IN THE MATTER OF THE *PUBLIC UTILITIES ACT*
REVISED STATUTES OF YUKON, 2002, C.186, AS AMENDED

AND

AN APPLICATION BY YUKON ENERGY CORPORATION FOR REQUESTED APPROVALS RELATED TO THE ALEXCO POWER PURCHASE AGREEMENT

REASONS FOR DECISION

A. Introduction

The Yukon Utilities Board (YUB or Board) received an application (Application) dated September 28, 2010, from Yukon Energy Corporation (YEC) seeking approval for the Purchase Power Agreement (PPA) between YEC and Alexco Keno Hill Mining Corp. and ELSA Reclamation & Development Company and Alexco Resource Corp. (individually or collectively referred to as Alexco).

The Application stems from a PPA YEC concluded with Alexco. YEC is seeking Board approval related to the implementation of the PPA.

B. Background

Currently, Alexco is a general service customer of YEC on the Mayo-Dawson (MD) system receiving service in the Keno Hill area. Alexco is developing mine facilities in the Mayo-Keno area with intentions of starting milling and mining operations in October of 2010. As such, Alexco is expected to become a Major Industrial Customer, as defined in OIC 1995/90, and accept service under Rate Schedule 39 once YEC develops an “Initial Mine Facilities Spur”.

The PPA, which defines the rights and obligations of YEC and Alexco, has provisions whereby Alexco will pay YEC for:

- Capital costs related to the design, engineering, construction and commissioning of a 1.65-km transmission line that connects the Alexco Initial Mill Site to YEC’s 69-kV Mayo-Keno transmission line;
- Costs to negotiate and conclude the PPA;
- Decommissioning costs (costs incurred by YEC to remove such facilities after the mine shuts down); and
- Any such future capital and decommissioning costs YEC and Alexco agree to develop to serve the mine facilities.

YEC noted that the charges and capital cost contributions to be paid by Alexco under the PPA, in principle, are consistent with those included in the Minto PPA previously approved by the Board[1].

In the Application, YEC is seeking Board approval of:

- A fixed charge of $7,289/month for service as permitted by Rate Schedule 39.
- The customer contribution for all Capital Costs for:
  (a) The Initial Mine Facilities Spur;
  (b) Negotiation and conclusion of the PPA;
  (c) Any other Mine Facilities Spurs that YEC agrees to develop in the future; and
  (d) Future decommissioning costs for the Mine Facilities Spurs.

Additionally, YEC is seeking Board approval for totalized metering as stated in Section 6.1 of the PPA:

> If permitted by the ESRs [Electrical Service Regulations] or YUB, the Electric Demand and Electric Energy at the Points of Delivery will be totaled and only one bill will be issued for such Point of Delivery.

The Board through Board Order 2010-10 set up the following written process for this Application:

November 10, 2010: Intervenor Registration
November 24, 2010: Information Requests to YEC
December 1, 2010: Information Response from YEC
December 8, 2010: Argument
December 15, 2010: Reply Argument

Through Board Order 2010-11, dated November 19, 2010, the Board granted Intervenor status to the following:

i) Yukon Electrical Company Limited (YECL)
ii) John Maissan (Leading Edge)
iii) Utilities Consumers' Group

Observer status was granted to the City of Whitehorse.

The Board notes that following the receipt of Reply argument, YEC filed a letter dated December 17, 2010 in which YEC took exception to YECL's Reply Argument which it argued was more in the nature of Argument. Also, YECL had chosen not to file Argument. YEC argued that YECL was demonstrating a clear disrespect for the process and its approach should not be condoned by the Board. Therefore, it was responding to the points made by YECL. On December 18, 2010, Utilities Consumers' Group replied

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[1] Board Order 2007-5 rejected the Minto PPA but in the reasons provided direction for YEC to change the PPA and re-apply to the Board. YEC subsequently filed amendments to the PPA on May 14, 2007 and approved the amended PPA on May 25, 2007.

to YEC's letter submitting that YECL's reply Argument was responsive and admissible. The Board considered these letters in addition to Argument and Reply Argument of the Parties and is not addressing YEC's comments on the process, as it did not request any action from the Board.

