IN THE MATTER OF YUKON ENERGY CORPORATION ("YEC") APPLICATION RE: THE POWER PURCHASE AGREEMENT BETWEEN YEC AND VICTORIA GOLD CORP. AND STRATAGOLD CORPORATION (COLLECTIVELY "VGC GROUP")

REPLY ARGUMENT

YUKON ENERGY CORPORATION

January 5, 2018

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1.0 INTRODUCTION

1.1 OVERVIEW

Yukon Energy's reply argument ("Reply") addresses key issues raised in the two intervenor Final Arguments regarding the Yukon Energy ("YEC") application (the "Application") for requested approvals related to the implementation of the Power Purchase Agreement ("PPA") that Yukon Energy has concluded with Victoria Gold Corp. ("VGC") and StrataGold Corporation ("StrataGold") (collectively "VGC Group").

Section 2 of the Reply responds to specific issues raised in the Final Arguments of John Maissan and the Utilities Consumers' Group. Capitalized terms in this Reply that are related to the PPA are as defined in the PPA.

2.0 SPECIFIC ISSUES RAISED IN INTERVENOR ARGUMENTS

2.1 REPLY TO JOHN MAISSAN ("JM")

The JM Final Argument is divided into two main sections: (1) Matters of Agreement (items 1 to 3); and (2) Matters of Concern (items 4 to 6). These are addressed separately below.

JM states at page 1 that his overall view is that "it is appropriate for Yukon Energy to be providing power service to VGC through the YIS [Yukon Integrated System]", noting as one significant reason that this will reduce GHG emissions compared to the mine using on-site diesel or LNG power generation to meet its requirements.

Under Matters of Agreement, JM notes other reasons include the reduced thermal generation resulting from use of the YIS long-term average (LTA) summer hydro surplus along with VGC Group's reduced electrical load in winter, JM's agreement regarding specific PPA terms (i.e., VGC Group capital contributions, the proposed fixed monthly charge, and the demand and energy costs consistency with Rate Schedule 39), and the opportunity provided by the VGC Group load to advance modest new renewable energy resources.

Matters of Agreement

Yukon Energy's only comment in reply under "matters of agreement" is in relation to the third matter, more particularly his assertion that the VGC Group load will provide an opportunity to advance modest new renewable energy sources as outlined in YEC's IRP (2016 Resource Plan) "with limited long-term risk to non-industrial ratepayers", including uprates to existing hydro plants, a battery based energy storage system, and the opportunity to "launch" the Independent Power Producer ("IPP") policy "to secure new renewable energy sources".

In reply, Yukon Energy notes that its 2016 Resource Plan recommended consideration of these modest new renewable resource supply developments under all load scenarios, including scenarios without the VGC Group Mine load. Therefore, while the VGC Group's specific load facilitates these developments, it cannot be assigned any of the risks or any causal responsibility with regard to such investments in new long-term capital intensive assets.

Matters of Concern

There are three "matters of concern" with the Application noted by JM. These are summarized below, with YEC's Reply for each specific item:

4. **JM concern -** Transmission lines proposed are not the lowest cost for Yukon ratepayers (due to assumed 138 kV with H-frame structures vs 69 kV line with single pole structures). JM recommends that, if the default transmission option is implemented, the Board order YEC "to implement the substantiated lowest costs option".

   YEC Reply – The Application's scope is limited to the PPA, which of necessity addresses obligations and rights of the Parties under a range of potential Transmission Facilities Development options. Review and approval of Transmission Facilities Development options is beyond the scope of this proceeding, and will be primarily impacted by factors not related to the PPA. The Board will have full opportunity to review and approve in the future any costs from Transmission Facilities Development before such costs are included in any rates.

   Added details supporting YEC's Reply response in this regard include:

   - It is important to emphasize that the SKTP planning and regulatory YESAB review proceeded well in advance of the VGC Group PPA, and that the PPA is responding to this existing SKTP planning (rather than driving this planning).[1] Regardless of the addition of the VGC Group Mine, near-term replacement or upgrade of at least portions of the SKTP is necessary, i.e., the end-of-life line from Mayo to Keno City. SKTP planning of necessity has also considered the range of future potential loads that could be served by any new facilities, and any external funding that may be available to facilitate enhanced facilities in this region of the YIS.
   - The Application's scope is limited to the PPA (rather than a review of SKTP transmission options), within which VGC Group has agreed to pay (when it is operating the VGC Group Mine) an annual Fixed Charge set at 85% of the Transmission Facilities Fixed Cost. This Fixed Charge includes 85% of any ratepayer costs for the default option new Transmission Facilities at 138 kV, as well as 85% of any ratepayer costs for the YEC McQuesten Substation Costs to ensure that this facility can accommodate the planned 138 kV new transmission.
   - The VGC Group PPA default transmission option defines a minimum priority development consistent with the SKTP planning to provide 138 kV capability to facilitate potential future load and/or renewable resource supply development in this region.

[1] Yukon Energy Final Argument, Section 2, item 3(c). Details on the full SKTP option and regulatory reviews are provided in YUB-YEC-1-10(a,b,c), YUB-YEC-1-11(a,b,c,d), YUB-YEC-1-12(a-e), YUB-YEC-1-13(c,d).

