

# **Yukon Energy Corporation Application for an Energy Project Certificate and an Energy Operation Certificate**

## **Information Request No. 1 of the City of Whitehorse (CW) to Yukon Energy Corporation (YEC)**

### **CW-YEC-01**

**Issue:** Project Need

**Reference:** Application, Section 1.0, page 2

**Preamble:** YEC states:

The business case (justification, need for and alternatives to) for pursuing the Mayo B project was reviewed during recent YEC 2008/2009 GRA. The Project is reviewed in the Application document (Tab 5, page 5- 20), in interrogatory responses (YUB-YEC-1-38 and YECL-YEC-1-5(b) REVISED reviews the business case for Project, while the response to UCG-YEC-1-89 provides detail on how the Project was identified as part of (and fits into) the overall 20-Year Resource Plan), and Undertaking #28 provides the near term load requirement context for considering the Mayo B project at this time. The Project was also subject to cross-examination by parties during the oral hearing and was further examined in Argument and Reply Argument filed during that proceeding. The GRA process included an assessment of need, alternatives and the basis for Mayo B as essentially the only renewable resource option that can feasibly be licensed and built for a 2011 in service date in order to displace diesel generation that would otherwise be needed to meet forecast load requirements on the two grids.

### **Request:**

- a) Please provide the material referred to above in a consolidated fashion. Please identify the points that YEC relies on to demonstrate that Mayo B is required.
- b) Please confirm that this material was provided in support of deferred costs to be placed in rate base during the test years and not in support of the \$120 million cost of the Mayo B Project. If not confirmed, please explain fully.

### **CW-YEC-02**

**Issue:** Project Funding

**Reference:** Application, Section 1.0, page 3, Application, Table 1, page 12 and Attachment E; Section 3.1.2, page 12, Table 1

**Preamble:** YEC states:

On April 13, 2009, Yukon Energy applied for federal funding for the Yukon Green Energy Legacy Project: Mayo B Enhancement/CSTP under the Federal Green Infrastructure Fund (GIF) Guidelines. The Federal Government has committed up to \$71 million in no cost grant funding to Yukon Energy for the Legacy Project (CSTP Stage 2 and Mayo B) with \$53.35 million in funding committed to Mayo B through the Federal Contribution Agreement executed on August 31, 2009 (provided as Attachment E).

The Yukon Government is providing funding assistance to Yukon Development Corporation (YDC) for the Mayo B and CSTP Stage 2 projects through an annual contribution for the principal and interest payments related to \$52.5 million of YDC's required borrowing for these legacy projects (see letter from the Minister responsible for YDC as provided in Attachment F). Up to \$30.15 million of this no cost funding assistance will be provided to borrowing costs for the Mayo B Project.

The combined \$53.35 million of federal no cost funding and \$30.15 million in no cost Yukon Government funding assistance act to lower the Mayo B capital costs to be funded by ratepayers. This funding assists Yukon Energy to advance the enhancement of Yukon's renewable energy capability and the reduction of future Yukon diesel generation requirements.

**Request:**

- a) Under what conditions would the full \$71 million of Federal Government Funding not be available? Please refer to the appropriate sections of Attachment E, and any other information or materials that affect the availability and the extent of this funding.
- b) Does Clause 3.1(a) limit the funding committed to Mayo B to the \$53.35 million as shown in Schedule B.2 of Attachment E, i.e. nothing more would be available from the combined \$71 million limit, should the CSTP construction cost be less than anticipated? Would the reverse be true if Mayo B is built at less than the anticipated cost? Please explain fully.
- c) Please confirm that the 'eligible costs' in the funding submission referred to in Note 1 of Table 1 remain approximated at \$106.6 million. If not confirmed, please fully explain any differences and outline what effect these differences may have on the available Federal grant.
- d) Do the same audit provisions, claims procedures, dispute resolution, etc. apply to the \$52.5 million of no-cost capital available from the Yukon Government? If not, please

provide a table indicating all differences between the terms on which the Federal and Territorial funds are available.

