



Leading Edge Projects Inc.

John F. Maissan – President

219 Falcon Drive Whitehorse Yukon Y1A 0A2

Phone: (867) 668-3535 Fax: (867) 668-3533

Email: john@leprojects.com Website: www.leprojects.com

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Yukon Utilities Board
Box 3178
Whitehorse, Yukon
Y1A 6L3

Attn: Ms. Wendy Shanks, Board Chair

YUKON UTILITIES BOARD	
EXHIBIT C4-3	
ENTERED BY LE	DATE Jan 27 09

Dear Ms. Shanks:

Re: Leading Edge Projects IRs on Yukon Energy's 2008-2009 GRA

With this letter Leading Edge will be sending out its IRs on Yukon Energy's 2008-2009 GRA. Consistent with Board Order 2009-1 that determined, among other things, that rate design, cost of service, and cost allocation issues will be dealt with in a separate Phase II proceeding, questions on these topics have not been included.

Respectfully submitted,

John Maissan
Leading Edge Projects Inc.

Electronically copied to YEC GRA circulation list

The Yukon Energy Corporation (YEC) 2008-2009 GRA

Information Requests of YEC
from
John Maissan, Leading Edge Projects Inc.

Tab Introduction to Application

- LE-YEC 1 Page (P) 2, first paragraph: Please confirm that YEC does not serve retail customers in Keno City but does serve retail customers in Faro.
- LE-YEC 2 P 5 top, (1. c. i.): Were any of YEC's Board of Directors, or YEC's CEO, or those preparing the Yukon Energy GRA aware that an Order in Council containing the directives ultimately contained in OIC 2008/149 would be coming into effect prior to the filing of Yukon Energy's 2008-2009 GRA? If so which of the above were aware of the coming order?
- LE-YEC 3 If the answer to LE-YEC 2 is no, who gave instructions to those preparing the GRA that no provisions for a Phase II hearing were to be made?
- LE-YEC 4 P 11, end of 2, and P 13-14: Correspondence on this GRA since the filing of Yukon Energy's application suggests that no discussions with YECL regarding adjustments to the General Service customer classes have yet taken place. Is this still the case or are discussions now underway?

Tab 1 Introduction

- LE-YEC 5 P 1-6, Line (L) 24: Was the failure being referred to here in the transmission line itself or elsewhere in the plant? Please explain in detail.
- LE-YEC 6 Further to LE-YEC 5, a fault at the Aishihik plant also caused a system wide outage and kept the Aishihik plant off-line for a period of time late in 2008. Please describe the faulted component and indicate how long the plant was restricted in its output.

Tab 2 Yukon Energy System Sales and Generation

- LE-YEC 7 P2-2, L 13: Please describe the forecasting methodology that was used for the 2008 and 2009 retail sales forecasts.
- LE-YEC 8 P 2-7, L 18: Are discussions with Alexco Resource Corp. on a power purchase agreement now underway?
- LE-YEC 9 P 2-7, L25: What was the reason for the 3.1% decline in firm retail sales in 2006?
- LE-YEC 10 P 2-9, L 23: Please indicate on how many days in 2009 peaking diesel is forecasted to be required.
- LE-YEC 11 P 2-9, L 23: Please confirm the indication in the Application that on days that diesel peaking is required this is only for portions of those days? Please confirm

that this has not already been required in the 2008-2009 winter season.