In reaching the determinations contained within this Decision, the Board has considered all relevant materials comprising the record of this proceeding, including the evidence and argument provided by each Party. Accordingly, references in this Decision to specific parts of the record are intended to assist the reader in understanding the Board's reasoning related to a particular matter and should not be taken as an indication that the Board did not consider all relevant portions of the record with respect to that matter.

C. Fixed Charges

The Alexco Fixed Charge[2] is to be added as an amendment to Rate Schedule 39 and is shown in Attachment C[3] to the Application. The Fixed Charge is stated to be $7,289[4] each month. YEC noted that "industrial customers are required to make contributions towards existing and new transmission infrastructure built specifically to provide industrial service to their mine site."[5]

The Fixed Charge, as determined in the PPA, assigned 85% of depreciation and return (owner costs) related to the defined Transmission Facilities[6], the derivation of which is shown in Attachment B to this PPA application.

Although Alexco's share of the forecast load is expected to be approximately 98% of the load going through the transmission facilities, the proposed 85% share was based on the NEB 1985 NCPC Report finding regarding the Faro mine[7].

YEC in response to UCG-YEC-1-9 said:

> The Fixed Charge to be paid by Alexco reflects costs currently included in rates charged to other customers that will now be recovered from Alexco. The other revenues recovered from Alexco, net of any incremental costs

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[2] The Fixed Charge means the fixed charge rate as set out in Schedule A, and is for service to Alexco mine and mill sites. The Fixed Charge each month will equal $7,289 as required under the Power Purchase Agreement (the "PPA") dated September 1, 2010 between YEC and Alexco Resource Corp. ("Alexco") for existing transmission connection to the mine and mill sites. (Application pages, Attachment A-9 and Attachment A-37).
[3] Application, pages Attachment C-1 to Attachment C-3 inclusive.
[4] Application, page 3.
[5] Application, page 3 –YEC further noted that for existing facilities, customers are assigned annual depreciation and return costs related to such facilities.
[6] Transmission Facilities are define on page Attachment A-13 as: YEC's 69 kV Mayo-Keno transmission facilities located north of Mayo, Yukon Territory, or any future replacement transmission facilities at similar or higher voltage.
[7] Application, page 4 – YEC noted that in the case of the Faro mine, Faro's share of the lines load was approximately 96.8%. The remaining 15% of the owner costs were shared by all customers including industrial customers based on their respective demands.

> incurred related to serving the Alexco load, will also go (in future GRAs) to reduce costs to be recovered from other ratepayers.

Leading Edge, in Argument, supported the fixed charge of $7,289 per month to Alexco[8].

UCG took the position that YEC failed to comply with provisions of OIC 1995/90[9]. UCG further argued that:

> There is no evidence on the record in this proceeding that the rates proposed to be charged to Alexco reflect the actual, fully loaded costs of serving the industrial class of customer[10].

Answers to questions relating to how billing for Alexco, on other rate schedules (for example, camp facilities), are to be billed are unclear to the UCG given the proposed issuance of one bill[11].

YEC argued that the fixed charge was based on precedent and was permitted by Rate Schedule 39[12].

In Reply, UCG said YEC has not proven that the rates to the industrial customer are sufficient to cover the costs to serve that customer[13]. UCG further submitted that:

> Each Alexco point of delivery should be charged its proportionate share of the fixed and other infrastructure costs to be recovered from Alexco (i.e., transmission line and substations, Aishihik 3 and Mayo B) as so determined by the Board[14].

In its Reply, YECL was generally supportive of the PPA and commented that it agreed with UCG in that:

> YEC has not provided a detailed analysis with respect to the cost of service in deriving the proposed power purchase rate to ensure all reasonable costs associated with the transmission facilities are recovered by the industrial customer[15].

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[8] Leading Edge Argument, page 1 – supported the amount of the fixed charge and the precedent that 85% of the costs of the line be directly allocated to Alexco and that Alexco will share in the pool of the remaining 15% of the costs. In this case costs are defined as owner costs which are depreciation and return costs.

