal generation cost forecast. This simplified approach would ensure that YEC's final average thermal cost per kWh each year will equal the last approved GRA average thermal cost per kWh – and utilize the LWRF deferral account to accommodate actual cost variances from this GRA forecast that are beyond YEC's control.

YUB-YEC-1-8 indicates that YEC final year end costs after LWRF transfer **related to actual load** would equal the GRA fuel mix costs if the fuel mix rules are simplified to set the expected LTA thermal fuel mix at 90% LNG and 10% diesel, without regard to actual diesel thermal generation, and without any constraint that LNG transfers not exceed 100% in cases where actual diesel thermal generation exceeds 10%. YEC final year end costs after LWRF transfers **limited to the forecast load** also equal the GRA fuel mix costs if the rules no longer require that LWRF transfers constrain the LNG share not to exceed 100% of the transfer.

In conclusion, YEC recommends that the Board approve adjustment to the 2nd Compliance Filing LWRF fuel mix rules to remove any constraint that LNG share not exceed 100% of the transfer in order to simplify the approach so as to ensure that YEC final year end costs after LWRF transfers equal the GRA fuel mix forecast.

3.3.3 UCG Recommended YUB Role

The UCG recommends that the YUB "establish their own deferral account model to be used to pioneer reconciliation of the forecasting methods used by the YEC, if we wish to continues with the current regulatory methodology" (para 28).

[26] See also response to YUB-YEC-1-8.

The UCG recommendation is beyond the scope of the proceeding as well as the mandate or responsibility of the Board, and should accordingly rejected by the Board.

4.0 OTHER ISSUES RAISED IN INTERVENOR ARGUMENTS

4.1 OTHER NEXT GRA ISSUES

CW has outlined a number of issues and recommended that Yukon Energy file additional information as part of its next General Rate Application. This includes:

- Evidence that demonstrates whether there is any trend in weather, and related water levels, that should be incorporated into the YECSIM model.[27]
- Evidence to clearly demonstrate that all management decision related to the use of the LWRF, including hydro maintenance and minimum water levels, have not been made to the advantage of YEC.[28]
- Evidence that the 90/10 mix remains optimal from a cost and environmental perspective.[29]
- Evidence about the impact on the LWRF on business risk, more specifically, a comparison of all changes to the LWRF and an assessment of any changes on business risk.[30]

YEC notes that all of the above CW issues are beyond the scope of 2nd Compliance Filing, and further (as referenced in footnotes) these matters have also been addressed and do not merit further review at this time.

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[27] This concern was responded to in CW-YEC-1-1. YEC noted simulation models of this type do not address trends in water levels beyond what is contained in the historic data. Such models also do not address potential water ranges for water change that may be evident from other factors such as the study of tree rings or other historic data beyond the 35 year official water record.

[28] CW-YEC-1-2 notes that issues related to YECSIM, LTA assessments and LWRF determinations being impacted by management decisions were extensively addressed in the current proceeding, and were not the focus for the current LWRF compliance filing review. See AEY-YEC-2-1, YUB-YEC-2-14(b-c) and YUB-YEC-2-16(a-b) in the 2017/18 GRA proceeding; YUB-YEC-1-5 and YUB-YEC-1-6(b) in the ERA Part 1 proceeding. See also YUB-YEC-1 in review of the 1st Compliance Filing.

[29] CW-YEC-1-3(a) notes YEC's 2016 Resource Plan reviewed air emission impacts of diesel and LNG as well as future opportunities to develop alternative renewable generation resources. Part (c) notes that YEC seeks to maximize LNG use versus diesel wherever this is practical and reasonable given LNG results in lower utility costs as well as lower GHG emission than would occur with diesel use.

[30] The Technical Session Background Notes Part 4 and 5 note that should the LWRF as outlined in the 2nd Compliance Filing be approved, Yukon Energy's business risk would increase (i.e., Yukon Energy would have increased risk for water variability above forecast loads).

4.2 OTHER UCG COMMENTS

Much of UCG's argument relating to the LWRF reviews past issues addressed during the GRA and the 1st Compliance Filing and does not provide any specific points to be addressed regarding the 2nd Compliance Filing issues.

UCG raises other comments that relate to "procedural process", "consistent methods and future rate hearings" and "mitigation efforts".

- UCG submits (para 29-34) that some of the processes used by the YUB are not consistently applied from application to application and are not fair or equitable for all stakeholders.
- UCG takes issue (para 35-40) with the YUB's use of actual results for 2017 for determining final rates; noting "the YUB appears to change its position on whether it should rely on actual operating result for one year and not for another."
- UCG submits (para 41-46) that "when revenues increase from one sector of ratepayers, then all the other ratepayers should get a rate decrease since revenue requirements have already been set", and "a proper sharing of the benefits of industrial loads would help protect residential customers from this large rate increases represented in the proposed rate riders at the hardest time of the year for many ratepayers."