- e) Please confirm that YEC requires customers to fund \$36.5 million of Mayo B project costs through rates (\$120 million-\$53.35 million-\$30.15 million). How will YEC finance this portion of project costs and maintain an equity ratio of 40%?
- f) Please provide a pro forma monthly schedule of the project financing showing clearly the payments of claims by the Federal and Territorial governments and financing through debt (including the source of the debt) or an infusion of equity from the Yukon Development Corporation.
- g) Please describe how YEC will maintain a 40% equity ratio during the construction of Mayo B and after this project enters rate base?

### **CW-YEC-03**

**Issue:** Project Summary Description and Risks

**Reference:** Application, Section 3.1; Application, Section 4.2

**Preamble:** YEC states that “the Project lies within the Traditional Territory of the First Nation of Nacho Nyak Dun (“NND”).”

YEC further states that “Yukon Energy has been working in consultation with stakeholders, such as NND, as well as regulators (e.g. DFO) to ensure any issues or concerns with the Project are addressed expeditiously.”

### **Request:**

- a) Please confirm that all necessary negotiations with the First Nation of NND with respect to the location of the project and the possible use of First Nation lands have been successfully concluded.
- b) If not confirmed, please advise of any outstanding issues that remain to be addressed with the First Nation of NND.
- c) Please provide details of any and all consultations YEC has made, or plans to make, with the First Nation of the NND.

- d) Please confirm that any and all costs associated with the use of First Nation lands are included in YEC's estimate of \$120 million for the Project. If so, please indicate where in Schedule B-2, Attachment E. If not confirmed, please explain fully.

**CW-YEC-04**

**Issue:** CSTP Stage 2

**Reference:** Application, Section 3.1.1, page 8

**Preamble:** YEC states:

The construction of the proposed Project is contemplated to occur concurrently with Stage Two of the CSTP, a project previously reviewed by the Executive Committee of YESAB as well as by the YUB. Stage Two CSTP will complete the 138 kV connection of the MD and WAF grids. Stage One of CSTP was completed in November 2008 and connected the Minto copper mine and Pelly Crossing to the WAF grid immediately displacing over 30 GW.h per year of diesel generation with surplus hydro generation.

**Request:**

- a) Please provide the documents concerning the CSTP Stage 2 project reviewed by the YESAB and YUB. Did CSTP Stage 2 receive YESAB and YUB approval?
- b) If not already provided in the YESAB and YUB reviews, please provide breakdowns of the CSTP Stage 2 project by asset class (i.e. engineering, line and towers, substations, SCADA, contingencies, etc.) and also by material, labour, contracting and other, including contingencies.

**CW-YEC-05**

**Issue:** Project Cost Details

**Reference:** Application, Section 3.1.2, p.10

**Preamble:** As of late November 2009, the updated installed capital cost estimate for Mayo B at the planned powerhouse location, with long-term average annual net generation of 41.4 GW.h (under full long term dispatchable generation load conditions of 720 GW.h/yr with Mayo Lake enhanced storage), remains at \$120 million. This \$120 million cost estimate includes provision for approximately \$99 million for

construction contractor and detailed engineering costs, \$8 million for owner construction costs (construction management and field inspection services, owner staff and administration costs, plus ES&G and AFUDC/interest costs during construction), and \$13 million for pre-construction and other permitting/regulatory planning costs (including provision for Mayo Lake environmental review and licensing).

**Request:**

- a) Please provide a detailed cost breakdown of the updated installed capital cost estimate for the proposed Mayo B hydro enhancement project of \$120 million. Please provide a breakdown by asset class (structures, turbines, generators, substations, SCADA, etc.) including contingencies. Please also provide a breakdown by material, labour, contractor and other, including contingencies.
- b) Please provide a cost/benefit analysis of this project.

**CW-YEC-06**

**Issue:** Project Funding

**Reference:** Application, Section 3.1.2, pages 10– 12 and footnote 12; Application, page 14, footnote 17; Application, Section 4.2, page 38, footnote 68

**Preamble:** YEC states:

The GRA responses by YEC noted, based on the estimated Project cost of \$120 million (and ignoring potential government infrastructure funding) that with an assumed output of 38.4 GW.h (under full load long term conditions with Mayo Lake), it was estimated that the Project would yield a levelized cost of energy (LCOE) for the capital cost of the Project of \$0.142/kWh. Further, and as noted in YECL-YEC-1-5 Revised, in the near-term under reasonably foreseeable load conditions, integration of the Project into Yukon power systems would be expected to yield a somewhat smaller net firm energy benefit, potentially as low as approximately 30 GW.h of firm energy with the LCOE estimated to approximate \$0.182/kW.h. During the earlier Resource Plan hearing, Mayo B was discussed as a potential small hydro resource option (10 MW installed) with the ability to produce up to 48 GW.h on the MD system at a capital cost of \$101 million in 2005\$ and a LCOE of 11.2 cents/kWh.

