

**PETER PERCIVAL/HAMLET OF MOUNT LORNE
(PWP/HML)**

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) If OIC 2008/149 requires that “rate adjustments for retail customers apply
6 equally, when measured as percentages, to all classes of retail customers.” And
7 other retail customers are receiving overall percentage changes in the range
8 between (17.8%) and (13.7%) why do Rate Schedules 61/66, 67, 75/76 only
9 receive negative 3.48% to all base rates.

10

11 **ANSWER:**

12

13 **(a)**

14

15 Each class of retail customer is receiving a rate reduction equal to 3.48%. This same
16 percentage does not apply to each specific rate or charge within the class rate structure,
17 but at a class level the percentage reductions are equal.

18

19 The reference to percentage changes in the range between (17.8%) and (13.7%) reflect
20 only the overall impact (after all riders, rebates and subsidies) of changes to the first
21 block energy charge. As reviewed in the Application, the overall rate change to each of
22 the related retail classes remained an overall 3.48% reduction.

23

24 Due to the absence of any separate rate components, all space and street lighting base
25 rates were simply reduced by 3.48%.

1 **REFERENCE:**

2

3 **QUESTION:**

4

- 5 a) On a monthly basis, during the period from the time of hook up of Minto to at
6 least the end of January 2009, what were the estimated or actual average all in
7 costs on the WAF for YEC to generate a kWh from each of wind, diesel and
8 hydro sources? What was the blended hydro/diesel actual all in costs per kWh on
9 the WAF on the same basis over the same period?

10

11 **ANSWER:**

12

13 **(a)**

14

15 Yukon Energy cannot calculate “estimated or actual average all in costs” on a monthly
16 basis, or by generation type. Even a full Cost of Service analysis, including significant
17 analysis on the classification and allocation of all of YEC’s and YECL’s costs, would not
18 yield this type of information on a monthly basis, nor typically by generation type.

19

20 Short-term incremental costs of WAF diesel generation (ignoring capital-related fixed
21 costs, but including fuel, variable O&M and assumed 10% line loss to supply the
22 customer), based on GRA prices (117 c/litre), are 37.37 cents/kW.h for 2009, as set out
23 at the top of page 4-12. Monthly variations in such costs have not been forecast. Actual
24 costs for fuel during November to January were below GRA forecasts.¹

25

26 In contrast, short-term incremental costs for established WAF hydro generation and wind
27 generation are typically very low, and hard to measure. For hydraulic generation, this
28 has been estimated in the past at 0.5 cents/kW.h. Such costs are not assessed or
29 forecast to vary on a monthly basis.

¹ UCG-YEC-1-62(a) indicates that, based on January 2009 fuel prices, WAF short-term incremental costs of diesel generation were 24.8 c/kWh. Actual average inventory costs charged for fuel use might be lower or higher, depending on average blended costs of inventory at that time.

1 **REFERENCE:**

2

3 **QUESTION:**

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5 a) On a monthly basis, during the period from the time of hook up of Minto to at
 6 least the end of January 2009, how much energy generated on the WAF system
 7 was subject to Rider F fuel adjustments? On a monthly basis over this period
 8 how much revenue was collected via Rider F on the WAF?

9

10 **ANSWER:**

11

12 **(a)**

13

14 Diesel generation on WAF and total Rider F collections in the Yukon since
 15 commencement of service to Minto (November 22, 2008) are as follows:

16

WAF	YEC Diesel Generation			Rider F
	kWh	Litres	Price Variance	Collections
From Nov 22-08				(All Yukon)
Nov-08	-	-	-	
Dec-08	663,618	179,465	\$ (80,696)	\$ 521,703
Jan-09	700,879	187,289	\$ (84,546)	\$ 693,220
	1,364,497	366,754	\$ (165,243)	\$ 1,214,923

17

18 YEC diesel generation on WAF for the period from mine in service date of November 22,
 19 2008 to January 31, 2009 was 1,364 MWh. This resulted in 366,754 litres of fuel that
 20 would have been subject to Rider F fuel adjustment in the amount of \$165,243.¹

21

22 YEC is not able to report the Rider F revenues collected specifically for the WAF for the
 23 corresponding period as YECL, the primary distribution company serving the WAF, does
 24 not share its community level data with YEC.