- The SKTP planning assessed transmission options, including 69 versus 138 kV options, and concluded that the mono pole option with braced post insulators at 69 kV would not provide significant cost savings compared with the proposed H-Frame structure and 138 kV when assessing costs for this new transmission.
- Further, proceeding to install a 69 kV transmission option with adequate upgrade limited only for VGC Group and Alexco would maintain existing service, but ignore the opportunity to strengthen and enhance the existing grid system to better support future development opportunities in the region.
- The example of the existing relatively new 69 kV from Stewart Crossing to Mayo highlights the significant added costs to come back in future (as per the full SKTP proposal) to increase the capability of transmission to 138 kV after a new 69 kV line has been installed.

- The VGC Group PPA also recognizes that any Transmission Facilities Development (as defined in the PPA) will be implemented as part of planned and required overall grid development, rather than for the benefit of the VGC Group Mine. The Application also clearly indicates[2] that the full SKTP development option is contingent on securing adequate external government no-cost funding that will protect ratepayers from the added costs noted by JM related to the full SKTP development option.
- In summary, the PPA (which is the subject at hand for this proceeding) clearly addresses JM's concern to protect all ratepayers to the maximum extent possible if the VGC Group Mine is developed and connected to the YIS, and there is no basis for the Board at this time to assess other transmission project options in response to JM's comments.
- Further and in any event, at such time as the default Transmission Facilities Development is completed and brought before the Board to be included in rates, Yukon Energy will need to satisfy the Board that the transmission line development cost is a prudent investment to be included in rates.

5. **JM concern** - <u>Risks to ratepayers are downplayed</u>. Four risks (see below) are specifically noted by JM in this regard.

   YEC Reply - There is no basis for the Board to conclude that the Application downplays risks to ratepayers related to connection of the VGC Group Mine pursuant to the PPA.

   The specific risks alleged by JM and Yukon Energy's reply to each allegation is as follows:

   a. **JM risk issue** - <u>Annual costs to ratepayers after the 10-year projected VGC Group Mine life if the default new transmission line option is developed</u>.

[2] See Yukon Energy Final Argument, Section 2, item 3(c).

YEC Reply – The Application and responses to IRs specify that the default option is a minimal and necessary requirement to replace the existing 69 kV end-of-life line between Mayo and McQuesten Substation (and JM states at page 3 that the need to do this replacement "is not in dispute").

As such, these costs would be required with or without the VGC Group Mine connection to the grid and therefore the ratepayer costs as ultimately approved by the Board are not directly due to the VGC Group Mine.[3]

In summary, there is no downplaying in the Application that these costs would be prudent and reasonable for recovery from all other ratepayers when VGC Group Mine is not operating.

b. **JM risk issue** - Risks of increased fuel costs because there are no inflation factors adopted in the Table 3 Revised ratepayer impact assessment. JM notes significant fluctuations in fossil fuel prices over the last decade, and asserts that "a greater than proportionate share of the increase in the price of fuels would be borne by the non-industrial customers who caused the increased in fuel consumption", and that with thermal generation at about 89 GW.h in 2021 as per Table 3 Revised "it would take an increase of only $0.10 per litre of diesel equivalent to increase costs by $1.9 million or more thus offsetting the calculated $1.93 million benefit of VGC."

YEC Reply – The Application has not downplayed risks to ratepayers.

While it is correct that the Table 3 Revised ratepayer impact assessment does not address increased fuel cost prices, the evidence demonstrates that consideration of fuel inflation risks does not challenge the overall assessment of net savings to all ratepayers (as reviewed in Section 4 of Yukon Energy's Final Argument).

Added details supporting YEC's Reply in this regard include:

- Fuel price changes are passed on to all ratepayers through the Rider F mechanism, and are levied per kW.h of actual energy use for each ratepayer, i.e., there is no basis for any assertion that fuel price change risks are somehow borne more by non-industrial customers than by industrial customers (beyond the simple point that non-industrial customers compared with industrial customers account for a much greater share of overall Yukon energy sales).
- The diesel fuel price per litre assumed in the 2017-18 GRA (and in the Application) remains above $0.90 per litre, or about 87% of the higher diesel price assumed in the 2012/13 YEC GRA.[4] The average forecast

[3] See JM-YEC-1-9(b) and Yukon Energy's Final Argument (page 18).
[4] The average YEC diesel fuel price in the 2017-18 YEC GRA is $0.943/litre (with $0.9163/litre at Whitehorse). The diesel fuel price at Whitehorse approved for the 2012/13 YEC GRA was $1.0513/litre.

thermal fuel cost, however, is much lower due to the 90/10 LNG/diesel split and the materially lower cost for LNG on a diesel equivalent basis.[5]

- JM's assessment of fuel price increase impacts fails to consider the resulting impacts on rates for each customer, as well as the need to assess the net added impact from the VGC Group load relative to all other assumed loads. Contrary to JM's assertion, net ratepayer savings in 2021 due to the VGC Group connection would not be fully offset by any reasonable fuel price increase risk.
    - JM's estimates imply an approximate 10% increase of thermal fuel prices over what is assumed in the 2017-18 GRA, e.g. $0.10/litre versus YEC 2017-18 GRA diesel fuel price forecast of $0.943/litre.
    - A 10% increase in fuel cost per Table 3 Revised for 2021 assumed load increases YEC's added thermal generation cost due to the VGC Group load by $0.74 million, from $7.39 million to $8.13 million, i.e., even before considering added rates to recover such an increase in fuel price, only 38% of the Table 3 Revised Rate Revenue Surplus of $1.93 million would be affected.[6]
    - A 20% increase in fuel costs for 2021 would increase YEC's added thermal generation cost due to the VGC Group load by $1.47 million, affecting 76% (versus 100% or more) of the ratepayer saving estimate prior to consideration of required rate increases for all customers (including the new VGC Group load).
- Finally, YEC also notes that the Application's Table 3 Revised estimates assumed a conservative case as regards the Minto and Alexco mine loads (i.e., neither of these mine loads has currently been committed for 2021) as well as the assumption of no renewable resource supply improvements (any of which would reduce thermal generation requirement impacts from the VGC Group Mine).

