TOPIC: **DCF and related matters**

REFERENCE: **YEC DCF ERA filing, YEC 2012-2013 GRA, YEC 2008 Diesel Contingency Fund Filing**

On March 29, 2010, Yukon Energy filed its 2008 DCF filing and noted the potential need to update methods of operation of the DCF. It was noted that the DCF operating rules would require attention in the future to address a number of new circumstances, including updating long-term average hydro generation values, fund triggers, and potentially a means to address secondary sales. Today, following connection of the WAF and Mayo Dawson grids, it is also necessary to adjust the DCF to deal with more than only WAF hydro generation. [1]

The proposed updated approach would permanently switch "on" the DCF through use of a formulaic approach that would automatically adjust forecast annual long-term average hydro generation and related diesel (or other non-diesel fossil fuel) generation to reflect actual grid generation load. Based on this DCF proposal there will no longer be a "diesel on the margin" test for activating the DCF.[2]

…Diesel was not on the margin for any month of the 2008 period. During December 2008 diesel generation exceeded the on the margin threshold of 250 MW.h/month used within the Diesel Contingency Fund as a determinant to indicate that all diesel generation is presumably required only for baseload serving purposes. Upon review it is evident that the diesel generation was for unplanned maintenance or peaking purposes… [3]

[1] YEC DCF-ERA filing, Appendix 1.1, page 1.1-2.

[2] YEC 2012 GRA, Tabs 1-11, page 5.

[3] YEC 2008 Diesel Contingency Fund Filing, March 29, 2010, page 2.

PREAMBLE:

Further information is required.

QUESTION:

a) In the past, the DCF was triggered at a point where the diesel usage was "presumably required only for baseload serving purposes."[4]
   i. Does YEC's current DCF proposal go beyond accounting for baseload diesel requirements?
   ii. Please define baseload diesel requirements — i.e. is diesel generation required for short-term emergencies or peaking purposes, considered to be baseload diesel?

b) Prior to YEC's original DCF proposal which was submitted as part of its 2012-13 GRA, did YEC consult with YECL about permanently switching on the DCF through the use of a formulaic approach? If so, please provide rationale and reasoning that was proposed as well as YECL's response. Please provide all documentation.

c) With respect to the 2012 and 2013 test years, please indicate the months for each of the test years when secondary sales were not available to customers.

d) Does YEC wish to comment on YECL's statement that "…Yukon Energy believes diesel expense can be recovered from two sources: (1) ratepayers if Yukon Energy's forecast is accurate; or (2) Yukon Electrical if Yukon Energy's forecast is inaccurate. Yukon Electrical maintains that prudently-incurred costs must be recovered from ratepayers."[5]

[4] YEC 2008 Diesel Contingency Fund Filing, March 29, 2010, page 2.

[5] YECL DCF-ERA filing, January 31, 2014, Appendix A, page 6.

ANSWER:

(a)

The term "baseload diesel requirement" has been used in various past GRA and DCF submissions to highlight when diesel is "on the margin", i.e., notable diesel requirements are forecast to be required to supply a forecast load under an assumed water condition[6]. The term has not been precisely defined. It has typically indicated a situation when diesel requirements under forecast water conditions go beyond a periodic peaking requirement - however, when "baseload" requirements have been forecast, typically no attempt has been made to separate out "baseload" from "peaking" diesel requirements, and it has not been implied that diesel is necessarily "on the margin" for every hour or month. The term excludes diesel for emergencies, maintenance, and to address other similar special non-water and non-load conditions.

YEC's current DCF proposal is consistent with previously approved DCF as regards accounting for "diesel on the margin", i.e., it does not include diesel generation for emergency, maintenance or other similar special non-water and non-load conditions, and it does not attempt to separate out "peaking" from other diesel generation when diesel is on the margin.

Additional background is provided below to elaborate on these points.

