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Yukon Utilities Board (YUB)
Box 31728
Whitehorse, Yukon
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Re: Arguments Concerning the YUB,s Review & Approval of the Yukon Energy Corporation's (YEC) Proposed Power Purchase Agreement with Minto Explorations Ltd. (Minto)

Pursuant to the YUB's Board Order 2007-01 of 07/02/09 (as modified by YUB letters of 07/03/19 to the Minister of Justice that outlines only 7 issues requiring YUB approvals and of 07/02/21 to UCG and YECL that expands the issues requiring approval to 9 items) and YUB Order 2007-03 (which sets out the final schedule for the PPA proceeding), I provide the following arguments for the Board's consideration:

1. Cost of Service, Firm Mine Rates & Proposed New Rate Schedule 39:

In the absence in a fully distributed Yukon wide cost of service study (COS) that includes YECL and all customer classes, which has been tested through a full round of IRs followed up by cross examination, it is most difficult to assess or determine whether or not the proposed firm mine rate, of $0.076/kWh for energy and of $15.00/kV.A for demand, would fairly recover its allocated share of a true up to dated COS.

The 2008 COS prepared by YEC for this proceeding is based upon up dating estimates to the approved 1997 COS as modified by the COS rulings in 1998. These COS are simply too out dated to be considered reliable as the bases for today's realities. The 2008 COS also relies on an assumed, since 1997, 26.37% overall inflation factor the origin and justification of which is not well defined in the application.

The Yukon Government's "hot off the press" announcement of 07/03/03 that it will provide a $10 M contribution to the construction of the main transmission line from Carmacks to Minto Landing further compromises YEC's current COS estimates. As such a contribution will lower the amount to be included in the rate base and thus the share each customer class will bear.

In the PPA under **1.1 Definitions** page 6 (kk) **"Electric Demand"** the demand charge rate is to be calculated in kV.A "averaged over a rolling 15 minute period". In the proposed new Rate Schedule 39 under **BILLING DEMAND** it states:

The Billing Demand shall be the greater of:

a) the highest kV.A demand recorded in the month, or

b) the highest metered kV.A demand recorded in the previous 12-month period including the current billing month, excluding the months April through September, *(this is seasonality non-ratcheting)* or

c) the contract minimum demand.

The peak demand created by the start up of large induction motors in the Minto mill, even with the provision of variable speed controls, and increases in sustained demand loads during heavy crushing operations will likely have negative power quality impacts on the system as a whole. Such quality impacts will especially affect the communities of Pelly Crossing, Ross River, Faro and Carmacks. In the summer, seasonality non-ratcheting of demand makes sense for the commercial classes of energy load draws as these will have negligible effect on power quality because the majority of these smaller demand loads are located near the generating facilities i.e. in Whitehorse. However, Minto, with its larger demand loads at the remote end of the transmission system, should be subject to demand ratcheting during the summer as were the mining operations in Faro. Please refer to the 1997 RATE SCHEDULE 39 INDUSTRIAL PRIMARY where under **BILLING DEMAND** it reads:

> a) the highest metered kV.A demand recorded in the current billing month or
> b) the highest metered kV.A demand recorded in the previous 12 month period including the current billing month.

The new proposed Rate Schedule 39 in the PPA should be adjusted by the YUB to read as per the 1997 Rate Schedule 39 b) above so as to induce Minto to take all appropriate steps to keep and buffer its demand at reasonable levels throughout the year in an effort to reduce adverse power quality impacts to other customers. Also, to encourage load demand controls the YUB should consider raising the Demand Charge rate in the proposed new Rate Schedule 39 from $15.00/kV.A to $16.00/kV.A on a temporary/interim refundable basis until such time as a full COS and new rates are approved by the YUB at the next GRA.

With respect to the Firm Mine Rate energy charge of $0.076/kWh the YUB should only approve it on a temporary/interim refundable basis until such time as a full COS and new rates are approved by the YUB at the next GRA.

