

**IN THE MATTER OF YUKON
ENERGY CORPORATION
("YEC") ENERGY
RECONCILIATION
ADJUSTMENT ("ERA") PART 1
APPLICATION**

FINAL ARGUMENT

YUKON ENERGY CORPORATION

March 16, 2018

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YUKON ENERGY CORPORATION (“YEC”) ENERGY RECONCILIATION ADJUSTMENT (“ERA”) PART 1 APPLICATION

YUKON ENERGY CORPORATION FINAL ARGUMENT

PREFACE

OVERVIEW OF APPLICATION

Pursuant to Board Order 2017-08, on December 6, 2017 Yukon Energy (“YEC”) filed the ERA Part 1 Application (the “Application”) with the Yukon Utilities Board (“YUB” or “the Board”) to comply with the September 17, 2017 direction of the Yukon Court of Appeal and further directions of the Board.

Yukon Energy’s Application requests Board approval for an amended Rate Schedule 42 that complies with the Yukon Court of Appeal’s direction, and for resulting ERA amounts for 2012 through 2016 (including a correction to the 2012 ERA) that enable Yukon Energy to recover all of its thermal generation costs, including any net Diesel Contingency Fund (“DCF”) payment made by YEC, attributable to ATCO Electric-Yukon’s (“AEY’s”) above forecast purchases of electricity.

Yukon Energy is requesting an Order of the Board approving:

- The amended Rate Schedule 42; and
- The ERA final amounts of \$501,000 for 2012 and zero for 2013, and the ERA interim amount of zero for each year from 2014 to 2016 (subject to final approvals, as part of the final annual DCF approvals, of the long-term average thermal generation amounts for these years based on actual YEC firm generation for each year).

OVERVIEW OF YUKON ENERGY FINAL ARGUMENT

Yukon Energy’s Final Argument follows the Application outline, and includes the following sections:

1. Context for Part 1 of the ERA Application: Yukon Court of Appeal;
2. 2012 ERA Charge;
3. Response to Board Order 2017-08 Directions regarding 2012 ERA Amount;
4. Other Pre-2017 ERA Amounts: 2013 to 2016; and
5. Amended Rate Schedule 42.

1.0 CONTEXT FOR PART 1 OF THE ERA APPLICATION: YUKON COURT OF APPEAL

The ERA is an unsettled matter from the 2012-13 GRA and the 2014 DCF/ERA Proceeding that has been before the Yukon Court of Appeal and was not finally determined until September 2017. Yukon Energy is seeking finalization of charges to AEY for 2012 ERA amounts following the Court's decision.

Section 1.2 of the Application reviews the Yukon Court of Appeal's findings at paragraphs 63 to 70, including related references to the revised DCF as approved by the Board in Board Order 2015-01.

In paragraph 71 of the Court's judgment, the Court remitted the matter back to the Board with directions "to set a wholesale rate that enables Yukon Energy to recover all of its diesel generation costs, which costs include any net DCF payment made by Yukon Energy attributable to Yukon Electrical's [AEY's] above-forecast wholesale purchases of electricity."

The Court of Appeal's findings in paragraphs 66 to 70 reference a net DCF payment in 2012 of \$439,000 made by Yukon Energy attributable to Yukon Electrical's above-forecast wholesale purchases of electricity. The Court's findings at paragraph 37 reviewed the basis for the \$439,000 amount based on YEC's prior filings with the Board, noting that under DCF rules Yukon Energy was obliged in 2012 to pay into the DCF the expected increase of \$1.773 million in diesel generation costs attributable to the excess wholesale demand of 14,264 MW.h higher than forecast, and that additional revenues from the above-forecast purchases were \$1.334 million, leaving a shortfall of \$439,000.

In keeping with the Court of Appeal's direction and the Board's directions in Order 2017-08 the Application provides an amended Rate Schedule 42 wholesale rate enabling YEC to recover all of its diesel generation costs, including any net DCF payment made by YEC attributable to AEY's above-forecast wholesale purchases of electricity. In addition based on the amended Rate Schedule 42 the Application seeks Board approval for final ERA amounts for 2012 and 2013, and interim ERA amounts for 2014 to 2016 (subject to final approvals of the DCF amounts for these years).

2.0 2012 ERA CHARGE

Table 1-1 in the Application provides the determination of the ERA charge to AEY, or Yukon Electrical Company Limited [YECL], of \$501,000 for 2012 based on the amended Rate Schedule 42 in Appendix 1.