[9] UCG Argument, paragraphs 21-23 inclusive. Specifically, UCG said YEC failed to comply, in that rates to major industrial customers are sufficient to cover the costs to serve those customers, and that the rates (Fixed Charge) to Alexco did not follow normal rate setting principals since a comprehensive cost of service study for all of Yukon was not provided with this Application.

[10] UCG Argument, paragraph 29.

[11] UCG Argument, paragraph 34.

[12] YEC Argument, page 3.

[13] UCG Reply, paragraph 13.

[14] UCG Reply, paragraph 15.

[15] YECL Reply, paragraph 2.

YECL said it was unable to assess whether Alexco was paying its fair share of the transmission capital costs and there was insufficient data to enable the comparison to the Faro Mine.

Views of the Board

YEC cited several decisions allowing that 85% of transmission line costs to be directly allocated to an industrial customer[16]. Board Order 2007-5 was also cited as support for the 85% allocation of transmission line costs to industrial customers. In Appendix A to YUB Board Order 2007-5, the Board said:

> The Board agrees with intervenor concerns regarding the lack of a complete COS study. The Board is of the view that due to the articulating nature of a COS study; rates cannot be developed in isolation. Therefore, the Board reiterates its earlier direction that YEC and YECL must provide a complete COS study and rate design with their next GRA. The COS is to include updated studies on allocators, and will look at the feasibility of direct assigning assets, where applicable to certain rate classes. Further, the Board expects to see justification on the allocation of transmission assets[17].

The Board later said that it accepted Rate Schedule 39 on an interim basis and that it had concerns about the sufficiency of the current COS presented by YEC.

The Board concludes that the precedents cited by YEC provide some support for the direct transmission allocation (85%) as applied for. Most of the cases cited refer to cost of service and not the fundamental basis or appropriateness for the establishment of fixed charges to industrial customers. The Board notes that no other alternatives have been presented (in terms of allocation of transmission costs through fixed charges) in this proceeding. The comparison to the Faro situation[18] when determining fixed charges for transmission line costs is the best available evidence for this proceeding. Furthermore, the Board accepts the information with respect to calculations provided by YEC in Attachment B to YUB-YEC-1-3(b) and approves the fixed charge to Alexco of $7,289 per month. The Board also concludes that the single fixed charge will apply to

[16] 1992 COS and Rate Design proceeding pertained to a cost of service allocation of costs for a report to the Yukon Government. Decision 1993-8 accepted the method that was approved in the Yukon Government report but did not specifically discuss transmission allocation. The Decision accepted the overall COS as being appropriate at that time. Decision 1996-7 (page 12 of 46) accepted the allocation of specific transmission costs (85% of costs of the Faro transmission line) to the industrial rate class.

[17] Appendix A to YUB Board Order 2007-5, page 5 of 27.

[18] The situation refers to when a transmission line is constructed to serve and industrial customer that 85% of the costs should be directly assigned to the industrial customer and that the industrial customer should also share in the remaining 15% of pooled costs to be allocated based on demand. The Board agrees with the submission of YEC that the Mayo-Elsa-Keno transmission line was originally constructed to serve a mining customer at what is currently known as the Alexco site.

what is defined in the PPA as the District,[19] that is, independent of the number of Points of Delivery.

D. Customer Contribution for Capital Costs

Capital Costs[20] for all Mine Facilities Spurs[21] that are developed by YEC are to be paid by Alexco. YEC's costs to negotiate and conclude the PPA are also to be paid by Alexco.[22]

YEC cited Board Order 2007-5 (Minto PPA) as precedent for collecting Capital Costs from Alexco. From that Board Order, YEC noted:

- Industrial customers are to contribute 100% of the costs towards any spur line; and
- Industrial customers should make contributions towards an appropriate share of new bulk transmission.