UCG's other comments as referenced above are beyond the scope of the 2nd Compliance Filing proceeding, and do not merit any reply. Accordingly, the Board should not consider these other UCG comments.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

P. John Landry

Counsel for Yukon Energy Corporation

November 5, 2019

Attachment 1: Review of Evidence on Water-Related Pricing Options

From the outset of YEC's rates being regulated by the Board, it has been accepted as a basic principle that diesel cost variances from forecast due to water availability variances are a ratepayer risk and not a utility risk.

Similar to other hydro-based systems, the system in place in Yukon to deal with water flow variation since the 1990's has been intended to maximize rate stability and predictability and mute the harsh short-term economic efficiency criteria (to the extent it might be relevant) as it arises with respect to diesel cost changes related only to water availability variances from approved forecasts used to set rates. The DCF /LWRF were established by the YUB specifically to smooth out short term price variability related to water availability and to provide firm rate customers with stable and appropriate longer term price signals.

The evidence in this proceeding has reviewed why an alternative approach that provides price signals related to water availability creates many new concerns. For example, it is not realistic to assume that the "cost of a severe drought" could ever be borne by only those ratepayers using power at the time of the drought. This was reviewed in detail in the response to YUB-YEC-2-13.[31] The worst year drought condition noted for the 2018 test period forecast load and fuel prices was forecast to result in 100 GWh of thermal generation and an additional $14.8 million in thermal costs; and extended severe low water conditions, (i.e., thermal generation of 24 GWH or more) were also shown to be possible over 8 consecutive years (based on water years 1996 to 2004). Severe and extended drought conditions have been noted to create several practical issues for any attempt to set prices based on actual annual diesel fuel costs, including:

- The difficulty of preparing, reviewing and approving in a timely way (i.e., to be operative in each year of the drought) the necessary GRA submissions needed to approve the needed rate changes.
- Aside from time needed for regulatory processes, assessment of actual water conditions affecting any given year can be subject to its own issues, i.e., forecasts for a subsequent year are subject to material change up to the end of the previous summer, and actual water conditions during any given year can also obviously change water conditions for that year.
- In addition to the above issues, imposing such added drought costs in rates for the affected year (or even spread over "a few" years) would result in "rate shock" for all Yukon ratepayers. In practice, one way or the other, drought-related cost impacts would

[31] See 2017-18 GRA, Table 3.4-6A, Appendix 3.4 (Attachment 3.4.4). The worst year drought condition is currently expected (with 2018 test period forecast load and fuel prices) to require more than 100 GW.h of thermal generation with single year added fuel costs (at GRA forecast fuel prices and fuel mix, and 420 GW.h annual grid load) approximating $14.8 million over and above the LTA fuel cost of $2.2 million/yr - and with prospects for extended severe low water conditions (i.e., thermal generation equal or exceeding 24 GW.h/yr when LTA thermal requirement is only 13.9 GW.h/yr) to occur over eight of nine consecutive years.

need to be charged to ratepayers over many years, i.e., including many years beyond when the actual drought water conditions occurred.

Looking beyond issues related to trying to charge drought costs only during drought conditions, providing price signals related to water availability would also create issues for a range of consumer and utility investments and tend to frustrate rather than enhance effective long-term planning by ratepayers and the utility. Basic examples of such issues reviewed in this proceeding include:

- In high water years (i.e., over half of the 35 water years at 420 GW.h/yr load), ratepayers would be given lower prices for power, suggesting that (to the extent feasible) ratepayers should increase power use through investment in electric heating, minimizing of DSM, developing new business activities, etc.; high water years would mask the inevitable increases needed under low water conditions, as well as any rate impacts related to major increases in fuel prices, increased need for thermal generation at LTA conditions associated with higher loads, and the benefit of investing in new renewable resources to displace fossil fuels.
- In low water years (i.e., about 20% of the 35 water years at 420 GW.h/yr load), ratepayers would be given much higher prices for power, suggesting that (to the extent feasible) ratepayers should reduce power use through switching to other heat sources, maximizing DSM, cutting back on new business activities, etc.; low water years would send price signals of long-term power costs well above the likely long term requirement, inhibiting business and consumer confidence in Yukon's ability to provide affordable and competitive power costs, and encouraging longer term renewable resource investment based on ST fossil fuel cost savings.

Overall, it is easy to see a wide range of ratepayer issues related to ST pricing based on water variance impacts on thermal generation, and difficult to forecast long term benefits in securing more efficient overall use of electricity. CW's argument supported use of LTA as the base for the LWRF as short-term forecasts (which would be a likely requirement for shorter-term pricing) would likely cause unwanted price fluctuations.