With respect to the ***RATE MODIFICATIONS APPLICABLE*** *in the proposed new Rate Schedule 39, the YUB should consider re-impose the fuel adjustment rider, Rider F. As electrical rates are equalized across the Yukon and all other customer classes are subject to this rider, in fairness, so should Minto.*

2. Peak Shaving Rate Option:

The Peak Shaving Rate Option is the "carrot" to Minto to reduce demand during the winter months and as such it is probably a good concept. What I have proposed above under demand charges is the "stick" to be available should Minto elect not to make use of this Option. I have not been able to ascertain whether there are any net negative revenue or rate impacts that this Option may have on YEC and its other electrical rate payers. It would appear that there should be positive benefits to this option.

If the YUB's staff consultants consider this to be a positive option with or without amendment it should be approved.

3. **Low Grade Ore Processing Secondary Energy Rate – Rate Schedule 35**:

As long as there is surplus hydro power on the WAF grid, after secondary power sales to commercial electrical customers have been satisfied, any and all large industrial electrical customers such as mines, saw mills, foundries, etc. should be able to obtain this surplus secondary power on a seasonal, fully interruptible, metered basis. In terms of revenues and costs, it makes no difference to YEC and the other classes of ratepayers who this surplus power is sold to. It makes little sense to reserve this power for mines only when mines are processing low grade copper ore. Who cares and why do they care if a mine is processing low grade ore or high grade ore, whether the ore is copper, lead, zinc, molybdenum, silver or gold or if a saw mill is cutting slabs and cants rather than dimensioned lumber when it uses this surplus hydro? Surely a Rate Schedule that stipulates that "this rate schedule is to be used only at a mine site engaged primarily in copper production for processing ore with less than 1% copper content" must be considered to be completely and unfairly discriminatory. This surplus hydro power and its secondary energy rate may well be allocated on a first come first served basis but not based on you come first, second or third only if you mine copper and low grade copper at that.

The YUB should require YEC to withdraw the current Rate Schedule35 and resubmit it in a simplified form such that any and all large industrial electrical customers can have an equal opportunity to purchase such seasonally available surplus hydro power on a non-discriminatory and non-favoured basis.

The energy rate for this type of power at6.0 cents per kW.h appears reasonable but again, the YUB should only approve it on a temporary/interim refundable basis until such time as a full COS and new rates are approved by the YUB at the next GRA.

4. The $7.2 Million Customer Contribution:

With respect to the $7.2 M Minto customer contribution there are, as I see it, three main issues that the YUB will need to address:

- The first of these involves the reasonableness of the amount and how it was determined.

- The second concern relates to the fairness of designating the contribution as a fixed amount based on current estimates rather than as a fixed percentage of the actual final reasonable costs of the construction of the transmission line.

- And the third, and maybe the most important, is the prudence and level of risk associate with the methods proposed in the PPA for financing both the main transmission line contribution and the mine spur line capital costs.

A) Reasonableness of Contribution and Methods of Calculation:

YEC has, to date, only provided the YUB with conceptual estimates of the costs to construct the two alternatives (34.5 kV or 138 kV) for the main (Carmacks to Minto Landing) transmission line. These estimates are primarily, and rather simply, based upon ball park $ per km figures. The accuracy of these figures has yet to be established or verified by YEC. And YEC suggests that more accurate cost estimates will only be available after the, very recently retained, Design Engineering consultant has completed its work.

The question to ask is whether the $7.2 million figure is truly Minto's fair share of the cost to construct the line. Maybe Minto is paying too much or maybe too little. From the sketchy cost estimate information now before the YUB it is next to impossible to determine the fairness of the contribution. If Minto is over contributing this would be unfair. If Minto pays less than its fair share of the costs then this would unfairly burden all of the rest of the ratepayers who primarily would be required to shoulder the short fall through increased rates, of course Minto's rates would also increase slightly too.

I contend that it is important to recognize that the most recent announcement by the Yukon Government that it is providing a $10 million contribution to construct the Carmacks to Minto Landing transmission line does not in any way diminish Minto's responsibility to pay its fair share of the costs of construction. This $10 M is a grant from the Canada to Yukon to be used for infrastructure improvements. It is being used as one of the ways to help finance the power line it is not to be considered as any kind of indirect support payment or subsidy to Minto so Minto can somehow avoid paying its fair contribution to the main transmission line.