YEC's current DCF proposal addresses a situation for the 2012-13 GRA test years, as well as subsequent years, when diesel is forecast to be "on the margin", i.e., diesel is forecast to be required to meet firm energy requirements (and not just periodic peaking conditions) at long-term average hydro generation water conditions.[7]

[6] A recent example is the YEC 2012-13 GRA submission filed in April 2012, Section 1.3. At page 1-7, for example, load growth is noted to be causing increased diesel generation costs and it is stated: "The Application marks a major transition in forecast annual long-term average [LTA] baseload diesel generation needed to meet grid load growth..." In the Application, LTA diesel generation provided the basis for all forecast diesel generation requirements, i.e., no attempt was made to break out "peaking" diesel generation. The LTA forecast did not consider potential emergency diesel requirements.

[7] This definition of "diesel on the margin" is what is provided in YEC's January 31, 2014 submission, Appendix 1.1, page 1.1-2.

Under such conditions as were forecast to apply for the 2012-13 GRA test years, YEC's current DCF proposal is the same as the DCF as approved in the past with regard to the following:

- There is no relevant "threshold" of actual diesel generation that is relevant to activation of the DCF in such years;

- No distinction is made between "baseload" and "peaking" diesel generation in either forecast or actual diesel generation (and no definition of such terms is relevant to implementation of the DCF); and

- Diesel generation requirements are excluded that arise due to hydro generation capital projects (i.e., when hydro generation is curtailed to carry out a capital project), or due to transmission line outages such as may occur due to forest fires, or are funded by RFID or insurance.

The referenced "YEC 2008 Diesel Contingency Fund Filing", dated March 29, 2010, including the DCF table of calculations for 2008 attached to this prior filing, is attached to this response as Attachment 1. The following elements of the prior DCF operation are demonstrated in this filing:

- The March 2010 filing stated at page 2 that "Diesel was not on the margin for any month of the 2008 period." This comment reflected the manual determination made at line 10 of the attached DCF table as to whether diesel was "on the margin" in any given month; as reviewed in past filings with the Board[8], this determination in the past was made solely based on whether the Faro mine was operating, i.e., in 2008 the Faro mine was not operating in any month, and therefore zero was shown at line 10 for each month. The definition of "diesel on the margin" at line 10 was not dependent in any way on actual diesel generation in any month.

[8] For example, YEC's filing with the Board on October 7, 1999 providing responses to specific questions asked by the Board regarding the DCF operations for 1996 through 1998. A copy of this, along with the related letter from YEC to the Board and other DCF documents from 1996 to 1999 was attached as Attachment 3 to YUB-YEC-2-4 in the 2011 proceeding re: Rider F issues - the full set of Attachments 1-4 to this earlier IR response is provided as Attachment 2 to this response.

- Reference in the March 2010 filing at page 2 to "the on the margin threshold of 250 MW.h/month" referred to a threshold that applied only to determinations made at line 16 in the attached DCF table; as provided for at line 16, this margin threshold applied only in months when it had already been determined (at line 10 of the attached DCF table) that diesel was "not on the margin". The following additional points are noted regarding the origins and purpose of this 250 MW.h/month threshold:

    - The 250 MW.h per month threshold was developed in 1997/98 when preparing DCF reports as a simple provision, when the Faro mine was shut down, for small amounts of diesel generation that may be required for purposes unrelated to variances from long-term hydro capability[9].

    - In order to address this factor when the Faro mine is closed, the DCF was not activated in any such month when actual diesel generation did not exceed 250 MW.h (as provided for at line 16 of the DCF report table for YEC).

    - Subject to further checks (see below), in such a month when actual diesel generation exceeded 250 MW.h, all of the diesel generation was included in the DCF determinations.

    - However, as noted in the 2008 filing attached as Attachment 1 for the month of December 2008, the 250 MW.h per month threshold could be set aside if it was determined separately that actual diesel generation was due to factors unrelated to below average hydro generation water conditions.[10]

    - The 250 MW.h per month threshold was developed based on WAF loads in 1997/98 when the Faro mine was not operating, and provided a useful guide for many years. However, at higher WAF loads existing by 2008 and thereafter, this number no longer provides a useful test - and as indicated in the 2012-13 GRA, and Order 2013-1, diesel generation is

[9] See Attachment 2 (page 30) to this response (October 7, 1999 filing, Attachment A page 4).
[10] See also Attachment 2 of this response, letter of October 7, 1999 to the Board and its references to treatment of 1997 and 1998 fire-related impacts.

now required to supply firm loads on the grid under long term average hydro generation water conditions.