...

Based on the estimated YEC rate base cost of \$36.5 million, Mayo B real LCOE costs to ratepayers (after government and YDC contributions) range from 6.69 c/kW.h with the enhanced Mayo Lake storage to 7.59 c/kW.h with no change to the Mayo Lake licence.

Financial contributions from Canada and YDC have materially reduced Mayo B LCOE to within, or below, the 8 to 10 c/kW.h levelized cost target range.

...

LCOE for the Project (net rate base of \$36.5 million) without Carmacks Copper load is 7.30 c/kW.h with enhanced storage at Mayo Lake and 8.19 c/kW.h without any change to the Mayo Lake licence.

...

With no contributions and a ratebase cost of \$120 million, the LCOE approximates 20.0 c/kW.h,... [emphasis added]

**Request:**

- a) Please provide the complete assumptions and detailed numerical analyses calculating the respective reported LCOE's of 14.2, 18.2, 11.2, 6.69, 7.59, 7.30, 8.19 and 20.0 c/kW.h as referenced above.
- b) Please provide the complete assumptions and detailed numeric analysis supporting the statement that financial contributions from Canada and YDC have materially reduced Mayo B LCOE to within, or below, the 8 to 10 c/kW.h levelized cost target range.

**CW-YEC-07**

**Issue:** Project Funding

**Reference:** Application, Section 3.1.2, page 12

**Preamble:** YEC states:

Financial contributions from Canada and YDC have materially reduced Mayo B LCOE to within, or below, the 8 to 10 c/kW.h levelized cost target range. In finalizing Project design, Yukon Energy will continue to pursue refinements and/or options (e.g. turbine/generator and/or penstock design, powerhouse location within the defined area) that can increase Mayo B energy output at an

incremental levelized cost (for the added capital cost) that does not exceed the minimum target cost of 8 c/kW.h.

**Request:**

- a) Please explain fully what added capital costs YEC foresees in pursuing these refinements and/or options to the Project.
- b) Please estimate what additional costs, if any, will or might be associated with these refinements and/or options.
- c) Will these additional costs referred to increase YEC's estimated costs associated with the Project from the \$120 million currently estimated?
- d) If the answer to (c) is affirmative, please explain fully why YEC continues to project the estimated costs of the Project at \$120 million.

**CW-YEC-08**

**Issue:** Diesel displacement

**Reference:** Application, Section 3.1.2, page 13

**Preamble:** YEC states:

The forecast "net generation" impact of Mayo B to displace diesel generation on YEC's overall WAF/Mayo Dawson integrated system (assuming completion of CSTP Stage 2) recognizes that, in order to assess diesel displacement benefits due to Mayo B, the increased generation at the Mayo plant ("gross generation") must be reduced to the extent that Mayo B operation results in reduced generation at the Whitehorse and/or Aishihik hydro generation facilities (due, for example, to impacts on seasonal generation at these other hydro plants).

**Request:**

- a) Please confirm that diesel displacement on the WAF grid will not occur without the completion of CSTP Stage 2.
- b) Does the phrase "assuming completion of CSTP Stage 2" mean that this part of the project has not been approved? Please explain fully.

- c) Please provide a numerical example of how reduced generation at Whitehorse and Aishihik due to Mayo B occurs, for example, at the system winter peak.
- d) If 30 GW.h of diesel generation will be displaced, what diesel units will be retired and decommissioned as a result of this Project? If none, please demonstrate in detail why all existing diesel units will still be used or required to be used.
- e) What Secondary Sales will become available when Mayo B is commissioned?

#### **CW-YEC-09**

**Issue:** Anticipated Timeline

**Reference:** Application, Section 3.2, page 15

**Preamble:** YEC states:

The YESAB review process and any related permitting requirements are the key critical path elements currently affecting the required start of construction for Mayo B in May 2010. Under the MOU, a construction contract is targeted with PKS by the end of 2009. If a PKS contract cannot be successfully concluded, a competitive tender process and award is to be concluded by April 2010.