Yukon Energy has provided the following added documentation regarding Table 1-1:

- AEY-YEC-1-3(a) and (e) Attachment 1 provides an excel file that includes the detailed calculation for the ERA amount.
- CW-YEC-1-1- Attachment 1 provides the source material for each item noted in Table 1-1 of the Application.

- The response to YUB-YEC-1-1(e) and (f), (h) and (m) provide details of the determination of the numbers in Table 1-1; and the response to YUB-YEC-1-6 (c) provides Tables 2.1 and 2.2 for sales and generation approved forecasts and actual results for the years 2012 to 2016.

Correction to 2012 ERA Amount

The excel file provided in response to AEY-YEC-1-3(a) and (e) includes the detailed calculations both for the previous ERA determination of \$439,000 [as included in the April 7, 2015 Board Order 2015-01 Compliance Filing] and for the revised ERA determination of \$501,000 [as included in the ERA Part 1 Application].

It is important to point out that there was no methodology change in how YEC calculated the revised 2012 ERA amount of \$501,000 [AEY-YEC 1-3(b)]. The increase of \$62,000 from the \$439,000 amount estimated in YEC's April 7, 2015 ERA filing (and referenced in the Yukon Court of Appeal reasons) corrects mistakes made in the calculation included in the previous \$439,000 number, more particularly:¹

- To reflect use of actual rider charges in 2012. The earlier estimate was based on the full revenue shortfall of 6.85% for all of 2012 when in fact that amount was not recovered from customers through any Rider J charge applicable in 2012. The corrected estimate now reflects the actual interim Rider J of 6.4% (not 6.85%) that was charged in 2012 and further it takes into account the fact that interim Rider J was only in place from July 1 to December 31 (a \$52,000 impact); and
- To reflect the fact that YEC Rider J revenue does not change due to wholesale changes related only to Fish Lake variances from LTA [a \$10,000 impact].²

It is also important to note that the correction in revenue impacts for the ERA has no relationship to DCF calculations, does not result in any impact to the DCF calculation for 2012, and has no relationship to the DCF Term Sheet or to YECSIM. [See AEY-YEC-1-3(d) and UCG-YEC-1-5(a)].

- ERA charges flowed through to AEY are determined after YEC's final thermal generation costs for the fiscal year are determined and consequently do not impact the determination of YEC's final thermal generation costs for the fiscal year.

As noted above, the ERA is an unsettled matter from the 2012-13 GRA and therefore YEC is not seeking in the Application to update Rider J rates charged to customers related to added wholesales in 2012. As a result the orders requested are not retroactive rate setting as suggested by the Utilities Consumers' Group (UCG). See UCG-YEC-1-4(a), YUB-YEC-1-1(m) and YUB-YEC-1-3 (a) and (b).

¹ The corrections relate only to YEC added revenues attributed to the excess AEY wholesales above the GRA forecast. No change was made to YEC added diesel generation costs attributed to the added AEY wholesales.

² A more detailed review of the changes in the 2012 ERA amount due to these corrections is provided in YUB-YEC-1-3 and in the Application at pages 1-5 and 1-6.

Clarifications regarding Table 1-1 Terms

Clarifications regarding terms in Table 1-1 of the Application were provided in response to several IRs. “**LTA**” as used in this table and in the Application refers to long term average (LTA) generation or costs determined as per an approved GRA or per the approved DCF Term Sheet Table. The terms “**LTA**” and “**expected**” have the same meaning [in the context of Table 1-1 of the Application].³

Key IR references that clarified specific terms in Table 1-1 are summarized in Table 1 below.

³ See YUB-YEC-1-1(i) and (j).

