Yukon Energy Corporation Part 2 Application
Regarding the ERA, YECSIM and other new information

Information Requests No. 1
ATCO Electric Yukon ("AEY")
Submitted: March 14, 2018

AEY-YEC-1

Topic: Risk profile

Reference:

"YECL's proposal would fundamentally change how all diesel-related forecast risk is managed in Yukon (please refer to Table 1-1 for review of these traditional risk sharing relationships), and in effect seeks to replace the DCF with a diesel deferral account that:

- At a basic level the proposal submitted by YECL would provide the basis for each utility to have a diesel deferral account that would fully protect and insulate each utility from any diesel related forecast risk, regardless of the cause; and

- In contrast, as reviewed above, the proposal submitted by YECL would do nothing to manage on behalf of ratepayers the fundamental concerns regarding rate instability due to water variability on a predominantly hydro-based system.

Historically, each utility has carried the risk for increased or decreased costs due to changes in the load compared to GRA forecasts and specifically with regard to load changes, equipment availability (i.e., unexpected maintenance or outages, except where such charges are appropriately part of insurance claims or uninsured losses) and generator efficiency.

…

Table 1-1: traditional Diesel-related regulatory risk sharing relationships in Yukon, YEC Supplemental Filing

Factors that affect diesel generation requirements	Ability to forecast	Who carries risk for forecast inaccuracy	How is risk addressed
1. Fluctuation in diesel price from GRA forecast	Each utility provides a diesel price forecast for the test years; actual fuel prices may vary considerably from forecast due to volatile market conditions that are outside the utility's ability to forecast	Ratepayers	Rider F and Diesel fuel price variance account (DFPVA)
2. Availability of water and / or wind	Each utility provides a forecast of expected LTA hydro generation; actual hydro generation may vary considerably from forecast depend on water availability in a given year.	Ratepayers	Diesel contingency fund
3. Volume of interconnected grid sales	Each utility forecasts the volume of sales in GRA test years.	Utilities	Utility forecast risk
4. Location of load (line losses)	Each utility provides forecast of line losses in test years.	Utilities	Utility forecast risk
5. Operation of system	Each utility provides sales and generation forecasts based on its knowledge regarding how the system is expected to operate	Utilities	Utility forecast risk
6. Unexpected event / loss	Not forecastable	Ratepayers	Reserve for injuries and damages (RFID) and insurance.

YEC supplemental filing, June 30, 2014, pp 1-7 to 1-8

"Specifically, items, such as efficiencies or inefficiencies related to actual YEC operation of its hydro or thermal generation facilities in any specific year are not addressed in LTA estimates such as those provided by YECSIM. If operational decisions result in the system being run more efficiently than assumed in the LTA estimates, then there will be more hydro generation [and less thermal] and a larger payment by YEC into the DCF (or a reduced rebate to YEC from the DCF); if operational decisions result in less efficient operation and higher diesel generation than assumed in the LTA estimates, then the YEC payment into the DCF will be smaller (or the rebate to YEC from the DCF will be larger).

Overall, YEC seeks to operate its facilities as efficiently as possible. The goal is to use as much water as allowed in order to reduce thermal generation requirements. To this end, YEC's staff continuously monitor the elevations in YEC's reservoirs, based on actual levels and the trajectory of the water usage to low supply levels. Based on this monitoring,

operators are advised what flow of water they can access. Updates are done several times a week, but can be daily, especially when approaching low supply levels in spring."

YEC response to YUB-YEC-1-6(b), ERA Part 1 Application

"Yukon Energy's actual thermal generation cost and net income are determined each year solely based on the DCF Term Sheet Table [Table 3.4-1] as approved by the Board for determining expected diesel generation for the actual grid load."

YEC response to YUB-YEC-1-6(a), ERA Part 1 Application

"…the purpose of the DCF mechanism (and the earlier LWRF) as originally established, and as proposed to be updated and re-activated in the Application, is to provide a ratepayer trust fund (i.e., a fund that is funded by, and maintained for, the benefit of ratepayers) to smooth customer rate changes driven by changes in actual thermal generation costs caused by variances from LTA levels of hydro and wind generation **due solely to water and wind availability.**" **[emphasis]**

YEC Argument, October 29, 2014, page 5

Preamble: AEY is interested in the regulated risk profile of the DCF and the purpose of the DCF.