- LE-YEC 12 P 2-9, L 23: At approximately what Whitehorse temperature will peaking diesel be required? At what Whitehorse temperature will 24 hour peaking diesel be required?
- LE-YEC 13 P 2-9, L 23: At approximately what Dawson City / Mayo temperature will peaking diesel be required on the M-D system? At what Dawson City temperature will 24 hour peaking diesel be required?
- LE-YEC 14 P 2-12, L 4: At approximately what percentage of long term average water inflow into the Aishihik system (or the Whitehorse Rapids hydro system) will there be an energy constraint on secondary sales?
- LE-YEC 15 Further to LE-YEC 14, at what percentages of these flows will diesel energy be required to serve firm load, assuming no net drawdown from storage?
- LE-YEC 16 P 2-11, L 18: Please explain in detail the range of summer (June through August) capacity and energy loads, the hydro capacity and energy available, and the surplus capacity and energy available to serve secondary sales.
- LE-YEC 16 P 2-11, L 21: How much load following from day to night can and is being carried out by the Whitehorse Rapids hydro facility during the winter season?
- LE-YEC 17 P 2-12, L 11: What is the winter capacity of the Mayo Hydro plant?
- LE-YEC 18 P 2-12, L 25: Are the diesel generation efficiencies specified before or after auxiliary and station service loads (including step-up transformers)?
- LE-YEC 19 P 2-13, L 6: Has any diesel generation occurred at either Faro or Minto to date this winter? If not, why not, and when will the Faro and Minto units be available for diesel peaking?

Preamble to questions LE-YEC 20 to 25:

In its application Yukon Energy describes the need, starting in the test years, for diesel generation to meet peak loads during very cold weather (P 2-11 and elsewhere), and the need for higher residential runoff rates to discourage the installation of electric baseboard heating (Introduction to the Application P10-11 and elsewhere). The Application also indicates that the hydro supplies will be fully utilized in the coming years (Introduction to the Application P10 and elsewhere) and that Yukon Energy will be spending about \$15.8 million on feasibility studies and planning for new renewable energy supplies (Page 5-20). Conspicuous by their absence in any of these discussions and financial requests are descriptions of any plans to manage customer energy and demand loads other than the higher runoff rates for residential customers to discourage the installation of electric baseboard heaters.

- LE-YEC 20 Please describe, for all consumer classes, the energy efficiency programs that Yukon Energy has studied and provide copies of these studies.
- LE-YEC 21 Please describe, for all consumer classes, the peak load shaving programs that Yukon Energy has studied and provide copies of these studies.

- LE-YEC 22 Please describe the consumer and contractor awareness and education programs that Yukon Energy has undertaken to inform them about the negative impacts of baseboard electric heating.
- LE-YEC 23 Please describe the support programs that Yukon Energy has undertaken to assist the consumers (residential and commercial) who wish to be rid of baseboard or other electric heating to install non-electric heating systems.
- LE-YEC 24 If Yukon Energy has not done some or all of the above programs please provide a detailed cost justification for each program not undertaken. Please provide any studies performed in support of Yukon Energy's decisions.
- LE-YEC 25 What energy efficiency projects and what off-electric heat projects does Yukon Energy have planned for its facilities?
- LE-YEC 26 Table 2.5: Please explain why the energy supplied by the wind generators has been falling steadily in recent years, and, since wind energy is more abundant in winter than in summer, what are Yukon Energy's plans to improve their winter performance to reduce diesel generation?
- LE-YEC 27 Are the leading edge blade heaters on the wind turbines operative?
- LE-YEC 28 Are the wind turbines SCADA controlled, and if not when will they be brought under SCADA control?
- LE-YEC 29 Where in the order of priority for operational attention and maintenance response are the wind turbines placed relative to other generators on the WAF system?

Tab 3 Revenue Requirement

- LE-YEC 30 P 3-4, Table 3.2: At what locations does Yukon Energy purchase wholesale power and what rates are paid for power at these locations?
- LE-YEC 31 P 3-5, L 18: It is stated here that Yukon Energy purchases power from YECL at Johnson's Crossing for \$0.20 per kWh. This seems exorbitant considering YECL will purchase this power for \$0.0685 per kWh (about one third of the cost) from Yukon Energy. Please explain why Yukon Energy has not addressed this issue with YECL to date.
- LE-YEC 32 P 3-7, Table 3.4; and p 3-12: Please provide the organization chart in effect at the start of 2005 and the number of full time equivalents (FTEs) in each position. Please also provide an organization chart (and FTEs in each position) that will be in effect for 2009. Please provide a detailed substantiation for each FTE added since 2005.
- LE-YEC 33 P 3-8, Table 3.6: For 2008 and 2009 please provide a breakdown of the brushing cost, and kilometers to be brushed, by transmission line.
- LE-YEC 34 P 3-9, L 8: Please describe in detail what the full labour crew will be doing that was previously not done, and justify why these things need to be done now.
- LE-YEC 35 P 3-19, L 13: Please provide the most recent available information on the present

and forecast of future long term Canada bond interest rates.