#### **Request:**

- a) Please confirm that the PKS contract referred to has been successfully concluded.
- b) If not confirmed, please provide details of the competitive tender process and advise whether this process is currently underway.

#### **CW-YEC-10**

**Issue:** System Capacity

**Reference:** Application, Section 4.1.2, page 27

**Preamble:** YEC states:

Mayo B will add approximately 10 MW to the IS capacity, and almost all of this will augment firm winter peaking capacity. Under Yukon Energy's capacity planning criteria, this added winter peak capacity at Mayo will defer the need to

provide additional winter peak capacity on the IS. This economic assessment of Mayo B impacts has not attempted to assign any specific value to this contribution to firm winter peak capacity.

**Request:**

- a) What are YEC's current planning criteria? If the current planning criteria are different from the LOLE system reliability criterion discussed in the 20 Year Resource Plan, please provide these new criteria and how YEC applies them in planning capacity additions.
- b) Please provide the planning criteria and analysis that determined that the Mayo B Project was needed and should proceed. How does LOLE change when the two systems are connected?
- c) Did the LOLE analysis identify any constraints on the existing transmission system that would require additional transmission upgrades when the two grids are connected? If so, please discuss.
- d) How does YEC integrate YECL's generation capacity in its planning criteria?
- e) If only "almost all" of Mayo B's capacity is available at the winter peak, what will be the exact contribution of Mayo B? Does this contribution differ at high, median and low water conditions? If yes, what is the contribution during these various conditions? Please explain fully.
- f) What will be the transmission losses on the integrated system due to the additional generating capacity of Mayo B?
- g) The discussion that follows the above quotation is in terms of energy (GW.h) output. Does YEC use energy output to determine its need for capacity (MW) at the winter peak or any other time of the year? If not, how does a discussion of energy help in deciding whether capacity is needed or not? Please explain fully.

**CW-YEC-11**

**Issue:** Business Case and Risk Evaluation

**Reference:** Application, Section 4.2, page 34

**Preamble:** YEC states:

The Mayo B Project as proposed by Yukon Energy at this time has involved a range of complexities and risks related to adequate no cost capital funding, regulatory schedule delays due to the YESAB environmental and socio-economic review process and subsequent federal and territorial permitting and licensing that would follow from that review, capital cost increases and construction risks, and project feasibility risks related to grid load and debt borrowing costs. Prior to YEC's Board of Directors approving each major stage of Mayo B development, all material risks are reviewed to confirm that it is prudent to proceed. In assessing Mayo B risks, Yukon Energy also considers seriously the material additional diesel generation costs that would likely arise should the Project not proceed at this time.

**Request:**

- a) Please provide the business case presented to the Board of Directors that resulted in a decision to proceed with this Project.
- b) If the business case presented to the Board of Directors does not include a PWAC (Present Worth of Annual Charges) analysis of the Mayo B Project, please provide this information.
- c) If the PWAC analysis requested in (b) does not include the incremental O&M expenses, what are the annual incremental O&M expenses due to Mayo B and what annual inflation assumptions are reasonable to apply? Please explain fully.

**CW-YEC-12**

**Issue:** Project Risks

**Reference:** Application, Section 4.2, pages 34 - 35

**Preamble:** YEC states:

The largest single factor considered likely to affect the risk of Yukon Energy not proceeding with Mayo B expansion (i.e., securing adequate federal infrastructure and other no cost funding on a timely basis) has been addressed via the Federal Contribution Agreement and a separate Yukon Government commitment that enables no cost contribution funding from YDC...The Federal Contribution Agreement, however, has introduced its own specific risk requiring substantial completion of the Project on or before March 31, 2012.

...

...Yukon Energy has taken steps to mitigate these risks...A construction management approach was adopted to mitigate construction contractor risks related to contractor selection, price and delay;

**Request:**

- a) Please provide a detailed description of the construction management approach adopted and how this approach will mitigate ongoing risks.
- b) Please explain fully the effects of failing to complete the Project on or before March 31, 2012, including the potential loss of Federal funding.
- c) Please provide a detailed discussion of any analysis performed as to how YEC would address these effects if the Project is delayed beyond March 31, 2012.
- d) Who bears the risk of additional costs if funding (either Federal or from the YDC) is lost, either as a result of delays or otherwise? Please explain fully.