I submit that more detailed cost estimates with levels of confidence are essential before the YUB will be able to fairly assess the reasonableness of this fixed contribution amount and the veracity of the methods by which it was calculated.

On the other hand, the YUB, in its Reasons for Decisions to Board Order 2007-03 with respect to PWP-YEC-1-9 & 1-10, has stated in part that while "--- in this proceeding --- it questions the relevance of this information" the YUB "--- does consider this information is likely relevant to the Part 3 review to be directed by the Government of Yukon."

As the Part 3 review is scheduled to take place in the very near future this critical detailed cost estimate information should be available to the YUB shortly. Neither YEC nor Minto would be overly adversely affected by the YUB waiting to finalize any decision on the customer contribution issue until the YUB has the opportunity to review more accurate detailed cost estimates. Indeed, as the YESAA review of the project is not expected to be completed for five months a minor delay occasioned by the YUB process is unlikely to be of any significance.

I contend that the YUB should advise YEC that the Board will reserve making a final decision on the appropriateness of the $7.2 million Customer Contribution until such time as the YUB has received and has had the opportunity to review and assess the more detailed cost estimate the Board expects YEC to submit for the upcoming Part 3 hearing and review process.

B) Contribution as Fixed Amount or Fixed Percentage:

YEC's proposal to have Minto's Customer Contribution classed as a fixed amount flies in the face of standard North American utility practice. Normally, electric public utilities provide a potential customer with a reasonable estimate of what the cost to provide service is expected to be, secures an upfront contribution from the customer equivalent to the estimate as a deposit and advises the customer that this estimate/contribution will be adjusted in accordance with the actual cost of the project. When the project is completed the customer is reimbursed for any over contribution and is charged for any short fall.

This process is considered fair and reasonable. Should the customer have a complaint as to the prudence, efficiency or cost effectiveness of the utility in carrying out its obligations the customer can normally appeal to the regulatory authority for relief. I would expect that the YUB would fairly adjudicate in the event that Minto had such a complaint.

In this case, the preliminary conceptual cost estimates for both a 34.5 kV and a 138 kV transmission line appear to be based on a lack of detailed information. However, both estimates are probably subject to the same degree of accuracy or margin of error. Thus, in the absence of more detailed cost estimates, the relative terms of these preliminary estimates could reasonably be employed to determine a fixed percentage that the customer should be required to contribute to the final cost of the project.

I submit that the YUB should, if the YUB determines that it cannot reserve it decision pending receipt of more detailed cost estimates as proposed in A) above, require the PPA to be amended such that the Customer Contribution is determined as a fixed percentage of the final cost to construct the main line with the percentage based upon either the ratios of preliminary cost estimates or, better and fairer even yet, the ratio of actual final $/km incurred to construct the Minto 34.5 kV spur and the actual final $/km to construct the 138 kV main transmission line.

C) Financing Prudence and Risk:

One of the most pressing issues before the YUB, in my view, is deciding on the prudence and associated level of risk to which YEC, and the rest of the electrical ratepayers, will be exposed as a result of the methods by which Minto and YEC have proposed to finance both the spur line and Minto's Customer Contribution to the main line.

YEC is a regulated electrical public utility monopoly whose only mandate is to supply electricity at fair rates to all its customers with some pretty good assurances that it will be permitted to earn a reasonable and fair rate of return on its investment. Often such utilities have some provisions (via a written policy or within the Electrical Service Regulations (ESRs), both of which are subject to regulatory review and approval) to permit limited investment by the utility in the extension of service to a new customer. YEC does not have such a policy in place now and the existing ESRs do not currently have such provisions for extension of service to Industrial customers.

Should the YUB approve the methods by which YEC intends to finance Minto's obligations re: the customer contribution to the main line and the costs to construct and then dismantle the spur line, the YUB will be setting a precedent.