Table 1: Key References to Interrogatory Responses for Table 1-1 Terms

| | 2012 | IR Reference | Summary |
|---|---------|-------------------------|---|
| A1 Actual wholesales | 310,264 | YUB-YEC-1-1(a) | Actual wholesales for 2012. |
| A2 GRA approved wholesales assuming Fish Lake LTA generation | 296,000 | | |
| A3 Fish Lake generation adjustment (expected LTA less actual) | 992 | YUB-YEC-1-1(b) and (d) | "Expected LTA" means long term average Fish Lake generation as approved by the YUB. "Actual" means AEY's actual generation from Fish Lake hydro in 2012. |
| A4 Change in wholesales for ERA | 13,272 | | A4=A1-A2-A3 |
| YEC Cost Impact per kW.h change in Wholesales | | | |
| B1 Losses (%) | 8.80% | YUB-YEC-1-1(c) | Actual YEC line losses for 2012 |
| B2 Total YEC's actual generation net of secondary, LTA wind & FL (MWh) | 423,310 | YUB-YEC-1-1(h) | Refers to Line 12 of Table 1 of Attachment 1 to Appendix 3.5 of YEC's 2012/18 GRA. "Actual Generation" is determined after deducting LTA Fish Lake hydro generation & LTA wind generation; and includes metered total generation less metered secondary sales. Deductions remove impacts from actual secondary sales and provide actual firm grid generation. "LTA wind and FL" is estimated LTA wind (approved for GRA forecast) and LTA Fish Lake hydro generation (adopted for approved GRA forecast). Deductions ensure that "Actual generation" used to determine LTA hydro and LTA thermal generation removes impacts related to actual wind or actual Fish Lake hydro generation varying from the long-term averages used for the GRA. |
| B3 GRA approved load forecast, net of expected wind (MWh) | 405,314 | YUB-YEC-1-1 (i) and (j) | Net of "expected" Fish Lake hydro generation and "expected" wind generation as approved for the GRA. "Expected" refers to LTA generation or costs determined per an approved GRA or an approved DCF Term Sheet Table. |
| B4 YEC incremental generation relative to | 17,995 | | B4=B2-B3 |
| B5 YEC's actual LTA Thermal Generation (MWh) | 15,622 | YUB-YEC-1-1(i) and (k) | Refers to the DCF determination of LTA thermal generation (after year end) based on actual YEC generation; determined using the approved DCF Term Sheet Table and actual 2012 generation. |
| B6 GRA LTA Thermal Generation (MWh) | 7,926 | YUB-YEC-1-1(i) and(l) | Refers to approved GRA forecast of LTA thermal generation. Based on approved Compliance Filing for the 2012-13 GRA and forecast firm generation at 405,314 MWh determined net of LTA wind and Fish Lake generation and the approved DCF Term Sheet Table. |
| B7 YEC Incremental thermal generation relative to GRA approved (MWh) | 7,696 | | B7=B5-B6 |
| B8 Incremental thermal generation for incremental total generation (%) [B8=B7/B4] | 42.77% | CW-YEC-1-1(f) | In 2012, the incremental total generation was 17,955 MWh and incremental LTA thermal related to this generation growth was 7,696 MWh. This results in 42.77% of incremental LTA thermal (i.e., 42.77% of increased generation was supplied by LTA thermal). |
| B9 Thermal Generation cost per GRA (\$/kW.h) | 0.2871 | CW-YEC-1-1 (f) and (g) | Approved fuel cost of diesel generation for 2012 (approved in Order 2013-01 and 2013). Approved fuel cost of 28.71 cents/kWh = the 2012 GRA approved fuel cost at \$2.276 million divided by approved LTA thermal generation at 7.926 GWh. |
| B10 YEC thermal cost change (\$/kWh wholesales) [B10=B9*B8*(1-B1)] | 0.1336 | CW-YEC-1-1 (f) and (g) | 42.77% of 28.71 cents/kWh (plus applicable losses of 8.8% to allow the cost to be applied to wholesales growth). Wholesale growth of 13.272 equals 14.440 GWh of added grid generation after including 8.8% losses, and added diesel generation related to this growth is 42.77% of added grid generation (6.176 GWh) and costs \$1.773 million (assuming 28.71 c/kWh for diesel generation). |
| YEC Revenue Impact per kW.h change in Wholesales | | | |
| C1 Rate Schedule 42 Energy Charge (\$/kW.h wholesales) | 0.0830 | | |
| C2 Average YEC rider applicable to AEY retails (\$/kWh wholesales) | 0.0066 | YUB-YEC-1-1(m) | Estimates Rider J revenues that YEC received from the added AEY wholesales that exceeded the GRA forecast in 2012. Rider J was applicable in 2012 only for the last 6 months. 71.8% of YEC 2012 added wholesales (higher than GRA forecast) occurred in the last six months of 2012 when the Rider J applied. |
| Net thermal cost impact on YEC (\$000) | | | |
| D1 Wholesale Change: Cost Impact (YEC thermal generation costs) [D1=A4*B10] | 1,773 | CW-YEC-1-1 (f) | 13.36 c/kWh (B10) times 13,272 MWh change in wholesale results in \$1.733 million cost impact. |
| D2 Wholesale Change: Revenue Impact (YEC revenues) | 1,272 | | D2=A4*(C1+C2)+A3*C1 |
| D3 Cost change>revenue change ("Yes"=1, "No"=0) [D3=is D1>D2 (absolute)] | 1 | CW-YEC-1-1(i) | Purpose of this line is to set the ERA at zero in years when the revenue change (due to wholesale change) exceeds the cost change to YEC. This line shows "1" when the cost change due to wholesale (Line D1) is higher than the revenue change (Line D2); and shows "0" when the opposite is true. Line D3 is used in calculation for Line D4. No ERA amount occurs when Line D3 shows "0" because YEC's revenue change exceeds its cost change due to the wholesale change. |
| D4 ERA Charge (rebate) to AEY [Net added cost (cost saving) for YEC] | 501 | | D4=D3*(D1-D2) |