**CW-YEC-13**

**Issue:** The Effect of Mayo B on customer rates, Capital Cost Increase Risks

**Reference:** Application, Section 4.2, page 35

**Preamble:** YEC states:

Capital cost increase risks and other construction risks may be expected for any project of this nature, location, scale and stage of development. Added risks (and costs) may also arise related to tight timing (e.g., Project costs that are required to be incurred will tend to increase the later into summer 2010 that Project construction commences).

**Request:**

- a) Please provide a detailed analysis and explanation of the effect on customer rates over the next ten years of a 10% cost overrun on this Project (i.e. the Project costing \$132 million rather than \$120 million).
- b) Please provide a detailed analysis and explanation of the effect on customer rates over the next ten years of a 20% cost overrun on this Project (i.e. the Project costing \$144 million rather than \$120 million).

- c) Please provide a detailed analysis and explanation of the effect on customer rates over the next ten years of a 10% cost underrun on this Project (i.e. the Project costing \$108 million rather than \$120 million).
- d) If part of the answer to either (a), (b) or (c) is that, in the short-term the Proposed Flexible Debt Mitigation for Short Term Rate Neutral Impacts will keep rates from exceeding a 10 to 11 cents per kWh range, please provide a detailed numeric analysis in support of this claim.

#### **CW-YEC-14**

**Issue:** The Effect of Mayo B on Customer Rates

**Reference:** Application, Section 4.3.2, pages 41-42

**Preamble:** YEC states:

Under reasonably foreseeable near term load conditions (2012-2015), integration of the Project with the Mayo Lake storage enhancement into Yukon power systems would be expected to yield a net firm energy benefit (diesel generation displacement) averaging approximately 28 GW.h/year of firm energy over the four years (plus enhanced potential secondary energy). At 26 cents/kWh incremental cost, 28 GW.h of diesel generation would have added annual fuel and operating costs of approximately \$7.3 million. In contrast, the projected near term average annual Mayo B cost to ratepayers for these same loads approximate \$3.1 million/year, net of federal and YDC contributions and with a full 6.56% average return on rate base. In summary, Mayo B provides an average annual near term cost savings for ratepayers of approximately \$4.2 million/year for the 2012 to 2015 period. Added near term secondary energy sales due to Mayo B would constitute added savings for ratepayers (averaging approximately \$0.145 million during the 2012-2015 period); total average savings of about \$4.3 million/year would be equivalent to about 8.5% of the YEC/YECL consolidated rate revenue requirement for 2009 (see Attachment D).

#### **Request:**

- a) Please provide the detailed calculations of the annual operating costs of Mayo B and the diesel alternative summarized in the quotation above.
- b) Do these detailed calculations include any assumptions concerning changes in the cost of transportation of diesel? If yes, what are these assumptions and what is the basis underlying these assumptions? Please explain fully.

**CW-YEC-15**

**Issue:** Depreciation

**Reference:** Application, Section 4.3.3, page 42, footnote 75

**Preamble:** YEC states

For capital intensive hydro projects, the annual costs that drive rates are highest in the initial years of operation when the impacts on rate base are highest (as the project depreciates over time these impacts on rates decrease accordingly). Conversely, the benefits of hydro intensive project increase over time due to the increased value of diesel being displaced (due to inflation or other upward price drivers) by the project. For example, the Mayo Dawson Transmission Project will achieve material cost savings for ratepayers over its life; however, despite these expected material savings over the project life, it was recognized that the project could result in adverse rate impacts in the initial years of service that would require mitigation through a form of flexible debt financing.

**Request:**

- a) Should the second sentence read “capital intensive hydro project” rather than “hydro intensive project”?
- b) Is the form of flexible debt financing referred to the same as shown on page 45 of the Application? If not, please explain fully.
- c) How do the operating and maintenance costs of a hydro generation installation vary over time? Don’t labour costs increase with inflation and the maintenance costs of electrical and mechanical equipment increase as they get older?
- d) Does YEC’s description of the costs of hydro generation hold true if electrical, mechanical and SCADA equipment must be replaced during the life of the generating station?

