

December 10, 2019

Mr. Robert Laking, Chair
Yukon Utilities Board
Box 31728
Whitehorse, Yukon Y1A 6L3

Dear Mr. Laking:

Re: Low Water Reserve Fund – 2018 Annual Filing

In Order 2019-04, the Board determined that Yukon Energy's LWRF, its calculations and associated term sheet in the 1st Compliance Filing (February 25, 2019) were not compliant with the directions of Board Order 2018-10 and were not approved. YEC was directed to revise its LWRF in accordance with the Board's findings in this decision in a 2nd Compliance Filing (September 23, 2019).

In summary, the Board directed that YEC is at risk for all thermal generation costs associated with loads that vary from the approved GRA forecast, including related thermal generation costs resulting from changes in water conditions from those assumed in the approved GRA thermal generation forecast. LWRF assignments are directed to be for thermal generation cost changes due to water condition change impacts only on the approved forecast load.

Order 2019-08 accepted YEC's 2nd Compliance Filing as submitted subject to any direction in Appendix A of the Order. Section 3.3.2 of Appendix A to Order 2019-08 accepted the LWRF submitted by YEC for the purpose of the 2017-18 GRA only (para 59), subject to removing from the Term Sheet the Fixed Change Factor references and the reference to "Diesel on the Margin" (para 52 and 54).

Based on the directions for the Low Water Reserve Fund (LWRF) provided in Order 2019-08, the following are attached for Yukon Utilities Board (YUB or the Board) review and approval:

1. **Updated LWRF Term Sheet** (Attachment 2.1-1 of Yukon Energy's September 23, 2019 Compliance Filing) – As directed in Order 2019-08, the LWRF Term Sheet removes the Fixed Change Factor and reference to "Diesel on the Margin", and provides (in replacement of the Fixed Change Factor) the LTA hydro term sheet

table for 2018 adjusted for the change in Minto load shape (See Attachment 2.1-1, Table 2.1-1)¹. YEC will provide the Board for review and approval, an update to the Table 2.1-1 when required in future to address material changes in LTA hydro system capability due to loads, installed capacity, licensing/ permits or other factors.

The LWRF Term Sheet as amended describes the same overall procedure as used in the 2nd Compliance Filing to determine estimated actual thermal generation at forecast load, as directed by the Board. The only change to this procedure is use of the LWRF hydro term sheet table instead of the Fixed Change Factor.

Table 2.1-1 (2018 Expected LTA Generation with Minto Load Shape Change) was used to determine the LTA forecast thermal generation at actual Yukon Integrated System (YIS) load for 2018; and the estimated actual thermal generation at the forecast load was determined using the steps outlined in the example provided in Table 2.1-2 (LWRF Analysis – 2018 Year End).

- Table 2.1-2, row 6 shows the YIS load variance at +26.89 GWh for 2018 actual YIS grid load (447.15 GWh) relative to GRA compliance filing forecast (420.26 GWh).
- Table 2.1-2, row 7 provides the LTA thermal generation at actual YIS load of 31.391 GWh as determined from Table 2.1-1.
- Table 2.1-2, row 10(b) indicates that 4.56 GWh of variance in actual vs. forecast thermal generation is due to adverse changes in water conditions, equal to actual thermal generation (35.95 GWh) less LTA thermal generation at actual YIS load (31.391 GWh).

The LWRF Term Sheet provides that costs for YEC thermal generation savings (excess) based on actual final YEC load for a 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) 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%.²

¹ In the 1st and 2nd Compliance Filings, this table was provided in Attachment 2.1-2. The only change for Table 2.1-1 is that the example at the bottom of the table shows the approved 2018 determination of the LTA thermal of 31.391 GWh for the actual 2018 grid load for 447.153 GWh (net of expected wind and Fish Lake Hydro).

² Board Order 2019-04 requires that the LWRF be determined based on estimated actual thermal generation for the forecast load. To comply with this direction, the percent of actual diesel at the estimated actual thermal generation for

2. Updated Low Water Reserve Fund (LWRF) Annual Reports and ERA Filing for 2017 and 2018 [Appendix 2.2 of the Yukon Energy February 25, 2019 Compliance Filing updated to address directions provided in Order 2019-08] – This includes the following information:

- a. Attachment 1 – LWRF Calculations for 2017 and 2018 based on Board Order 2019-08 and Balance Updates.
- b. Attachment 2 – 2017 and 2018 ERA Filing.
- c. Attachment 3 – Update on 2019 Forecast Water Conditions.

The attached LWRF Term Sheet has been used (as directed in Order 2019-08) to determine the LTA forecast thermal generation at actual YIS load for 2018.

Please direct any questions on this communication to the undersigned.

Yours truly,



Ed Mollard
Chief Financial Officer

the forecast load is assumed to be the same as the actual diesel generation percentage for actual year-end YEC firm generation.