c. **JM risk issue** - The addition of the VGC Group Mine will result in substantially higher diesel peaking requirement for the YIS. JM asserts that "potential cost impacts to all ratepayers was not fully and objectively discussed", noting that the response to JM-YEC-1-3 indicates that the 2020-21 winter diesel peaking in Tables 2 and 3 "calls into question the 90% LNG: 10% diesel mix that Yukon Energy assumed in calculating the increased costs of serving VGC" (JM-YEC-1-7).

[5] The average thermal cost for the 2017/18 GRA is $0.1583/kW.h (90:10 LNG/diesel), versus $0.2633/kW.h average for diesel only.

[6] If 10% increase is assumed for both diesel and LNG fuel prices the average fuel cost would change from $0.1583/kW.h to $0.1742/kW.h. With $0.1742/kW.h average fuel cost YEC added thermal generation cost in Table 3 Revised for 2021 would change from $7.39 million to $8.13 million reducing VGC Group Mine benefits from $1.93 million to $1.19 million ($1.93 – ($8.13-7.39)).

YEC Reply – There is no basis for this concern, as the winter peak estimates as referenced have no material bearing on the LTA thermal generation cost estimates relevant to calculating annual ratepayer costs under different load conditions.

Added details supporting YEC's Reply in this regard include:

- The winter YIS peak numbers referenced by JM from Table 2 of JM-YEC-1-3 represent short-term hourly peak demand during winter, reflecting potential winter temperatures and peak loads.
    - The 2020-21 winter peak is forecast at 105.21 MW, of which non-industrial load accounts for 92.92 MW and industrial load (with Minto, Alexco and VGC Group) accounts for 12.29 MW.
- Table 3 of JM-YEC-1-3 in contrast indicates maximum dependable YIS capacity of 119.4 MW for the 2020-21 winter period, including 70.5 MW of hydro, 13.2 MW of natural gas thermal, and 35.7 MW of diesel thermal.
    - This assessment reflects existing facilities plus the committed LNG 3rd engine (which alone is inadequate to offset the current dependable capacity shortfall based on the N-1 criterion, i.e., additional dependable capacity will need to be developed beyond what is shown in Table 3).
    - Table 3 indicates a need for at least 21.5 MW of existing diesel capacity to supply the forecast winter peak load in 2020-21.
- These winter hourly peaking numbers, however, are not at all representative of the long-term average (LTA) annual generation estimates relevant for assessing LTA annual thermal generation costs in response to JM-YEC-1-7 with the assumed 90% LNG: 10% diesel mix.
    - As reviewed in response to JM-YEC-1-10 and YUB-YEC-1-28, LTA thermal generation used for GRA and Table 3 Revised assessments are estimated based on analysis from the updated YECSIM model.
    - Attachment 3.4.2 of YEC's 2017-18 GRA shows that most of the LTA annual thermal generation estimate occurs in the minority of water years with the worst drought conditions. The response to John Maissan-YEC-1-21 REVISED (filed November 30, 2017 in the GRA proceeding) updates Table 3.4-4 in Attachment 3.4.2 assessment for a 490 GW.h load with VGC Group, and shows that 55% of the LTA thermal generation occurs in the 31% of the 35 water years with the worst drought conditions.
    - In summary, the LTA thermal estimates and the related 90:10 assumed LNG/diesel split are driven almost entirely by load and

water conditions unrelated to dependable capacity requirements for the winter peak.

- Accordingly, there is no basis for the concern as noted regarding the 90:10 assumed LNG/diesel split being challenged by the increased thermal peaking requirement on the YIS related to the VGC Group and other industrial loads as well as growing non-industrial peak loads.

d. **JM risk issue** – Potential added operating costs that affect other ratepayers disproportionately. JM states: "It is possible that YIS protection schemes will need to be adjusted between summer and winter" and that "this and potentially similar future operating costs (e.g., transmission line brushing) have the potential to add costs to other ratepayers disproportionately."

YEC Reply – There is no evidence to support this suggested potential operating cost risk as being a basis for concern with regard to the VGC Group PPA.

Details supporting YEC's Reply in this regard include:

- Seasonal adjustments in YIS protection schemes, if needed, can be addressed in the initial programming (which is covered in the VGC Group capital cost contributions for Initial YEC System Improvements). YEC's assessment is that any subsequent incremental annual cost of adjusting settings once programmed will be insignificant.
- Transmission line brushing costs for any YEC facilities are a normal operating cost requirement related to transmission facilities required with or without the VGC Group PPA, and such costs cannot in any way be asserted to arise due to the VGC Group PPA. If anything, Transmission Facilities Development facilitated by this PPA may potentially reduce ongoing escalating brushing and other costs expended to sustain current end-of-life L180 facilities.