25

26 YEC is able to report that Rider F collections for all communities in Yukon during the
 27 corresponding period were \$1,214,923.

¹ The fuel adjustment is the amount that the actual average inventory price for fuel used is in excess of the 2005 GRA fuel price forecast price.

1 **REFERENCE:**

2

3 **QUESTION:**

4

- 5 a) On a monthly basis, during the period from the time of hook up of Minto to at
 6 least the end of January 2009, how much energy generated on the WAF system
 7 and supplied by YEC to the Minto mine was subject to Rider F fuel adjustments?
 8 On a monthly basis over this period how much revenue was collected via Rider F
 9 from the Minto mine?

10

11 **ANSWER:**

12

13 **(a)**

It is not practical to estimate “how much energy generated on the WAF system and supplied by YEC to the Minto mine was subject to Rider F fuel adjustments.” As provided in response to PWP/HML-YEC-1-19, total YEC diesel fuel consumed on WAF, in kW.h and litres, and amount of fuel price variance charged to the diesel fuel price variance account (Rider F account) since hook of the Minto mine until the end of January 2009 is as follows:

WAF	YEC Diesel Generation		
	kWh	Litres	Price Variance
Nov-08	-	-	
Dec-08	663,618	179,465	\$ (80,696)
Jan-09	700,879	187,289	\$ (84,546)
Total	1,364,497	366,754	\$ (165,243)

14

15

Total Rider F collections from Minto

Minto Rider F collections		
	kWh	Rider F
Nov-08	784,980	\$ 5,267
Dec-08	2,415,504	\$ 16,208
Jan-09	2,459,856	\$ 16,506
	5,660,340	\$ 37,981

16

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) Has a reduction in price for these units been determined as a result of their
6 current condition and based on related depreciation and maintenance expenses
7 related to actual use in excess of stipulated hours of operation? If so please
8 provide the new estimated or actual purchase price for each unit and the costs
9 estimates (or actual costs) to restore them to acceptable levels of service.

10

11 **ANSWER:**

12

13 **(a)**

14

15 The purchase price of the Minto Diesel Units is determined in accordance with the terms
16 of the Power Purchase Agreement. This price is to be determined at the time when
17 Yukon Energy is assigned the Cat leases. To date, Yukon Energy has not been
18 assigned the relevant Cat leases for these diesel units and therefore has yet to actually
19 purchase the units. Accordingly, no final price is yet available, as discussions are
20 ongoing.

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) Please provide, in Excel format (with explanations for all assumptions i.e. interest
6 / discount rates, current purchase prices, rehabilitation costs, service lives,
7 repositioning schedules with costs, annual O&M (hours of use, fuel efficiencies,
8 etc.), security/insurance costs, depreciation, periodic upgrades, salvage /
9 reclamation / remediation / retirement costs, etc.), the detailed life cycle net
10 present value (in this case cost) engineering economy comparison studies for the
11 business case justification of the purchase of the Minto diesel units as compared
12 to the refurbishment and similar O & M costs for the Mirrlees.

13

14 **ANSWER:**

15

16 **(a)**

17

18 The business case analysis for the Minto diesels or any other form of peaking capacity is
19 driven almost entirely by the capital costs per MW. Over the life of the units, operating
20 costs, including fuel efficiency, insurance costs, etc. for units that are basically
21 emergency stand-by units operating very few hours in any given year are very low
22 compared to the capital costs incurred. For this reason, the business case analysis on
23 new sources of capacity hinge almost entirely on the comparative capital cost estimates
24 provided in YUB-YEC-1-34(e).

25

26 The other factor that is supportive of the Minto diesels is portability. These units offer
27 significant flexibility compared to a Mirrlees life extension project or other baseload
28 permanent installation diesel unit, as they can be moved as necessary and ultimately
29 disposed of (sold) at market prices if determined to be no longer required.