As reviewed in Attachment 2 of this response (page 30), YEC defined "diesel on the margin" in its October 7, 1999 filing as a concept used to represent the significant impact that the operation of the Faro mine had on the Yukon electrical system. Actual hydro generation and actual diesel generation did not affect whether diesel was determined to be "on the margin" at line 10 of the DCF table. As reviewed above, in months when diesel was not "on the margin" (due to shut down of the Faro mine), no formal definition of "baseload" or "peaking" was ever defined beyond the 250 MW.h threshold per month reviewed above - and that threshold was subject to review, as noted, to exclude diesel generation required for reasons clearly not related to low water conditions.

(b)

Prior to the 2012-2013 GRA filed in April 2012, YEC had worked with YECL in developing the ERA as approved in Order 2011-06 which reflected the joint submission of both utilities and applies when "diesel generation in the Hydro zone is on the margin at long-term average water flows." YEC had also discussed with YECL issues related to YECL's wholesale purchase power deferral account as approved in Board Order 2009-02 which fully addresses any cost impacts on YECL from load forecast variance derived ERA cost charges.

YEC did not consult YECL, prior to submitting its 2012-2013 GRA in April 2012, about permanently switching on the DCF through the use of a formulaic approach. The rationale and reasoning that was proposed for this proposal was set out in detail in the 2012-2013 GRA as filed, as well as in subsequent responses to IRs.

(c)

Please see response to AEY-YEC-1-9(a). For each of the test years, secondary sales were activated during the following period:

- 2012: July 10 to October 24 [secondary sales not available from January 1 to July 9; and from October 25 to December 31].

- 2013: August 1 to October 1 [secondary sales not available from January 1 to July 31 and from October 2 to December 31].

REVISED RESPONSE:

Please see revised response to AEY-YEC-1-9(a).

(d)

YECL's statement, and the related Table 3.1 in its submission, do not help the Board.

The ERA as approved in the past, and as proposed by YEC today, is designed so that each utility can recover from Hydro rate zone ratepayers the diesel generation energy costs prudently incurred by YEC. The only difference today is the need to provide for a YECL deferral rate rider to recover (or rebate) any ERA amounts not covered by YECL's approved Hydro rate zone retail run-out energy rate charges - in the past this added rider was not required because Hydro zone retail run-out rate charges fully reflected the incremental diesel generation energy charges incurred by YEC.

The following additional comments are provided to assist on this matter:

1. At a most fundamental level, YECL's statement fails to recognize key features that remain unchanged in YEC's current proposals regarding the ERA from what was agreed to by both YEC and YECL in the past, and approved by the Board in past decisions, including:

    a. The ERA continues (as in the past) to address the specific issues that arise only when YEC's forecast wholesales (as approved by the Board) "is inaccurate", i.e., there are no such issues to address (and no ERA applicable) if actual wholesales from YEC to YECL (after Fish Lake adjustments) are exactly the same as the Board approved forecast, and 100% of YEC's diesel cost would under such circumstances be recovered from ratepayers.

b. The ERA continues (as in the past) to be required and applicable only when diesel is on the margin for YEC (i.e., YEC's costs for diesel will be determined by the DCF mechanism) and actual wholesales to YECL vary from approved forecasts (for reasons not related to Fish Lake hydro generation variances).

c. The ERA continues (as in the past) to flow through to YECL only the actual net cost (or saving) incurred by YEC with regard to diesel generation costs incurred (or saved) due to YECL's higher than forecast (or lower than forecast) wholesale purchases from YEC.[11]

d. The ERA continues (as in the past) to apply only to YECL wholesale variances from approved forecasts, i.e., it does not address the diesel cost impacts on YEC due to variances from approved forecasts for YEC retail or industrial sales.

e. The basis for the ERA being applied to YECL continues (as in the past) to reflect the following:

   i. OIC 1995/90 direction that the wholesale rate to YECL must "be sufficient to enable Yukon Energy Corporation to recover its costs that are not recovered from its other ratepayers".