6. **JM concern** - Cost of Service (COS) study required. JM states that "Far too much time has elapsed since Yukon Energy and AEY have provided a joint Yukon COS study and analysis that the YUB supports", and "This adds needless confusion and cost to the process of setting fair rates for VGC through the PPA." JM specifically notes that load patterns of residential and commercial electricity consumption are changing (i.e., tending to increase) and it is important to capture the effect of these changes in an updated COS.[7] JM also states that it is important for YEC and AEY to shift DSM programming to peak demand management, notwithstanding the Board determination in the AEY 2013 GRA process that peak demand focused DSM was unmerited.

[7] JM references added electric heat being installed in new residential and commercial construction, upward pressure on the electricity system as federal carbon tax is implemented (and people reduce fossil fuel consumption), and switching from oil to electric heat of some existing homeowners "as insurance companies get fussy about the oil tanks in service."

YEC Reply – JM's concern related to seeking an updated joint COS study does not provide any basis for changing or rejecting the Board approvals sought in the Application.

First, JM does not raise any specific issue with the analysis provided in the Application that would suggest that the Fixed Charge included in the VGC Group PPA is not fair and reasonable, and/or that the Firm Mine Rate per Rate Schedule 39 is not appropriate.

Second, JM's comments in any event ignore the COS evidence provided on the record in response to YUB-YEC-1-7, and YUB-YEC-1-8 which clearly confirms that industrial customers continue to pay more than their cost of service. Yukon Energy's Final Argument Section 5.1 summarizes the related evidence on COS relative to existing OIC 1995/90 requirements.

JM's comments on this matter appear, if anything, to assert that ongoing changes (e.g., fuel switching to electric heating) for non-industrial loads suggest increased COS for non-industrial loads. These comments provide added support to the evidence that industrial COS is less than current approved rates. Table 3 from JM-YEC-1-3 indicates forecast peak non-industrial load in winter 2020-2021 at 92.92 MW, an increase of 6.5 MW from the non-industrial load peak forecast for 2018 in the YEC GRA.[8]

Finally, JM's recommendations regarding shifting DSM programming to peak demand management do not relate to the VGC PPA and are similarly outside the scope of the current proceeding.

2.2 REPLY TO UTILITIES CONSUMERS' GROUP (UCG)

The UCG Final Argument submits, in summary (concluding paragraph #62), that the proposed YEC/VGC Group PPA "should be sent 'back to the drawing board' incorporating all concerns and directions coming out of this process". UCG's wording in this regard is word-for-word the same as set out in the concluding paragraph of its December 8, 2010 Final Argument on the Alexco PPA, which the Board approved in Order 2010-14.

In fact, UCG's Final Argument has throughout (including the Summary of UCG's Position at paragraphs #3 through #11, and most of the other issues at concluding paragraphs #55 to #62) raised arguments and assertions that UCG previously made in its Final Argument with regard to the Alexco PPA that were addressed fully by YEC and the Board at that time. These include:

- The Board must approve all elements of the PPA, rather than only the elements as requested in the current Application and as approved for the Alexco PPA (para 5, 34);
- YEC has not provided "basic business case information" on PPA benefits to all ratepayers and the Yukon as a whole, or "identified and proven beyond a doubt any real benefits of this PPA to firm ratepayers of the Yukon" (para 55, 9);

[8] YEC 2017-18 GRA, page 2-16 indicates forecast non-industrial peak of 86.4 MW for 2018 after removal of Minto forecast peak of 6.5 MW (total 92.9 MW per Table 2.2 of the GRA). The *growth* in non-industrial peak in this short period is forecast to equal the overall peak load of the Minto mine.

- YEC should be directed to provide regular reports of the electricity requirements of the VGC Group, so that the Board can "provide direction on a more timely basis should actual electricity requirements start dropping significantly and potentially drive the rates of other Yukon ratepayers" (para 54); and
- The industrial customer (VGC Group today, Alexco before) will ramp up thermal generation in response to its load requirements, and should be responsible for additional [assigned shares of] existing infrastructure costs, e.g., costs for CSTP, Aishihik 3rd Turbine, Mayo B, other new transmission, etc. in order to prevent industrial customers from being "given a free ride on infrastructure costs needed to provide mines with present and future needs" (para 39,40).

Overall, there is no basis provided in UCG's latest Final Argument on the VGC Group PPA (any more than there was in UCG's Final Argument on the Alexco PPA) to support its summary recommendation in paragraph 62 to incur further costs and delays on this matter. There is also no basis today to reconsider the other UCG assertions set out above that were previously considered and rejected by the Board in its review of the Alexco PPA.

However to ensure that Yukon Energy provides the Board with its views on certain points, Yukon Energy replies to certain specific issues raised in the balance of UCG's Final Argument as follows:

1. **Industrial Firm Rates and Cost of Service:** UCG once again argues (para 4), as it did in the Alexco PPA, that "of particular concern is the lack of a cost of service analysis which ensures that the rates and charges proposed … are based on a comprehensive cost of service study and recover all costs associated with the proposed services" and devotes several paragraphs (see para 13 to 25) to OIC 1995/90 directives, prior cross examination and evidence from earlier hearings, and the alleged need to consult stakeholders on the proposed firm mine rate.