The PPA[23], in Section 5.2 describes the terms for which the Capital Costs for other Mine Facilities Spurs are to be covered:

> Alexco will pay to YEC the Capital Costs for any new Mine Facilities Spurs that YEC agrees to develop after the Initial Mine Facilities Spurs, as provided for in Section 4.5, with payment by Alexco to YEC of 50% of YEC's estimated costs for such facilities prior to YEC starting to order equipment for, or to construct, such new Mine Facilities Spurs, and with the balance of such Capital Costs to be paid by Alexco to YEC within 30 days of notice by YEC that such new Mine Facilities Spurs are commissioned and available to receive Grid Electricity to provide to Alexco. When the actual Capital Cost for such new Mine facilities Spurs is determined by YEC to be greater or less than the amount paid to date by Alexco, YEC will so notify Alexco in writing as soon as practical thereafter and an appropriate adjustment will be made between the Parties from the date such determination is made[24].

[19] The PPA defines District as the entire area as shown in Figure C-1, in Schedule C and is labeled as Bellekeno Mine Project.
[20] Capital Cost is defined in the PPA as all of YEC's reasonably incurred costs and expenses incurred in the design, engineering, procurement, construction and commissioning of the Mine Facilities Spurs and YEC's costs and expenses reasonably incurred to negotiate and conclude this agreement (Application, Attachment A-6).
[21] Mine Facilities Spurs are defined in the PPA as the YEC transmission connections from the Transmission Facilities to the Points of Delivery, including any transmission line spurs and related switches, fuses, meters, transformers, or other equipment connecting the Transmission Facilities to the Points of Delivery, and "Mine Facility Spur" means any one of them (Application, Attachment A-11)
[22] Application, page 5.
[23] Section 4.5, Part 5 and section 5.2 of the PPA states the responsibilities of YEC and Alexco in terms of any new Mine Facilities Spurs that YEC agrees to develop and Alexco agrees to pay for.
[24] Application, page Attachment A-19.

YEC noted in the Application (page 7) that through the PPA where the industrial customer agrees to pay the full costs for any new facilities dedicated to that customer (including negotiation costs) assures that ratepayers are protected from any cost risks associated with those specific transmission facilities.

Leading Edge supported the payment by Alexco of 100% of all costs related to Initial Mine Facilities Spurs as well future other Mine Facilities Spurs. Leading Edge also supported the payment schedules as described in the PPA[25]. However, Leading Edge did not agree that Alexco should pay YEC's cost to negotiate and conclude the PPA[26] and stated that there was no Yukon precedent to do so.

In Argument, UCG submitted that it was unclear if costs recovered through the PPA (Alexco) were already being recovered from other ratepayers.[27] UCG asked that the Capital Cost Contributions be subject to regular audit.

In Reply, YECL agreed that Alexco should pay YEC's costs to negotiate and conclude the PPA[28] since other customers were not part of the PPA process and that the ratepayer receiving the benefit should pay the costs.

UCG submitted that Alexco should be responsible for operating and maintenance costs associated with the facilities plus consultant and in-house work to develop the PPA and all regulatory costs[29].

In Reply, YEC disagreed with Leading Edge in terms of YEC's cost to negotiate and conclude the PPA. YEC said:

> In effect, the Alexco PPA ensures that non-industrial retail ratepayers are not exposed to material costs (or cost risks) for transmission or PPA negotiation capital costs related to the connection of new industrial customers[30].

YEC further disagreed with the UCG with respect to regulatory costs:

> … based on precedents and general principles that all such regulatory costs should continue to be borne by all customer classes, in part reflecting the extent to which the industrial customer cannot reasonably affect or control such costs[31].

[25] Leading Edge Argument, paragraph 2.
[26] Leading Edge submitted that it was perverse to charge a customer to negotiate with YEC, and that such actions does not incent YEC to be cost effective and expedient in negotiations (paragraph 3).
[27] UCG Argument, paragraph 46
[28] YECL Reply, paragraph 3 – YECL further noted that "to the extent the benefit can be attributable and identifiable to a specific customer that customer should bear the cost"..
[29] UCG Reply, paragraphs 16 and 17.
[30] YEC Reply, page 2.
[31] YEC Reply, page 6.

Views of the Board

The Board agrees with the submission of YEC in that Board Order 2007-5 did set a precedent in terms of contributions for capital costs from industrial customers. The incremental costs (spur costs) for connections to existing or new transmission facilities should be completely borne by the industrial customer.