   ii. Unlike other YEC customers, YECL is a regulated utility that purchases wholesales from YEC in order to sell the power to its retail and industrial customers at rates as approved by the Board, i.e., YECL's revenues are directly impacted when changes in its retail and industrial sales lead to variances from approved forecasts in its wholesales purchases.

   iii. The wholesale rate otherwise charged by YEC to YECL (absent the ERA) is only a simple average energy rate, determined on the basis of the Board approved wholesale forecast:

[11] Section 4.6 of YEC's 2012-13 GRA filing reviews the last Board approval of the ERA in the 2008/09 GRA per Order 2011-6.

- This average energy rate wholesale charge from YEC to YECL is well below the incremental energy rates charged by YECL to its customers.

- This average energy rate wholesale charge is also well below the incremental diesel generation energy costs incurred or saved by YEC as a result of YECL wholesale purchases varying from the approved forecast.

iv. The ERA charges or rebates continue (as in the past) to address only the gap, as applied only to the variance in actual wholesales from approved forecast, between the approved wholesale average energy rate charged to YECL and YEC's DCF-determined incremental diesel generation energy costs that impact YEC with regard to any variance in actual wholesales from approved forecast.

v. It continues to be assumed (as in the past) that YECL's incremental rate revenues related to increased wholesale requirements above approved wholesales forecasts are to be applied as "ratepayer" funding to cover ERA charges to YECL (and that the decreased rate revenues related to shortfalls in wholesale requirements below approved wholesale forecasts are also applied as "ratepayer" saving associated with ERA rebates to YECL).

2. The YECL statement also fails to recognize the one fundamental change today (from the past) in YEC's proposal related to ERA charges, i.e., all ERA charges or rebates to YECL, net of any related YECL revenue changes associated with the same purchase power variances addressed by the ERA charges or rebates, will go directly to YECL's Purchase Power Flow Through deferral account to flow through to ratepayers at such time or times as approved by the Board. This change reflects the following considerations:

a. The extent to which current run-out retail rates in the Hydro rate zone do not reflect fully YEC's incremental diesel generation energy costs with implementation of the DCF, and the need to enable YECL to recover from (or rebate to) ratepayers these prudently incurred net costs.

b. The avoidance of added impacts on ratepayers that would occur if YECL's revenue offsets are ignored as would occur under Option B in YEC's January 31, 2014 submission.[12]

[12] See pages 6 and 7 of YEC's January 31, 2014 submission - Option A (which is proposed) versus Option B saves ratepayers $531 million in deferral account amounts to be recovered through rate riders based on 2012 and 2013 examples included, with $0.443 million relating to YECL wholesales (i.e., the exclusion of offsetting YECL revenues related to wholesale variances) and the balance ($0.088 million is the corrected amount) relating to YEC industrial and retail sales impacted with Option B.

REFERENCE: "However, since diesel is now forecast to be on the margin in the test years these mechanisms once again become relevant and important."

(YEC 2012-2013 GRA Application, p. 2-12)

"The Fund does not currently deal with secondary sales conditions or revenues, since the Fund only is active when diesel is on the margin (i.e., when secondary sales are not allowed).

UPDATE: Secondary revenues remain highly variable component of YEC's income structure and fundamentally are made feasible from time to time based on water flows. For this reason a logical connection exists to the updated DCF and the overall objective of facilitating rate stability. In order to have stability in GRA rate revenues it is proposed that YEC will forecast 0 GWh of secondary sales in any GRA for the purposes of setting rates whenever annual long-term average hydro forecasts indicate the need for forecast baseload diesel/gas generation costs to be included in rates. In the event secondary sales arise secondary revenues will then be credited directly to the DCF (without any Rider F related adjustment or impact for price changes), thereby helping to fund the long-term risks related to hydro generation water condition fluctuation."

(YEC 2012-2013 GRA Application, Attachment 3.2, Page 6)

"Secondary energy is available from time to time to General Service or Industrial customers in parts of the WAF and Mayo-Dawson systems as determined by Yukon Energy based on the availability of surplus hydro."