   In other words, UCG's argument regarding the need for a COS at this time in order to approve the PPA generally repeats its submission on the Alexco PPA.

   One new element (para 19) is UCG's submission that the YUB direct the utilities to develop a COS analysis as soon as practical and before the end of 2018 to determine if the VGC Group will be paying their fair share of costs and to review rate rebalancing proposals to be implemented in January 2019.

   As reviewed in response to YUB-YEC-1-7(f), the Board in Order 2010-14 approved the Alexco PPA (including the 85% threshold for the Fixed Charge determinations) after Board Order 2010-13 had rejected the COS study filed by the Companies as part of the 2009 GRA Phase II proceeding. As a result the Alexco PPA was approved, with its related rate changes linked to the Fixed Charge, notwithstanding the absence of a recent approved COS study as well as UCG's submissions on this matter with regard to the Alexco PPA.

   Further, subsequent to the Alexco PPA approval, the Board has also approved general rate changes for the 2012-13 GRA without any noted concern that Rate Schedule 39 is failing to meet the COS related directions in OIC 1995/90 for major industrial customer rates.

Accordingly, UCG's continued assertions on this matter ignore the Board's determination on the Alexco PPA, the COS information from the 2009 Phase II Rate Application proceeding, and other COS-related information provided by YEC in its Application and in interrogatory responses in this proceeding (see Section 5.1 of Yukon Energy's Final Argument for summary of the evidence).

Overall, this information as summarized in YEC's Final Argument demonstrates that the Board is able to proceed with approval of the VGC Group PPA rate-related provisions without any concern that any resulting major industrial customer class rates today (and over the next decade) would be insufficient to recover the COS as required by OIC 1995/90 [see YUB-YEC-1-7(e,f), YUB-YEC-1-8(a-e), and UCG-YEC-1-13(c)].

Further, under the PPA, the Board continues to retain full jurisdiction to amend the overall Firm Mine Rate in future as required in response to any approved COS study results, OIC directions, or other new information.

In summary, UCG's argument regarding the need for a COS in order to approve the VGC Group PPA is without merit or relevance to the current proceeding, and there is no basis for the Board to require completion of an updated joint COS study by the Companies before the end of 2018 in order to determine if the VGC Group will be paying their fair share of costs.

2. **Costs and Risks Not Considered:** UCG once again argues (as UCG did regarding the Alexco PPA) that a wide range of costs and risks are not adequately considered in the PPA.

   Specific examples include:

   - "the lack of guarantees (e.g., take-or-pay provisions or early closure penalties) indicates that there remains a very real possibility that Yukoners…will end up paying more of the costs of the proposed service than YEC is indicating" (para 6);
   - "the transient nature of mines and their operations in the Yukon drive the need for take-or-pay or ratepayer benefit guarantee provisions to ensure that the remainder of Yukon ratepayers are protected" (para 33);
   - "all regulatory costs for these types of specific purchase power proposals" should be included for recovery from VGC Group (para 7);
   - "there are several risks that have not been considered or quantified", including reference to O&M costs for transmission line, displacement of secondary sales, added thermal generation (para 8);
   - "it is unrealistic to ask ratepayers to make a decision to assume the risk of a 10 year investment without having any information on the potential impact over the full 10 years…YEC should offer a guarantee that ratepayers will be better off over

the full 10 year life of the mine" (para 23, follows para 22 review of response to UCG-YEC-1-5 where YEC reviews why it cannot provide revenue and ratepayer impact details for each year); and

- "UCG questions how costs associated with YEC's commitments to the FNNND will be recovered. UCG submits that this is another cost that needs to be recovered from VGC Group as the driver of the project needing this support" (para 26).

In summary, UCG is simply repeating issues that it argued, without success, in the Alexco PPA review process when it addresses lack of "guarantees", added charges to the Industrial customer for regulatory costs that the Board has previously rejected[9], and unsubstantiated concerns about non-capital costs or secondary sales reductions that may arise from connecting a new industrial customer.

One very clear example of UCG's approach in this regard is its current argument re-iterating UCG's prior submission regarding the Alexco PPA "that any costs that can be directly assigned to a specific customer or customer class should be in accordance with cost of service principles" (para 59). UCG then proceeds in this instance (para 60) to acknowledge that Board Order 2010-14 on the Alexco PPA "did not agree with the submissions of UCG in that proceeding that a single rate class should bear the costs for the regulatory process", and then goes on to state that "the YUB did not provide any reasons to explain this position and, in fact, stated earlier in its Reasons for Decision for Board Order 2010-14 that costs related to issues specific to a single rate class that are readily identifiable should be attributed to that rate class."

UCG's approach of re-arguing earlier settled issues and re-iterating broad attacks on this latest PPA continues to be without merit or substance, ignores the precedents set by the Board in previously approved PPAs, and is of no assistance or relevance to the Board in the current proceeding.

In response to UCG's new comments on this specific PPA, Yukon Energy notes that it has provided detailed responses in UCG-YEC-1-5 as well as YUB-YEC-1-28 (to the extent that it is possible to provide a range of impacts over the mine life based on what is known today) which demonstrate material net ratepayer benefits under the full range examined after taking into account (contrary to UCG assertions) LTA thermal generation cost impacts.