Because of the size and the very complicated nature of the PPA and the financing agreements with Minto, it appears that YEC is requesting the YUB to permit it to make financial arrangements more akin to the services offered by a bank than what normally would be expected from a public utility. YEC is not a bank or financial institution and the YUB's jurisdiction in this regard, I would argue, extends only to the prudence and risk of YEC entering into such financial arrangements.

Essentially, YEC, by entering into this financial agreement with Minto, is investing in a mining venture. Mining ventures are inherently risky, metal prices can fluctuate widely and quickly, this mining operation is new, the company has no established operating track record, YEC stands second in terms of security provisions, most of the security is of a form that is not easily converted - indeed some of the securities may have environmental liabilities attached to them by the time YEC obtains possession. In addition, YEC is relying on a financial due diligence report the authors of which, as far as I have been able to ascertain, while highly experienced and knowledgeable in their fields, are not registered as professional engineers in Yukon (only one appears to be registered as a P. Eng. in Ontario). Yukon registered professional engineers are regulated under an Act and are required to carry errors and omissions insurance. What recourse will YEC have available to it should the due diligence report prove to be inaccurate or wrong? YEC has relied upon assurances that Minto has sold forward it concentrates over the next four years and states that the purchaser is a large multi-national conglomerate and therefore the sales contract is guaranteed. However, there exists a real risk here as the actual entity to which the sales are to be made could be a shell company of the multi-national conglomerate with virtually no assets available for attachment if the shell reneges on the sales contract agreement. The risk to the forward sales contract would be reasonable if it was known that the buyer was a smelter – smelters have huge assets and inventories available for attachment.

I submit that the YUB should reject the financing arrangements between YEC and Minto as provided for in the PPA on the grounds that such financial investments are imprudent with an attached level of unacceptable risk to YEC and its other customers. The YUB should require YEC to obtain all of the main line Customer Contribution and the estimated costs to construct and decommission the spur as a lump sum upfront deposit from Minto before YEC commences construction activities.

5. Net Mine Revenue Account:

The need to establish this account has not been demonstrated by YEC. It appears that this account will be used to defer revenues only so as to possibly create a fund that will be used at some future date for further utility investments in infrastructure. The revenues obtained from the sale of power to Minto should not be diverted into a holding account. But simply be considered as contributing to YEC's, YUB approved annual revenue requirements and as such these revenues could then be used immediately to reduce rates for all customer classes. The account looks more like an internal accounting procedure which really should have no bearing on the provisions of the PPA. To permit Minto to have a defined say in how the fund will be used in the future as is provided for in the PPA is, or at least may be, prejudicial to the interests of all other ratepayers who should also be granted a say in the disposition of the account funds. In addition, the account if approved can be expected to cause inter-generational inequities.

I ask that the YUB deny the establishment of this account and require the removal of any mention of such account from the PPA.

6. Minimum Take or Pay Provisions:

The minimum take or pay provisions appear to be primarily intended to reduce risk to YEC by ensuring that Minto would be somehow bound to pay off its obligations with respect to its customer contribution to the main line and for the cost to install and dismantle the spur. However, if Minto can't take it means that it is not producing copper and if it is not producing copper it would soon have no income to pay for the power it can't take. This is circular risk taking by YEC which would appear to lead to default by Minto in the long if not the short run. The cloudy part with a take or pay contract is that if Minto can't take but can pay and another customer requests and pays for Minto's now surplus untaken power, YEC will be obligated to reimburse Minto for such sales. This looks like an accounting nightmare or even a trip to the courts. If the YUB requires YEC to obtain a full upfront contribution for these obligations then a take or pay contract could well be unnecessary and the risk to YEC and its other customers could well be less than with the Take or Pay Provisions.

The YUB's consulting staff will likely have a more in depth appreciation of the this issue than any of the intervenors as they may have experience in regulating and assessing the risk impacts associated with such contracts in other jurisdictions.

I would tend to defer to the advice of the YUB's consultant on this issue.

However, should the YUB not require YEC to obtain upfront contributions from Minto to cover all its construction and dismantling obligations the Take or Pay Provisions may be the only other option available.