Further, the Board agrees with the principle that industrial customers should make a contribution towards an appropriate share of new or to existing bulk transmission.

With respect to negotiation costs of PPAs, the Board does not agree with the submissions of Leading Edge. A PPA is an arms-length agreement between two parties, generally pertains to issues specific to a single rate class, and the costs of which are readily identifiable and can be attributed to that rate class. The Board does not wish to eliminate a term which would be detrimental to the costs associated with other rate classes.

The Board does not agree with the submissions of the UCG that a single rate class should bear the costs for the regulatory process.

Therefore, the Board approves the terms in the PPA as they pertain to Customer Contribution for Capital Costs.

E. Payments for Future Decommissioning Costs

YEC submits that Alexco will be responsible for all Decommissioning Costs[32] incurred by YEC as described in Part 11 of the PPA. The Decommissioning Costs to be fully paid by Alexco include the following costs defined in section 1.1(o) of the PPA:

> All decommissioning and other costs to be incurred by YEC and agreed to be recovered from Alexco (including without limitation, costs to take down and remove facilities and costs to restore any property under applicable law, less credits for recovery sales of any materials removed and sold) reasonably required to remove such parts of the Mine Facilities Spurs to be decommissioned after a Mine Facilities Shut Down Date as YEC at that time may require to be decommissioned.

YEC submits that Payment of the Decommissioning Costs as provided in Part 11 of the Alexco PPA follows the same model for determining and accounting for decommissioning costs developed under the Minto PPA that was previously reviewed and approved by the YUB in Order 2007-5 (Directive 16).[33] In this respect, the Alexco

[32] Decommissioning Costs include costs to take down and remove facilities and costs to restore any property under applicable law, less credits for recovery sales of any materials removed and sold.

[33] The Board in Order 2007-5 (at page 21) established use of the Minto Accrued Decommissioning Fund as an acceptable method respecting treatment of future salvage costs and noted that the liability of each party is clearly set out in the final reconciliation. The Board accepted 25% of estimated capital costs as a reasonable level of decommissioning costs since these were based on a prior depreciation study that set salvage costs.

PPA provides for an Accrued Decommissioning Fund account whereby Alexco will make Decommissioning Cost Payments (based on the Estimated Decommissioning Costs) toward this account to be deposited into the decommissioning account by YEC upon payment and invested at 6.5% interest per annum to fund YEC's regulated rate base during the Term under Part 11. The Estimated Decommissioning Costs to be paid to YEC by Alexco will for any Mine Facilities Spur (or part thereof) be an amount equal to 25% of the Capital Costs incurred by YEC for that Mine Facilities Spur (or part thereof) as described in section 1.1(x).

Leading Edge supported the measures in the Alexco PPA which require Alexco to be responsible for all decommissioning costs (PPA Part 11).

Views of the Board

The Board notes that no Parties objected to the provisions in the Alexco PPA respecting the treatment of decommissioning costs.

The Board considers that the provisions of the Alexco PPA respecting recovery of decommissioning costs are consistent with the principles and mechanisms previously approved by the Board respecting the Minto PPA. The Board finds that it is reasonable and appropriate to apply these principles and mechanisms to the Alexco circumstances and that the Alexco PPA provides for satisfactory recovery of any associated decommissioning costs from Alexco.

F. Billing and Totalized Metering

In the Alexco PPA, YEC proposes to apply the totalized metering provision of the proposed PPA in the event that the Board chose not to approve, or delays approval of, Section 7.7 of the proposed Terms and Conditions[34].

YEC notes that the current YEC and YECL Electrical Service Regulations (ESRs) (section 4.7) would not permit totalized metering for the Alexco mine, as the Points of Delivery are not located within a radius of a half a mile of each other. However, proposed revisions to the Terms and Conditions of Service in its 2009 Phase II Rate Application would allow totalized metering if the provision is specified in a contract, as is the case with Alexco.

YEC submits that the half-mile radius criteria contained in the Terms and Conditions is a guideline that acknowledges the inter-dependency of two points of service contributing toward the existence of one mining operation. YEC also indicates that it was seeking approval of the totalized metering provision to ensure that only one Fixed Charge amount of $7,289 (or any other such amount as approved by the Board) is billed per month to Alexco regardless of the number of Points of Delivery for Major Industrial customer service to Alexco (Rate Schedule 39).