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) Did Minto confirm by Dec. 31, 2008 its ability and commitment to process
6 Additional Reserves at the Mine prior to Dec. 31, 2017? Has Minto provided YEC
7 with documentation as to an Adjusted Mine Life due to increases in processing
8 rates or increased reserves as per the May 25, 2007 PPA Agreement?

9

10 **ANSWER:**

11

12 **(a)**

13

14 Minto did not confirm by Dec. 31, 2008 its ability to process Additional Reserves prior to
15 December 31, 2017. As provided for in the May 25, 2007 PPA Amendment, Minto has
16 provided YEC with access to its public documentation as to its reserves and processing
17 to date as required to determine an Adjusted Mine Life due to increases in its licensed
18 mill processing rate. During 2009, Minto plans to confirm material additional reserves.

19

20 Yukon Energy is currently in discussions with Minto regarding these matters.

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) In light of current economic conditions is it realistic to expect that customer
6 extensions will cost YEC \$150,000 over the test years?

7

8 **ANSWER:**

9

10 **(a)**

11

12 Yes.

13

14 As it does only a small degree of distribution, Yukon Energy has limited customer
15 connections in any given year, typically small customers. The standard annual budget
16 for this has been \$475,000, offset by an estimated \$400,000 in customer contributions.

17

18 There is no evidence current economic conditions will materially affect the rate of
19 residential and small commercial customer connections in the communities YEC serves
20 directly. The best estimate YEC can provide of the rate of customer connections is as
21 set out in the GRA.

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) In RATE SCHEDULE – 42, what is the 37.37 cents per kW.h based upon? Is this
6 the actual (or estimated) cost to generate a kW.h of electrical energy by diesel
7 alone on the WAF system?

8

9 **ANSWER:**

10

11 **(a)**

12

13 The Energy Reconciliation Adjustment (ERA) in Rate Schedule 42 is to reconcile
14 wholesale purchases to test year forecast purchases; it is applied only when diesel
15 generation is on the margin¹, and per the 1996/97 GRA approved rate, was set at the
16 approved run out rate for non-government residential service for the Hydro Zone. Based
17 on OIC 1995/90 and the related implementation principles approved in the 1996/97 joint
18 YEC/YECL GRA, the Hydro Zone non-government residential run out rate was
19 determined based on short-term incremental diesel generation costs (fuel plus variable
20 O&M and 10% for line losses from the generator to customer meter).

21

22 As per the 1996/97 GRA determination of the non-government residential run out rate,
23 the 37.37 cents per kWh is based on the Application's forecast cost of diesel generation
24 on the WAF system as used in the Application for 2009 (see Page 4-18 of the
25 Application). Footnote 11, at page 4-12 of the Application, provides the following
26 explanation of the calculation of 37.37 cents/kWh noting it is based on:

27

28 Average 2009 YEC fuel price for hydro systems of \$1.170/litre, average
29 efficiency of 3.60 kW.h/litre, 10% system-wide losses and assuming
30 retention of the 1.6 cents/kW.h variable O&M estimates from 1996/97.

31

32 Overall, the proposed Rate Schedule 42 addressed the need to ensure that, regardless
33 of the Hydro Zone non-government residential run out rate approved at this time (i.e.,
34 YEC has sought only a modest increase in this rate to start moving to the levels required
35 per OIC 1995/90), the ERA will provide that YEC is compensated for its GRA-approved

¹ Order 1999-4 approved a Settlement between YEC and YECL on Rate Schedule 42 which, among other provisions, confirmed that "the ERA mechanism will apply only during months when diesel is on the margin for the WAF system."

- 1 forecast cost of diesel generation in the event that such generation is required to supply
- 2 YECL with wholesales greater than the GRA forecast wholesale purchases.
- 3
- 4 Please see also response to YUB-YEC-1-22.

1 **REFERENCE:**

2

3 **QUESTION:**

4

5 a) If there is a very cold winter and YECL's actual wholesale purchases
6 substantially exceed forecasts won't the provisions of Schedule 42 effectively
7 require YECL to establish a form of Diesel Energy Surcharge Rider to recover
8 the YEC adjustment costs from YECL' retail customers? Will YEC' industrial
9 customer(s) be subject to the same Schedule-42 adjustment rate?