3.0 RESPONSE TO BOARD ORDER 2017-08 DIRECTIONS REGARDING THE 2012 ERA AMOUNT

The Board in Order 2017-08 provided several statements from the record of YEC's 2017-18 GRA (responses to IRs) regarding potential variances of YECSIM model assessments compared to actual YEC operations, and directed Yukon Energy in its application regarding the 2012 ERA amount "...to explain the extent of any adjustments needed to account for the above-noted concerns when it determines the amount payable by AEY to YEC".

The concerns noted by the Board were summarized in Section 1.4 of the Application as follows:

- Lack of detailed retrospective verifications or tests of YECSIM;
- Long-term planning models such as YECSIM is not set to replicate actual past short-term operational decisions or to address future short term operational planning;
- Differences may occur in actual system operation from YECSIM planning model simulations (in response to operator assessments of, or response to, specific conditions);
- YEC assesses added opportunities to enhance winter storage beyond those simulated by YECSIM; and
- The restriction of YECSIM model assessments to specific operational rules.

Section 1.4 of the Application also noted that the Board in Order 2015-01 (page 23) had identified the following specific concerns regarding the YECSIM model use for the ERA:

1. "The Board is of the view that the results of the YECSIM model cannot be verified;
2. The YECSIM model is a planning tool and not a billing engine; and
3. Operational decisions of YEC can affect variables such as losses and in turn affect diesel generation requirements."

Section 1.4 of the Application [pages 1-6 to 1-10] provides YEC's views on the extent that the Board's concerns affect the use of YECSIM results for the ERA (versus its use in relation to the DCF or other determinations of the Board). YEC also addressed the Board's concerns in response to a number of interrogatories.

In summary, the YECSIM model is not used as a "billing engine" or as the basis to determine the ERA charged to AEY in 2012.⁴ The 2012 ERA is determined based on the final thermal generation costs actually incurred by YEC in 2012 that can be reasonably assigned to AEY, without any reference to YECSIM. Further, because YEC's final thermal generation costs were determined based on the DCF Term Sheet as approved by the Board, actual system operation had no impact on the 2012 ERA.