7. YEC Purchase of the Mine Diesel Units:

Originally I was under the impression that all these units were new. It appears that some if not all of these plants are reconditioned units. I have also heard unconfirmed reports that two of the units have recently experienced mechanical or electrical malfunctions. At the pre-hearing conference in August 2006 I was informed by YEC personnel that these mine diesel were not considered compatible with YEC's other generating facilities as they were too small, too high speed and may not generate at a compatible voltage and thus YEC would not consider acquiring them after Minto was hooked into the WAF grid.

The PPA requires that YEC purchase these units under certain terms and conditions and leave all four at the mine site for two years at which time it can relocate two units as YEC sees fit. The other two units can be removed by YEC after another six years. YEC considers the purchase of these units as providing increased peak winter capacity on the WAF grid and as a form of security should Minto fail to meet its obligations to pay for the mine spur. Should the YUB require YEC to obtain full upfront contributions for the mine spur from Minto the security issue would be moote. While the units are located at Minto YEC will have reduced control and security over the use and care of them without stationing its own operator(s) on site. This lack of control and security increases the risk of ownership. And to have a standby operator or operators on site would greatly increase ownership costs. Should Minto fail in its spur line obligations it is unlikely additional winter peaking will be necessary on the WAF grid.

If Minto retained ownership of these units YES could fairly easily contract for the supply of any required energy from Minto for the grid probably at a lower present worth cost per kwh than if YEC owned and operated them. In addition, the refurbishing of the diesel unit at Faro would likely be a wiser and less risky investment.

I am not convinced that the purchase of these used units is a prudent investment by YEC and I submit that the YUB should disallow the acquisition of these units by YEC.

8. The Level of YEC Security:

To reiterate, YEC, by entering into this PPA with Minto, is investing in a mining venture. Mining ventures are inherently risky, metal prices can fluctuate widely and quickly, this mining operation is new, the company has no established operating track record, YEC stands second in terms of security provisions, most of the security is of a form that is not easily converted - indeed some of the securities may have environmental liabilities attached to them by the time YEC obtains possession. The complicated acquisition of ownership of the used mine diesel units does not appear to provide much security especially if these units have not been operated or maintained properly by Minto.

It is my submission that level of security held by YEC through the PPA is inadequate as it is for the most part not easily convertible and being second after the bank and some other minor lien holders likely translates into YEC and its other ratepayers being virtually unsecured. The best way to ensure that neither YEC or its other ratepayers are adequately secured is for the YUB to require YEC to obtain all of the main line Customer

Contribution and the estimated costs to construct and decommission the spur as a lump sum upfront deposit from Minto before YEC commences construction activities.

9. Decommissioning Costs:

Because there are no detailed cost estimates for the construction of the spur line it is very difficult to estimate what decommissioning of this line will cost. In general, it is likely that it will take the same amount of labour and equipment time to dismantle the line as it would to install it. It is likely that the salvage value of the components after about twenty years of service may not amount to more than about 15% of the original value. If labour and equipment costs are found to be 50% of the original cost of installation then deducting the salvaged value of 15% would mean that the decommissioning costs would amount to 35% of the original cost of construction. All these estimates are highly conceptual. What we need are detailed cost estimates (which may soon be available from the Part 3 filings) or after the fact actual construction cost inputs. In any event, if the YUB does not require YEC to obtain an upfront contribution from Minto to cover the dismantlement and salvage of the spur, the only way to ensure that sufficient funds to do the work are deposited in an accrual account is to make sure the currently proposed method of collecting payments from Minto achieve the 35% level within the first 4 years.

I submit that the YUB should require YEC either to obtain an upfront contribution from Minto equivalent to 35% of the spur line estimated cost or, revise the PPA terms in this section so that 35% of the actual cost to construct the spur are collected from Minto by four equal annual payments commencing at the end of the first year of service.

I respectfully offer these arguments for the YUB consideration and hope that they will assist the Board in its deliberations and determinations.

Sincerely,

P. W. Percival, P. Eng.