**CW-YEC-16**

**Issue:** Potential Concerns Absent Proposed Mitigation

**Reference:** Application, Section 4.3.3, pages 42-44

**Preamble:** YEC provides a series of scenarios without the proposed flexible financing.

**Request:**

- a) Please provide the detailed calculations behind each scenario.

### **CW-YEC-17**

**Issue:** The Effect of Mayo B on Customer Rates

**Reference:** Application, Section 4.3.3, page 43 and footnote 77

**Preamble:** YEC states:

Absent any other measures to constrain near term impacts on rates, upward pressure on rates may be expected over the initial 10-15 years of the Project's life to the extent that its costs per unit of net generation in the first years of operation are higher than the revenues recovered per kW.h of related generation from additional loads served through the Project. Such initial higher costs are due in part to added depreciation and allowed return on rate base costs (blend of interest and equity) that are reduced over time as rate base is depreciated.

...

Once the Project is complete and in service, YEC will apply to the YUB to recover through rates the balance of Project costs not otherwise funded by federal or YDC no cost funding contributions. [emphasis added]

**Request:**

- a) Please discuss how depreciation on this Project decreases over time if YEC employs straight-line depreciation methods.
- b) Please provide the rates of depreciation that YEC intends to apply to the various classes of equipment that comprise the Mayo B Project. What assumptions has YEC made, if any, concerning changes in depreciation rates over the life of the Project?
- c) Please confirm that the "added depreciation and allowed return on rate base" will be calculated on rate base net of contributions from the Canadian and Yukon governments.

- d) Please outline all potential “costs not otherwise funded by federal or YDC funding contributions.” Please confirm that this includes any cost overruns on the Mayo B Project. If not confirmed, please explain fully.

#### **CW-YEC-18**

**Issue:** Hearings

**Reference:** Application, Section 4.3.3, page 43, footnote 77

**Preamble:** YEC states:

Once the Project is complete and in service, YEC will apply to the YUB to recover through rates the balance of Project costs not otherwise funded by federal or YDC no cost funding contributions.

**Request:**

- a) Does YEC intend to make a general rate application to recover these costs? If not, how does YEC propose to recuperate the Mayo B costs from customers?
- b) Does YEC intend to make this general rate application coincide with the expiry of OIC 1995/90 and restructure rates as well?

#### **CW-YEC-19**

**Issue:** Annual Unit Cost Ceiling Target for Rate Neutral Annual Impacts

**Reference:** Application, Section 4.3.3, page 44

**Preamble:** YEC states:

To address potential short term annual rate impact concerns flowing from the Project, YEC has defined an annual “unit cost ceiling target” for Mayo B at the cost level per kWh for Project net generation in year 1 (escalating at inflation for subsequent years) that would mitigate upward pressure on near term rates (absent consideration of the benefits secured from diesel generation cost savings). This unit cost ceiling target has been set at 10-11 cents/kWh in 2012 (rising with inflation) based on assumed average Major Industrial rates to be applied in 2012. In effect, Mayo B net generation revenue requirement costs capped at 10 to 11 c/kW.h will not materially exceed new industrial or other rate revenue growth per

kW.h, and that Mayo B costs would therefore not be expected to create upward pressure on overall near term retail rates.

**Request:**

- a) Please discuss how the unit cost ceiling target of 10-11 cents/kWh in 2012 was chosen.
- b) Is this target the rate for energy delivered to customers or the specific rate for energy generated by Mayo B?
- c) How does this target compare to the unit cost of energy delivered approved as a result of YEC's 2008-2009 general rate application?
- d) Please provide a year by year table of forecast rates for energy delivered to customers for the next ten years for each scenario on pages 44 to 45.
- e) Please respond to the question (d) above assuming there is a 10% capital cost overrun (i.e. the Project costs \$132 million rather than \$120 million).
- f) Please respond to the question (d) above assuming there is a 20% capital cost overrun (i.e. the Project costs \$144 million rather than \$120 million).
- g) Please respond to the question (d) above assuming there is a 10% capital cost underrun (i.e. the Project costs \$108 million rather than \$120 million).