Requests:

(a) Please confirm that, under YEC's DCF proposal, YEC does not carry the "4. Location of load" diesel-related risk described in the referenced table above. If not confirmed, please explain. If confirmed, please explain who carries the "4. Location of load" diesel-related risk.

(b) Please confirm that, under the DCF proposal, YEC does not carry the "5. Operation of system" diesel-related risk described in the referenced table above. If not confirmed, please explain. If confirmed, please explain who carries the "5. Operation of system" diesel-related risk.

(c) Please confirm that the proposed DCF mechanism does not isolate cost variances due “solely to water and wind availability”. If not confirmed, please explain. If confirmed, please discuss whether YEC believes the proposed DCF fulfills its purpose.

AEY-YEC-2

Topic: Price signals

Reference: "the DCF has been established to provide stability for rates, and to reflect the underlying long-term valuation of renewable hydro and wind generation (where economic feasibility typically is assessed based on long-term average energy supply). In this context, intergenerational equity is enhanced to the extent that the DCF is able to provide rate stability – and price signals (i.e., higher rates) during a drought to promote conservation are not seen as fair or reasonable."

YEC response to AEY-YEC-1-3(e), YEC 2017/18 General Rate Application

"YEC has a $10 million line of credit that would be used to finance a DCF shortfall up to the current cap of $8 million. If the Board directed that this cap would be increased to $16 million, YEC would propose to accrue cash sufficient to cover the increase in a trust bank account over a reasonable period of time. This approach would avoid finance charges on this excess balance."

YEC response to AEY-YEC-1-3(b), YEC 2017/18 General Rate Application

Preamble: AEY is clarifying YEC's discussion of price signals.

Requests:

(a) Please confirm that YEC is of the view that the DCF provides a long-term price signal based on long term average hydro availability that helps promote intergenerational equity.

(b) Please confirm that YEC is of the view that the DCF does not provide a short-term price signal – i.e. that consumers are not encouraged to conserve energy when hydro energy is unavailable through their electricity rate.

(c) Please consider the following hypothetical scenario. "A large, new customer is connected for a term of 10 years. The customer uses approximately 25% of the grid energy each year. At the beginning of the term, the DCF is at its cap. Water is

low throughout the term of the customer's connection. At the end of term, the customer is disconnected and has benefited approximately $4 millions from the DCF, the DCF is depleted, and YEC has borrowed against its line of credit to the lower DCF cap." For this scenario, please discuss:

i. Has the DCF operated as intended?

ii. If the answer to (i) is affirmative, please explain why this customer should not be provided a short-term price signal to encourage conservation if hydro is low or unavailable.

AEY-YEC-3

Topic: DCF ERA appeal decision

Reference: "The Board's decision was unreasonable. By interpreting "actual diesel generation costs" for two rate stabilization mechanisms differently, in an internally inconsistent manner, the Board set a rate that prevents Yukon Energy from recovering diesel related costs it actually incurred for generating the electricity sold to its wholesale customer."

2017 YKCA 15 Yukon Energy Corporation v. Yukon (Utilities Board), page 2

Requests:

(a) Please confirm that YEC is of the opinion that the ERA must be allowed because the DCF was allowed. Please discuss.

(b) Please discuss that the corollary to (a). i.e. the DCF should not be allowed, because the ERA was not allowed.

AEY-YEC-4

Topic: YECSIM Model

Reference: "The structure of the YECSIM model was custom-made by KGS Group to **take into account all significant factors that affect the operation of the YEC power system** including complex rules of operation and regulatory demands on YEC."

YEC response to AEY-YEC-1-1(b), ERA Part 1 Application

Requests:

(a) Please confirm that YECSIM does not take into consideration instantaneous demand or load location.

(b) Please confirm that YEC believes instantaneous demand is not a significant factor affecting the operation of the power system.

(c) Please discuss response to (b). In your discussion, please include the following:

i. Please explain what is the maximum hydro generation capacity.

ii. Please explain how a load that is higher than the maximum hydro generation capacity would be served with generation.

(d) Please confirm that YEC believes load location is not a significant factor affecting the operation of the power system.

(e) Please discuss response to (d).

(f) Please provide all costs that YEC has paid in relation to YECSIM since its inception, by year and by party.

(g) Other than YECSIM, has YEC considered the use of any hydro generation grid software or is it aware of any such software, whether developed or conceptual? If so, please list such software. If not, please discuss how KGS Group was selected to provide YECSIM.