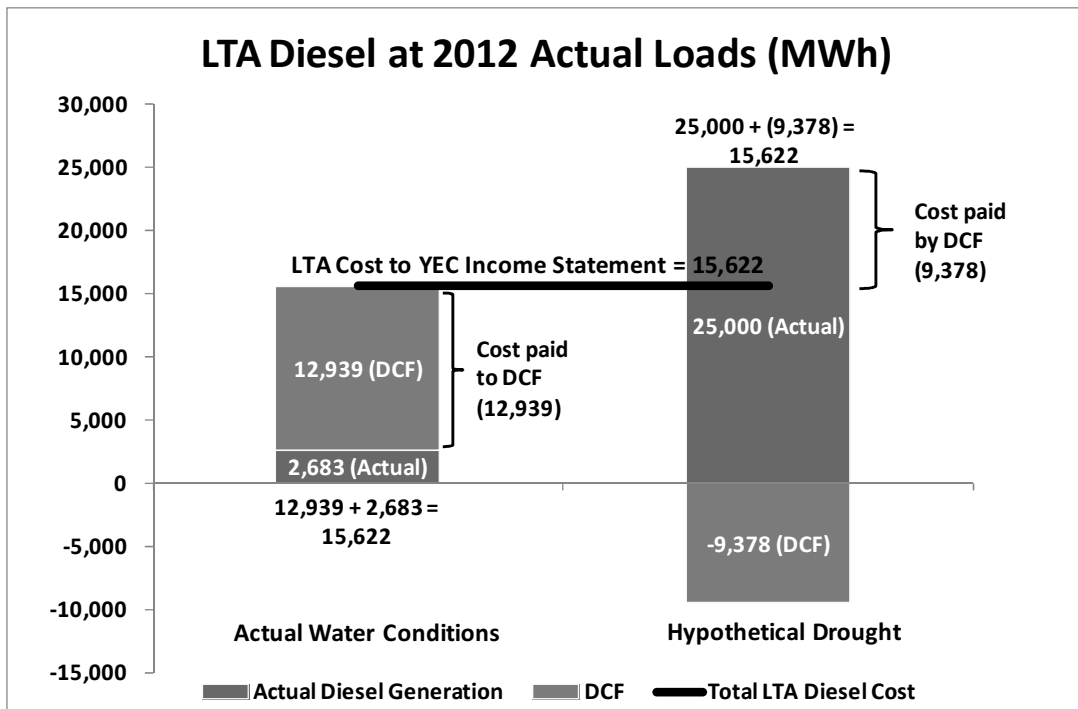
Supporting references for these summary conclusions are noted below.

⁴ See Application pages 1-9 and 1-10.

Overall, the Application [page 1-7 and 1-10] and IR responses have clarified that YECSIM is not used directly as a billing engine that determines ERA charges to AEY. Information regarding YECSIM model verification or testing has been reviewed in prior proceedings (see response to AEY-YEC-1-1(b)), and YEC is not able to provide any analysis of operation decisions in 2012 that varied from YECSIM assumptions for 2012 (see response to UCG-YEC-1-5). However, the issue of verification does not arise regarding the ERA because YEC’s actual diesel generation costs are determined based on a DCF Term Sheet as approved by the Board without any new YECSIM assessments.

Figure 1 below from YUB-YEC-1-5 sets out LTA diesel generation for 2012 based on 2012 actual total generation. It demonstrates that the LTA diesel generation and cost to YEC remain unchanged, even when water conditions are changed from the actual 2012 water conditions, or actual diesel generation operated by YEC (net of capital projects and RFID diesel generation) vary based on water conditions.

Figure 1: LTA Diesel at 2012 Actual Loads (MW.h)



In summary, although payments into or out of the DCF fund in any year can potentially be affected by items other than changes in forecast water levels (including activities such as enhancing winter storage and changes due to actual system operations), such items do not affect the final LTA diesel generation amount for the year (as estimated using the approved DCF Term Sheet and the total actual generation load for the year). See also response to CW-YEC-1-1(e).

Key factors regarding YECSIM and the ERA include:

- YECSIM derives the DCF Term Sheet Table which, after approval by the Board, is then used to determine the volume (kWh) of LTA diesel generation for a given actual annual firm generation load supplied by YEC.

- The ERA is determined each year based, in part, on: (1) YEC's final LTA diesel generation volume calculated using the actual firm grid load for the year and the approved DCF Term Sheet Table; and (2) changes from the GRA forecast LTA diesel generation volume calculated using the approved GRA forecast grid load and the DCF Term Sheet Table. [AEY-YEC-1-1(a)].
- Although YECSIM's accuracy in estimating LTA hydro generation affects the DCF Term Sheet Table (as well as test year revenue requirements approved by the Board), YEC's final diesel generation costs for each year are determined solely using the DCF Term Sheet Table and the GRA approved unit rates for diesel generation. [AEY-YEC-1-1(a)].

With regard to the specific 2012 ERA charge, YEC's actual LTA diesel generation volume for 2012 used to determine YEC's final diesel generation costs was determined based solely on the Board approved DCF Term Sheet Table (i.e., taking the LTA diesel generation for the actual grid load in 2012 from that Table) without any further use of the YECSIM Model. See Application page 1-7 and response to AEY-YEC-1-1(b).

Regardless of the forecast used to determine grid thermal generation requirements and related expense (whether that forecast be set by YECSIM or some other model), the key regulatory requirement is consistent application and implementation for GRA test years and for determining subsequent diesel generation requirements and costs charged to YEC at each year end.