**CW-YEC-20**

**Issue:** Proposed Flexible Debt Mitigation for Short Term Rate Neutral Impacts

**Reference:** Application Section, 4.3.3, page 45

**Preamble:** YEC states:

To mitigate potential annual rate impacts in the initial years of Mayo B operation, and to ensure annual per kW.h costs are held within the defined unit cost ceiling during this period, YEC will arrange flexible debt financing with YDC for Mayo B similar to the current YEC flexible term debt long term loan arrangements related to Whitehorse #4 generating unit.

**Request:**

- a) Please identify which debt instrument on Schedule 13 of YEC's 2008-2009 rate application is the flexible term debt long term loan arrangements related to Whitehorse #4 generating unit?
- b) Please quantify the rate mitigation effect of the proposed flexible debt financing on the Mayo Dawson Transmission Project and Mayo B.

**CW-YEC-21**

**Issue:** Contributions - NND FN

**Reference:** Application, Section 5.0, p.47-48, Attachment E, Schedule B-2

**Preamble:** YEC states:

In January 2009, Yukon Energy also entered into a Contribution Letter of Agreement with NND that included funding towards their participation in the Planning Phase of the Mayo B Project (including activities that occurred in December of 2008).

...

A second Contribution Letter of Agreement with FNNND was agreed to in August 2009 to enable their participation in the YESAB reviews and project-related consultation on the Mayo B Project.

**Request:**

- a) Please confirm that the above-referenced contributions are made by YEC. If not confirmed, please explain who makes the contribution.
- b) Please identify the amount contributed towards the FNNND participation in the Planning Phase of the Mayo B Project.
- c) Please identify the amount contributed towards the FNNND participation in the YESAB reviews and project-related consultation on the Mayo B Project.
- d) Please confirm that these contributions are included in Schedule B-2 of Attachment E for Mayo B in the row entitled "YEC with NND FN". If not confirmed, please explain fully.

- e) Please provide a breakdown of the provision of these funds for the years 2009/10, 2010/2011 and 2011/2012 as per Schedule B-2 of Attachment E.
- f) Please reconcile the difference between the \$36.7 million total contribution to Mayo B as shown in Schedule B-2, Attachment E and the \$36.5 million estimated cost for YEC shown in Table 1, p.12 of the Application.

### **CW-YEC-22**

**Issue:** System Capacity

**Reference:** Application, Attachment C-1

**Preamble:** YEC states:

The new IS, including committed projects noted above, will comprise approximately 132 MW of installed generation prior to the addition of Mayo B (approximately 82 MW YEC hydro, 1 MW YEC wind, 42 MW YEC diesel, 1 MW YECL hydro, and 6 MW of YECL diesel).

#### **Request:**

- a) Please provide the capacity contribution in MW of each generating unit on the system at the winter peak under the current two grid system and for the system when integrated. For Hydro Units, please show the contribution at low, median and high water levels. Please include the capacity of diesel units that will be displaced by Mayo B but will not run at the system peak. How much of each unit's capacity can be dispatched?
- b) Please provide the industrial, commercial and residential load at the winter peak. How much of this load is firm and how much is interruptible, i.e. what load can be shed to shave the peak?
- c) Please describe YEC's current system control center. Is any additional investment and labour required in YEC's system control center in order to operate an integrated grid? If so, have these additional costs been incorporated in the \$120 million cost of the Project?

### **CW-YEC-23**

**Issue:** Growth in Load

**Reference:** Application, Attachment D-2, Table D-1

**Preamble:** YEC provides the following Table:

**Table D-1: Load Forecasts per 2006-205 Resource Plan as compared to updated data**

**Load Forecasts - 2005 data (per 2006-2025 Resource Plan) compared to 2009**

Population Increase		Source	Increase in Use/ Customer	Combined Percentage Increase		Sensitivity Case
2005 data	2009 data			2005 data	2009 data	
0.40%	0.53%	Yukon Bureau of Statistics - Medium Growth Projection	0.50%	0.90%	1.03%	Low
1.00%	2.61%	City of Whitehorse Population Increase (4 year average) Mid-point	0.50%	1.50%	3.13%	Medium-Low Medium
		Yukon Energy's Average Recorded Increase in Consumption since 2001		1.85%	2.68%	Medium-High
		Yukon Energy's Highest Annual Recorded Increase in Consumption		2.20%	5.48%	High

**Request:**

- a) Please provide the source of YEC’s projected population growth.
- b) Please confirm that the forecast growth rate used by YEC for non-industrial customers is 1.85%. If not please provide the forecast growth rate.
- c) What is the forecast growth rate for “WAF and MD Normal Non-Industrial loads & losses” as shown in Figure D-1 on p.D-4? If different from the response to b) above, please explain why.