Contrary to UCG's assertion (para 23), ratepayers are not being asked to "invest" in anything – all "investments" related specifically to serving VGC Group (versus meeting broader YIS requirements that exist with or without VGC Group Mine operation) are being paid for up front by VGC Group as provided for in the PPA.

[9] Appendix A to Board Order 2010-14 (Alexco PPA) the Board at page 8 explicitly rejected UCG's prior submission on this matter, stating: "The Board does not agree with the submission of the UCG that a single rate class should bear the costs for the regulatory process."

A 10-year guarantee approach as proposed by UCG would be without any precedent, and without any need or merit when the customer is in fact paying up front for all required investments.

Further, UCG's proposal that VGC Group should pay for FNNND benefit costs related to the actual Transmission Facilities Development adopted is similarly without merit, i.e., such costs relate entirely to the SKTP (full or partial) adopted to address long-term YIS requirements of YEC rather than current VGC Group requirements, and VGC Group (along with any Other Industrial Customers) will pay during each year of industrial operation (through the Fixed Charge) for 85% of any resulting YEC annual fixed costs as approved by the Board.

In summary, there is no basis for any broad assertion by UCG that the Application does not directly address all relevant ratepayer costs and risks related to the VGC Group PPA. Specific supporting evidence in this regard is set out in Sections 2 and 4 of Yukon Energy's Final Argument:

- Section 4 of Yukon Energy's Final Argument (as well as YEC's earlier Reply to JM's concerns about ratepayer risks being downplayed) reviews the extensive evidence in this proceeding on expected ratepayer impacts from VGC Group Mine operation.
- Section 2 of Yukon Energy's Final Argument summarizes evidence as to the consistency of the VGC Group PPA with existing approved PPAs for Alexco and Minto, addressing the Firm Mine Rate and Fixed Charge provisions, customer contributions for capital costs to connect, the reasonable basis for not including any take-or-pay provisions for Alexco and VGC Group PPAs, and the absence of any fixed charge or other cost assignment related to incremental generation costs.

3. **Basis for Fixed Charge at 85% and the Firm Mine Rate:** UCG once again argues (as it did regarding the Alexco PPA Fixed Charge) that "there is a significant difference in the proposed application versus the situation when NCPC was instructed to build the transmission line to Cyprus Anvil Mining Corporation and directed to recover only 85% of the cost of the transmission line from CAMC" (para 27).

   UCG asserts that the industrial customer is the "driver" of the need for the transmission facilities (because it accounts for 98%-99% of the energy use on the line), and should be responsible therefore for a much higher percentage (e.g., 98%-99%) "as their use requires".

   In its VGC Group PPA Final Argument UCG expands on its earlier submissions, asserting that the Board only accepted the 85% allocation in Order 2010-14 for the Alexco PPA "because no other alternatives had been presented (in terms of allocation of transmission costs through fixed charges) in that proceeding" (para 28). UCG argues that the Board today is left in the same situation "in that YEC is basing its proposal for direct transmission cost allocation to the VGC Group on ancient cost of service-based analysis that has not been updated for current circumstances" (para 29), and "that basing decisions on circumstances that existed 30 years ago can't possibly be reflective of best practices in other regulatory jurisdictions and should not be considered adequate for the Yukon" (para 31).

UCG's only proposed action on this matter, however, is limited to requesting that the Board direct YEC "to complete a fully allocated cost of service study in order to more properly allocate costs to the industrial class of customers" (para 32). UCG asserts that a delay in approving final charges to be applied to the VGC Group "will have no impact on the mine's operations since, as YEC has noted, the parties are proceeding based on the proposed power purchase agreement on the understanding that certain provisions are subject to YUB approval" (para 32).

UCG's above arguments and assertions fail to address the relevant evidence as reviewed in this proceeding which refute these submissions.

In addition, YEC strongly disagrees that delay as proposed by UCG to review (as per the thrust of UCG's position) an alleged basis for higher charges to VGC Group "will have no impact on the mine's operations", i.e., this delay proposal would have adverse and potentially fatal impacts on the mine's proposed development, and ignores specific Conditions Precedent requirements in the PPA as to the timing for YUB approval of the Fixed Charge and other specific elements of the PPA.

The relevant evidence on the Fixed Charge is summarized for the Board in Section 3.1 of Yukon Energy's Final Argument which reviews in detail the principled basis for the 85% Fixed Charge and related provisions as proposed in the Application, including (Section 3.1.1) the regulatory background and evidence basis for the 85% assignment of fixed annual costs for specific transmission facilities (and the related specific amounts) as proposed in the PPA.

UCG's assertions once again ignore the evidence as to the Faro Mine where the 85% direct assignment to that mine of Faro-Whitehorse line costs was also made notwithstanding the evidence that the Faro Mine accounted for over 96% of the load on that line.

In summary, there is no basis in Yukon precedent relating to Faro or Alexco mines, or relating to any other evidence provided in the current proceeding, for the Board to consider a higher direct assignment to any mine (including VGC Group's mine) than 85% of the direct annual costs for any YIS transmission facilities that are provided and sustained for use with or without the mine's load.

Further, and in any event, this conclusion with regard to the maximum Fixed Charge percentage would not in any way be impacted by development of an updated COS study for Yukon utilities and customer classes, i.e., the relevant evidence relating to this specific direct cost allocation issue is already clearly before the Board (as it was for the Alexco PPA).