During each GRA, the adoption of LTA estimates and the related DCF Term Sheet Table created from the YECSIM model (including its parameters) are subject to regulatory oversight. Whether or not YECSIM can be retrospectively verified does not prevent the Board from providing regulatory oversight regarding Yukon Energy LTA thermal costs and subsequent ERA charges to AEY. [AEY-YEC-1-1(c)].

4.0 OTHER PRE-2017 AMOUNTS: 2013-2016

Table 1-2 in the Application provides ERA determinations for 2013 to 2016, based on the amended Rate Schedule 42 in Appendix 1.1 of the Application. These amounts are calculated using the same methods and approach used to determine the ERA amount for 2012 in Table 1-1.⁵ Because the Board has approved DCF amounts for 2013, the 2013 ERA is a final number. Since no DCF amounts have

⁵ YEC GRA LTA thermal as approved for 2013 assumed AEY connection of the Whitehorse Copper Tailings major industrial load, with an approved modified DCF Term Sheet table to reflect the changed grid load shape. Actual LTA expected thermal generation for 2013 to 2016, however, continued to be determined based on the approved DCF Term Sheet applicable without this new industrial load.

Line B9 thermal generation costs per kW.h are per the DCF annual report, and reflect LNG impacts in 2015 and 2016 resulting in lower average costs per kW.h.

Line C2 estimates of average YEC rider applicable to AEY retails (\$ per kW.h wholesales) are per YEC records. The last AEY GRA reported actual or estimated AEY base rate retail revenues and rider payments to YEC for 2013 to 2016 (effective average rider % of base rate AEY retail revenues at 12.02% for 2013, 13.25% for 2014, 11.09% for 2015; assumed at 11.01% for 2016).

been approved by the Board for 2014-2016, the 2014 to 2016 ERA determinations are considered interim until such time as the Board approves the DCF amounts for these years.⁶

Table 1-2 indicates that no ERA charge or rebate applies for the years 2013 to 2016, based on the fact (as shown in line D3 of Table 1-2) that YEC's wholesale change revenue impact in each year exceeded YEC's wholesale change cost impact.

As reviewed in response to CW-YEC-1-1(i), the purpose of Line D3 in Table 1-1 (and Table 1-2) is to set the ERA at zero in years when the revenue increase or decrease to YEC (due to an increase or decrease in wholesales compared to GRA forecasts) exceeds the related thermal generation cost increase or decrease to YEC. Overall, the purpose of the ERA in a year such as 2012 is to enable YEC to recover its diesel generation costs net of revenues due to wholesale loads exceeding GRA forecasts.

The relevance of these factors related to Line D3 of Table 1-2 is highlighted in the ERA Application at pages 1-12 and 1-13, including Table 1-3.

5.0 AMENDED RATE SCHEDULE 42

Yukon Energy is applying for Board approval of the amended Rate Schedule 42 as provided in Appendix 1.1 of the Application, effective January 1, 2012.

The amended Rate Schedule 42 includes an ERA that enables Yukon Energy in each calendar year to recover all of its diesel or other thermal generation costs, net of related changes in Yukon Energy wholesale revenues, attributable to YECL's above-forecast wholesale purchases of electricity. The ERA in the amended Rate Schedule 42 also requires Yukon Energy in each calendar year to rebate all of its diesel or other thermal generation cost savings, net of related changes in Yukon Energy wholesale revenues, attributable to YECL's below-forecast wholesale purchases of electricity.

The ERA in the amended Rate Schedule 42 is to be determined for each calendar year based on actual wholesale purchases exceeding or falling short of Yukon Energy's most recent test year forecast wholesale purchases as approved by the Board. In this regard, Rate Schedule 42 deals only with Wholesale Primary, i.e., ERA determinations do not include any reference to YEC secondary wholesales.

The ERA amount for each year will be provided for Board review and approval, concurrent with the Annual DCF Report filing by Yukon Energy.

⁶ In response to YUB-YEC-1-7, YEC stated that it considers the ERA amounts included in Table 1-2 final. For 2014 to 2016, this is subject to Board approval of the DCF final report for these years as it relates to the final LTA thermal generation amounts for each year.

ALL OF WHICH IS RESPECTFULLY SUBMITTED



P. John Landry
Counsel for Yukon Energy Corporation

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