**CW-YEC-24**

**Issue:** Growth in Load

**Reference:** Application Attachment D-3, Table D-2 and Figure D-1

**Request:**

- a) What are the risks of forecast industrial loads of the Minto, Alexco and Carmacks Copper mines to the year 2018 as shown in Table D-2 not materializing?

- b) If industrial loads do not materialize as forecast, please explain the effects on residential and commercial rates over the next 10 years.
- c) Assuming the projected industrial load materializes, will it require YEC to bring on additional diesel generation to supply system peak demand? If so, how will YEC address this matter? Will a new diesel plant need to be commissioned? Please explain fully.
- d) What are the risks of the forecast increase in “WAF and MD Normal Non-Industrial loads & losses” over the next 10 years, as shown in Figure D-1, not materializing?
- e) If these non-industrial loads do not materialize as forecast, please explain the effects on residential and commercial rates over the next 10 years.

#### **CW-YEC-25**

**Issue:** Allowance for Funds Used During Construction (AFUDC) and Project Financing

**Reference:** Application, Attachment E

**Preamble:** The City wishes to investigate the interim financing costs for the Project.

#### **Request:**

- a) Section 6.2 of Attachment E states that claims are to be submitted at three month intervals. How does YEC intend to finance the projects in the interim between payments to contractors and receipt of grants? Please explain fully.
- b) Does YEC intend to create an AFUDC account for financing costs incurred during construction? If not, what regulatory treatment does YEC propose for AFUDC that will be incurred during the construction phase of Mayo B? How will YEC treat AFUDC incurred by the Mayo B and CSTP Stage 2 on its financial statements?
- c) What is the total amount of AFUDC that will be accumulated by this Project? Has this been included in the estimated cost of \$120 million or is this an additional cost to be recovered through rates?
- d) Please provide a monthly schedule of AFUDC incurred by the Mayo B Project separated into debt and equity components.

**CW-YEC-26**

**Issue:** Project Funding

**Reference:** Application, Attachment F

**Preamble:**

Yukon Development Corporation, as an agent of Yukon Government, will borrow the funds required to finance working capital needs and these legacy projects on a long-term basis. To ensure that ratepayers will not be adversely affected, Yukon Government will also provide an annual contribution to Yukon Development Corporation for the principal and interest payments related to a portion of the borrowing up to \$52.5 million.

**Request:**

- a) What is the portion referred to in the above quotation? If the portion is less than 100%, who is responsible for the remaining portion? Please explain fully.
- b) Is the loan in the name of the Yukon Government or the Yukon Development Corporation?
- c) How will YEC treat this capital on its own financial statements?

**CW-YEC-27**

**Issue:** Hearing Costs

**Reference:** Hearing Reserve Account

**Preamble:** The City wishes to investigate the regulatory costs incurred by the Mayo B Project as these were apparently not included in YEC's 2008-2009 general rate application.

**Request:**

- a) Please provide the anticipated regulatory costs associated with this Project before the YESAB, Transport Canada, Department of Fisheries and any other regulatory body, including this hearing.

- b) Please confirm that these costs are included in the \$120 million forecast Project cost. If not confirmed, how does YEC propose recovering the costs of these various applications?

**CW-YEC-28**

**Issue:** Phase 2 and Cost of Service Study

**Reference:** Current Phase 2 Application

**Preamble:** The City supports the Utilities and intervenors working towards determining costs that are as close as possible to representing the “true costs” to service each rate class. The City understands that the costs of the Mayo B project will not be included in the cost of service study proposed in the current joint YEC/YECL Phase 2 GRA.

**Request:**

- a) Please confirm that the costs of the Mayo B Project will not be included in the cost of service study proposed in the current joint YEC/YECL Phase 2 GRA. If unable to confirm, please explain fully.
- b) If confirmed, will YEC undertake to provide a pro forma cost of service study to show how rates will be affected when Mayo B enters service?