UCG's arguments regarding overall industrial rates (the Firm Mine Rate) and its allegations that YEC is relying on "ancient cost of service-based analysis" also ignore the YEC evidence in the current proceeding that reviews in detail COS information and analysis for industrial customer loads as per the 2009 GRA Phase II proceeding and Board Orders as well as per more recent information and Board decisions (see summary provided in Section 5.1 of YEC Final Argument). The overall current evidence demonstrates that the next updated COS study will confirm that industrial customer class rates are materially higher than COS consistent with the directions of Section 6.1 of OIC 1995/90 and normal regulatory principles as reflected in past Board decisions and as required by Section 3 of OIC 1995/90.[10]

In short, there is no reasonable basis or need to delay approval of the PPA in order to confirm this expected outcome, and accordingly the Board should reject UCG's arguments and proposals to delay approval of the Fixed Charge, Firm Mine Rate and other PPA-related proposals as set out in the Application.

4. **Interruptible Service Option:** UCG submits (para 36) that use of VGC Group on-site diesel generators on a regular basis would allow YEC to provide some of the VGC Group load on an intermittent / interruptible basis "to lessen the need for LNG-based generation on the system."

   The interruptible service option is not relevant for consideration in this instance, given the VGC Group's requirements for firm rather than interruptible Grid Electricity, YEC's need to secure firm rate revenues rather than lower and less secure interruptible rate revenues (e.g., a Fixed Charge would likely not be applicable to interruptible service), the overall public interest (as noted in JM's Final Argument) in reducing on-site diesel generation GHG emissions, and the lower overall costs and emissions secured through use of YEC's available LNG generation rather than VGC Group's on-site diesel thermal generation.

   Further, LNG-based generation on the YIS has been installed to meet dependable capacity requirements related to non-industrial loads, and continues to be required with or without the VGC Group Mine load. LNG-based generation was selected over new diesel generation in order to reduce YIS LTA thermal generation fuel costs and air emissions.

   UCG also asserts (para 37, 38) that YEC has provided "generation mix stories" that "are fluctuating to YEC's benefit as circumstances dictate and decisions are <u>not</u> being made in the public interest." There is simply no basis for UCG to assert that YEC has any benefit to protect on this matter, or that there is any inconsistency in the evidence that YEC has provided.

   For example, UCG notes at para 37 that YEC has indicated that LNG will be used when feasible to displace diesel generation, and that a material share of any new loads at this

[10] Section 3 of OIC 1995/90 titled "Normal principles to apply" states: "Except to the extent otherwise stated by this Directive or the Act, the Board must review and approve rates in accordance with principles established in Canada for utilities, including those principles established by regulatory authorities of the Government of Canada or of a province regulating hydro and other non-hydro electric utilities."

time will be supplied by existing LTA hydro generation resources, and further at para 38 that YEC has also stated that forecast test year LTA thermal generation is assumed to be supplied 90% by LNG generation and 10% by diesel generation, and that VGC Group load will require an extensive amount of thermal generation to be used in the coming years.

Contrary to UCG's suggestions in this regard, the above statements are consistent, and accurately reflect what can be expected.

As JM notes in his Final Argument, connection of the VGC Group load will allow a material share of the required generation to be supplied by existing LTA hydro generation resources (which JM notes to be in the public interest) and also facilitate expansion of YIS renewable resource capability which will enable expanded reliance on renewable generation.

Yukon Energy also notes that the Application has provided extensive evidence that the overall net impact of the PPA on ratepayers is to provide material ratepayer benefits (savings) without exposure to any material hang-over cost risks related specifically to the VGC Group PPA.

5. **Capital Cost Contribution Section of UCG Argument:** UCG's Final Argument under the Capital Cost Contribution section heading re-iterates earlier Alexco PPA submissions (para 41-42) on which YEC has no new comment to provide, and then provides a range of new submissions (para 43-53).

   Overall, Yukon Energy notes that the new submissions generally have minimal relevance to the PPA capital cost contribution provisions, and instead appear to re-raise fixed charge and COS related arguments along with new submissions (which have not been tested in the evidence of this proceeding) advocating discriminatory rates, assured ratepayer benefits and other related matters.

   Specific comments are noted below on these new items:

   - UCG's para 43 - provides a quote from an earlier proceeding. Yukon Energy has fully addressed for the current PPA the capital cost contributions which are noted under the "new regime" referenced in this quote to be required for any new PPA. As reviewed in Sections 1 and 2 of Yukon Energy's Final Argument, the VGC Group PPA is consistent with the existing approved PPAs.
   - UCG's para 44 – UCG appears to suggest that "normal regulatory principles" and Yukon precedents are not relevant "since the YUB often makes its determinations based on evidence presented rather than precedent". There is simply no basis to assert that "evidence" over-rides precedents in YUB decisions. Further, OIC 1995/90 provides clear direction as to the relevance of normal regulatory

principles established in Canada for utilities when the Board makes determinations on rates.[11]