[34] YEC Argument, page 5.

YEC stated that it proposes to total the energy and demand charges applicable to each Point of Delivery onto one bill and if totalized metering is approved in this instance, Alexco and YEC may in future arrange to totalize demand readings in the interest of promoting demand management. Alexco would be required to pay any incremental costs associated with totalized metering.

Leading Edge supported the totalized metering proposed in section 6.1 of the PPA. Leading Edge submitted that totalized metering would encourage industrial customers to minimize their coincident peak demand through energy management and conservation but also stated that this issue should be discussed at a future Phase II hearing. Leading Edge also submitted that it would be appropriate for Alexco to be responsible for any costs associated with implementing totalized metering. Leading Edge also submitted that it would be inappropriate to charge Alexco twice the 85% allocation of the transmission costs and Leading Edge submitted that Alexco should be charged only one Fixed Charge per month, regardless of the number of points of delivery.

UCG submits that the proposed totalized metering should not be allowed as it is not allowed under the present ESRs. UCG questions whether it is appropriate to override the half-mile radius which is presently incorporated in the present ESRs for a specific customer. UCG also submits that the proposed treatment would also place Alexco into the Major Industrial Customer class for which rates have been fixed by the Yukon government for several years.

YECL submitted that it does not support totalization as it may dampen (through the monthly bill) potentially large swings in demand during the year that would otherwise be billed to the customer through the demand ratchet. YECL stated that allowing customers to totalize the demand readings from different points of delivery may result in other customers sharing in the cost recovery of facilities required to serve an individual customer’s peak demand. YECL indicated that while it supports the change to the Terms and Conditions as outlined in the 2009 Phase II, it considers that caution needs to be exercised when applying this amended provision to allow for totalization.

YECL submitted that YEC has not provided any evidence to support its claim that totalization can promote energy conservation and demand management by smoothing out the peaks and dips in demand.

Views of the Board

The Board notes that YEC proposes to initially total the Alexco energy and demand charges applicable to each Point of Delivery and create a totalized bill. YEC stated that in the event that totalized metering is approved, Alexco and YEC may in future, arrange to totalize demand readings. Alexco would be required to pay any incremental costs associated with totalized metering.

The Board finds that totalized billing, where the energy and demand charges applicable to each Point of Delivery are included on one bill is acceptable and may be applied to Alexco.

The Board finds that the YEC response to YUB-YEC-1-1(a), illustrates the impacts of totalized billing by comparing two separate bills to one consolidated bill; however, this calculation does not demonstrate the potential revenue impacts of meter totalization. Totalized metering refers to the practice of combining data to bill multiple service points as if they were measured by a single meter. The totalized demand is the sum of the coincident demands which is typically less than the sum of the individual peak demands registered by the individual meters. The difference in the two demands can represent a cost savings to the individual customer served under totalized metering and a cost to other customers in the rate class due to less revenue being collected.

The Board finds that the concept and potential impacts of totalized metering were not adequately explored in this proceeding. The Board also finds that it would be inappropriate to approve the concept of totalized metering before it has been dealt with in the YEC and YECL 2009 Phase II Rate Application. As such, at this time, the Board denies the YEC request for totalized metering for Alexco.

The Board notes that YEC sought approval of the totalized metering provision to ensure that only one Fixed Charge is billed per month to Alexco regardless of the number of Points of Delivery for service to Alexco. The Board has discussed this issue in the Fixed Charges section of this Decision.

G. Other Issues

Leading Edge submits that the definition of ampere is incorrectly stated in the Alexco PPA as being 6.023×10^{23} electrons per second whereas several industry sources indicate that number should be number is about 6.241×10^{18}.

Views of the Board

The Board considers that an ampere is a well-understood industry term and expects that it is not necessary to provide this level of detail in the PPA. Nonetheless, the Board finds that YEC may choose to correct the definition as noted by Leading Edge or remove the ampere or other technical definitions from the PPA.