10

11 **ANSWER:**

12

13 **(a)**

14

15 The Energy Reconciliation Adjustment (ERA) provisions of Rate Schedule 42 occur only
16 after the fact, when diesel generation is on the margin for WAF operations of YEC, and
17 do not provide under a very cold winter any basis for changes to retail or industrial rates
18 or for any form of Diesel Energy Surcharge Rider to be sought by YECL. Please see
19 PWP/HML-YEC-1-35.

20

21 The triggering of the ERA does not create any new costs, it only addresses the
22 distribution of costs between Yukon Energy and YECL. In the event diesel generation is
23 on the margin for YEC, and YECL's load grows beyond the forecast levels reflected in
24 Rate Schedule 42 rates, there will be an actual cost to the system of 37.37 cents/kW.h of
25 added retail load growth to generate the power to serve this added load growth. The
26 presence of the ERA does not create this cost, it only ensures that this cost is
27 appropriately recovered by YEC from YECL, consistent with the terms of OIC 1995/90,
28 section 7(b).

29

30 The effect is exactly analogous to the situation if YECL's load grows in Watson Lake
31 beyond what was forecast in the GRA – in that case there is a need for YECL to incur
32 the costs of diesel generation to serve the load growth, without any resort to rate
33 changes or a Diesel Energy Surcharge Rider. There has not been, nor is there expected
34 to be, any "Diesel Energy Surcharge Rider" related to such diesel generation costs on
35 any system in Yukon.

1 The industrial rate schedule currently does not include a provision for an Energy
2 Reconciliation Adjustment. However, Rate Schedule 39 continues to provide for a Base
3 Load Energy Amount to be established at any time for a customer of 90% of forecast
4 use when YEC expects to require diesel fuel generation to service use in excess of such
5 a Base Load Energy amount. At such time, Rate Schedule 39 provides that YEC will
6 submit this rate schedule to the YUB for amendment to adjust the Energy rate as
7 required for a two part rate that yields the same overall energy charge at forecast energy
8 use, with all energy consumed in excess of the Base Load being charged at a rate
9 reflecting the incremental cost of using diesel fuel generation and all other energy being
10 charged at the reduced rate required to yield the same overall energy charge at forecast
11 energy use. This concept has been included in previous industrial rate schedules in
12 Yukon applicable to the Faro mine.

1 **REFERENCE:**

2

3 **QUESTION:**

4

- 5 a) At my request, on February 6, 2008 I met with YEC staff members (David
6 Morrison and Hector Campbell among others) to discuss rate design issues and
7 concerns that I suggested could possibly be addressed in the upcoming GRA
8 process. At that meeting I asked if YEC would consider studying the
9 re-introduction of the Diesel Energy Surcharge which would include automatic
10 fuel adjustment provisions so as to eliminate blended diesel/hydro rates and to
11 more fairly distribute the actual costs of generating diesel electric energy on each
12 of the WAF and M-D hydro zones to all classes of customers through all rate
13 blocks whenever diesel generation was required on these systems. Sorry for the
14 preamble. My questions are did YEC undertake such a study and if so can YEC
15 please provide copies? If this study was not carried out can YEC please explain
16 the reasons why not?

17

18 **ANSWER:**

19

20 **(a)**

21

22 YEC has not undertaken the suggested study. Yukon Energy did not attempt to
23 undertake any fundamental redesign of base rates for this Application, and as a result no
24 such study was undertaken.

25

26 YEC is unclear of the extent to which the overall proposal as outlined above and in the
27 meeting with YEC would be consistent with current rate directives. Any such proposal for
28 a Diesel Energy Surcharge would, by necessity, be constrained by OIC 1995/90 which
29 requires equalized rates throughout Yukon within each retail rate class subject only to
30 adjusted run off rates (applicable above the stipulated energy use levels per month) to
31 reflect economy and efficiency (which the YUB has implemented previously on the basis
32 for forecast short-term incremental diesel generation costs). Rider F adjustments,
33 applicable to all retail energy use throughout Yukon, have then addressed variances
34 from GRA forecast fuel prices.