- UCG's para 45 – UCG quotes YUB-YEC-1-20(e) (where YEC states that there is not a principled basis for a portion of YEC fixed generation costs to be included in the VGC Group fixed charge), and then submits that "not only should a major portion of future thermal fuel demand be assigned directly to the VGC Group, but a portion of the newly (about to be placed on the firm rate base) LNG facilities costs, as well." Section 1 of Yukon Energy's Final Argument notes the consistent exclusion from each existing PPA (notwithstanding UCG's similar argument regarding the Alexco PPA) of any fixed charge or other cost assignment to industrial customers related to incremental generation costs, as well as responses to YUB-YEC-1-20(e) and UCG-YEC-1-17(a and b) regarding why any such measure may be considered rate discrimination. UCG's submission on these points is without merit, and contrary to past decisions of the Board as well as to normal regulatory principles established in Canada for utilities, and accordingly must be rejected by the Board.
- UCG's para 46 - UCG submits that peak load requirements will be increased by this new mine, "thus further demonstrating that the new mine be responsible for some of the costs of the new LNG facilities and resulting extra thermal costs" The UCG's submission ignores the fact that new LNG facilities on the YIS are being installed to meet dependable capacity requirements related to non-industrial loads, and continue to be required with or without the VGC Group Mine load. There is no evidence in this proceeding to support UCG's assertions in this regard. In summary, UCG's submission on this point is without merit, and contrary to past decisions of the Board as well as to normal regulatory principles established in Canada for utilities, and accordingly must be rejected by the Board.
- UCG's para 47-52 – UCG asserts that there are several jurisdictions that have practices contrary to YEC's position as set out in YUB-YEC-1-20(e), and subsequently provides reference to a US guide (para 49) and one US decision (para 52). UCG also asserts (para 51) that "in most jurisdictions, utilities currently are no longer mandated to wheel power for larger individual customers (e.g., industrial users and co-generators who would be in direct contention for this service from others)", and then provides only one unsourced example to an Alberta regulator having the mandate to order a utility to provide or withhold service and also providing other ratepayer groups "some decision-making status". UCG's submissions on these matters are of no use or relevance to the current proceeding, are untested, and are not consistent with past Yukon

[11] Section 3 of OIC 1995/90 titled "Normal principles to apply" states: "Except to the extent otherwise stated by this Directive or the Act, the Board must review and approve rates in accordance with principles established in Canada for utilities, including those principles established by regulatory authorities of the Government of Canada or of a province regulating hydro and other non-hydro electric utilities."

practice and precedents or to normal regulatory principles established in Canada for utilities, and accordingly must be rejected by the Board.

- UCG's para 53 – UCG reviews the YEC McQuesten Substation Costs of $930,563, and submits "that it is not in the public interest to allow YEC to take on any of this investment risk on behalf of Yukon ratepayers" and "that the costs associated with such an investment should be 100% recovered through fixed charges applied to the VGC Group." UCG's submission ignores the evidence in this proceeding as it relates to the Application and the VGC Group PPA, and as summarized in Section 3.1.3 of Yukon Energy's Final Argument which in summary indicates as follows:
  - The referenced costs will be held in WIP (i.e., not charged to ratepayers) until the Transmission Facilities Development Operation Date; and
  - Thereafter, the referenced costs as approved by the Board will be included in the Transmission Facilities Fixed Cost, and that the Fixed Charge to VGC Group and Other Industrial Customers will therefore include these costs.

  The referenced YEC costs will only be incurred in the event that the PPA is approved and VGC Group proceeds with development and operation of the Mine as provided for in the PPA, i.e., under these circumstances the Fixed Charge will in effect recover 85% of these costs (as approved by the Board and charged to ratepayers) in each year of Mine operation. (Issues related to increasing the Fixed Charge percentage above 85% have been addressed separately under item 3 above of the UCG-specific issues, and are not re-examined in this part of the Reply).

6. **Re-regulated Rules for Hook-up to Industrial Rates:** UCG maintains (para 57) that rules for hook-up to industrial rates "must be re-regulated", and that this "will stop any gamesmanship by YEC". UCG submits (para 58) "that current Government directions do not prevent the Board from determining how new rates for new industrial service are to be determined".

   UCG assertions and submissions on these matters are without substance or merit.

   The assertions suggest the absence of a regulatory regime for hooking up new mines, and the need for the Board to act in order to fix something. This is incorrect. Further, UCG's assertions provide no evidence as to any specific problem that needs to be addressed. There is also no useful assessment by UCG as to the effect of existing OIC directions as these may affect rates for industrial customers. UCG also fails to provide any specifics as to what new rules it is asserting should now be established by the Board.

   UCG's assertions ignore evidence on the "new regime" (as reviewed in the YEC quote from the LNG proceeding that UCG provided in para 43 of its argument) that YEC has adopted with review and approval of the Board over more than the past decade (i.e., with Minto and then Alexco).

The new regime built upon precedents developed with the Board and the relevant OIC 1995/90 directions during the Faro mine era, and was developed specifically for new mines hooking up to the YIS. A key feature of the new regime was to ensure that there is no hangover effect from assets that had to be put in place solely for each mine (and that might not otherwise be fully paid off when a mine closed business early).

As reviewed in detail in Sections 1 to 3 of Yukon Energy's Final Argument, the VGC Group PPA has been developed so as to ensure consistency with existing approved PPAs as well as existing OIC directions, and to provide a principled basis for all requested approvals by the Board.

In short, there is no basis for the Board to throw aside the stable and predictable regulatory regime that has been being developed for PPAs related to new major industrial customers connecting to the YIS. UCG's assertions and proposal in this regard must be rejected by the Board.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

P. John Landry
Counsel for Yukon Energy Corporation

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