(Rate Schedule 32)

	For Standard metered Secondary Service Customers	
Year	**Secondary Sales 'ON'**	**Secondary Sales 'OFF'**
2012	July 10, 2012	October 21, 2012
2013	July 31, 2013	October 31, 2013
2014	June 19, 2014	

PREAMBLE:

AEY is seeking further understanding about the concept of "diesel on the margin."

QUESTION:

a) Please provide the dates and times of YEC's activation of secondary sales for its SCADA customers from 2012 to today.

b) Please explain why diesel should be considered "on-the-margin" all of the time in 2012 and 2013 when secondary sales were "on" for a substantial part of the year.

c) Please list any new customers engaged by YEC in 2012, 2013 or 2014 that have been offered secondary sales.

ANSWER:

(a)

YEC secondary sales were activated for YEC's SCADA customers during the following time periods:

- 2012: July 10 to October 24.
- 2013: August 1 to October 1.
- 2014: June 9 to current.

REVISED RESPONSE:

The following clarifications and corrections are provided to the August 19, 2014 response:

1. The activation dates provided for 2012, 2013 and 2014 related to non-SCADA secondary sales customers. The activation dates provided were applicable to all non-SCADA customers except for one customer (Yukon College) which was provided secondary sales in January 2013 due to issues with their primary heat system in that month.

2. One SCADA customer (the Canada Games Centre) has been provided with secondary sales over the period from 2012 to present. This customer can be disconnected nearly instantaneously if conditions warrant. The customer has not been cut off over the period due to the high water conditions experienced over the time period.

(b)

As approved in Board Order 2013-01, diesel has been considered "on the margin" for 2012 and 2013 total loads based on the forecast needed in each test year for material firm diesel generation at 100% of long-term average (LTA) hydro generation water conditions. These determinations were made for the test years when (based on the GRA as filed in April 2012) actual hydro generation water conditions were forecast to be well above LTA (see for example YUB-YEC-1-1(a)). Actual diesel generation (or its absence) has no bearing today or in the past on the determination as to whether diesel is "on the margin (see YUB-YEC-1-1, YUB-YEC-1-4), whereas actual access to secondary sales is determined based on actual surplus hydro generation due to actual water conditions.

In each of the above years from 2012 to 2014 (current) secondary sales were available over the summer period only (i.e., from June or July until October). The availability of secondary sales over the summer periods noted relates to the fact that over this period there was higher than annual average hydro generation as well as (for much of this seasonal period) lower than annual average grid loads. Secondary sales were not available over the winter months for any of the years noted in response to (a) above.

The 2012/2013 General Rate Application noted that system growth since the closure of the Faro mine, and resulting depletion of surplus hydro, meant that secondary sales revenue benefits were no longer available on a reliable forecast basis going forward to reduce total revenues required to be collected in rates. Secondary sales (and related revenues) were not forecast to be available in the test years and were not expected to be available on more than a limited basis going forward.

The 2012-13 GRA also recognized that, notwithstanding that diesel is now on the margin for annual generation forecasts, secondary sales could still occur during high water years or seasons – and, in order to enhance rate stability and augment the DCF funds available for future low water years, the 2012-13 GRA proposed that any future secondary revenues be fully assigned to the DCF (which benefits ratepayers in dealing with future fossil fuel generation costs resulting from lower than average hydro generation) rather than be included as revenues to YEC. The Board rejected this approach in Order 2013-1.

REVISED RESPONSE:

Please see revised response provided to (a) above. Secondary sales to non-SCADA customers have been cut off for winter months with one exception noted. Secondary sales have continued to be provided to one SCADA customer over the winter months largely due to the higher than average water conditions over the period since 2012 and due to the fact that the SCADA customer is capable of being nearly instantaneously cut off if the event that conditions changed.

(c)

New customers engaged by YEC in 2012, 2013 or 2014 that have been offered secondary sales are as follows:

- 2012: Chilkoot Brewing, Quadra Equities, City of Whitehorse, YTG Law Centre.
- 2013: Chilkoot Brewing, City of Whitehorse (all year), YTG Law Centre.
- 2014: City of Whitehorse (January 1-current).