- LE-YEC 36 P 3-19, L 19: Why did Yukon Energy finance the purchase of the Minto mine diesels at 7.5% when Yukon Energy has available to it financing from YDC at substantially lower interest rates?
- LE-YEC 37 P 3-20, L 8: How was the 6.55% interest rate on the Mayo – Dawson Note set?
- LE-YEC 38 P 3-20, L 25: Why is the TD Canada Trust note not replaced with YDC debt at a much lower interest rate?
- LE-YEC 39 P 3-21, L8: What is the proposed ROE for Yukon Energy for 2009 based on the BCUC decision?
- LE-YEC 40 P 3-22, L 16: What is the interest rate earned by the Diesel Contingency Fund?

Tab 4 Rates

- LE-YEC 41 P 4-5, L 13: What is Yukon Energy's forecast of secondary energy rate should world oil prices stay at the current level of about \$40 to \$50 per barrel?
- LE-YEC 42 P 4-5, L 22: Given that diesel generation for peaking will be required more and more starting in 2009, what efforts have Yukon Energy expended to shorten the notice period to cut off and reconnect secondary customers more quickly than the existing 7 days, or the proposed 5 days, to maximize secondary sales during shorter periods of availability? What plans does Yukon Energy have on a go forward basis to deal with this opportunity?
- LE-YEC 43 P 4-8, L 5: Given the much lower world oil price today than when the GRA was prepared, does Yukon Energy propose to update their fuel price forecast for 2009, and if so what is that forecast price?

Tab 5 Capital Projects

- LE-YEC 44 P 5-3, L 8: Are the final costs for Stage One of the Carmacks – Stewart Crossing Transmission Project (CSTP) and the Minto Spur line now known, and if so what are they? If still not known exactly, what are the most recent estimates?
- LE-YEC 45 P 5-3, L 28: What is the length of the Minto Spur line, and what is the cost breakdown between the line and substations?
- LE-YEC 46 P 5-7, L 7: Please provide a detailed cost breakdown of the \$22.6 million CSTP Stage One budget and the same breakdown for the final or latest known costs (\$28.394 or otherwise).
- LE-YEC 47 P 5-7, L 17: Please provide a detailed cost breakdown of the \$3.83 million Minto Spur budget and the same breakdown for the final or latest known costs (\$9.989 million or otherwise).
- LE-YEC 48 P 5-9, L1: In table form please provide complete information on each of the Minto diesel units including manufacturer, model, RPM, year of manufacture, total hours of use on each unit, continuous loading capacity in MW, and fuel efficiency in

	kWh per litre.
LE-YEC 49	P 5-9, L 3 to 7: Has the work on the Minto diesels described now been completed? If not all completed what has been completed, what remains to be completed, and what is the expected completion date?
LE-YEC 50	P 5-9, L 14: What will be the fuel efficiency of the refurbished Mirrlees diesel generators?
LE-YEC 51	P 5-9, L 14: What would be the fuel efficiency of new base load diesel generators of similar nature and capacity to the Mirrlees units? At what fuel price would it be more cost effective to purchase new base load generators rather than refurbish Mirrlees units?
LE-YEC 52	P 5-10, L 4: Would the projected cost of new diesels at the mine site of \$1.035 million per MW include foundations, building, SCADA connection, and all other features the mine diesels will have once Yukon Energy's planned work is complete?
LE-YEC 53	P 5-12, L1: Please describe in detail how Yukon Energy specifies its large transformers, distribution transformers, and other larger electrical equipment to ensure that the lowest loss equipment that is economically justifiable is purchased.
LE-YEC 54	P 5-12, L 17: Please confirm that the Faro Mirrlees diesel unit is now available to be operated on the WAF system as required.
LE-YEC 55	P 5-14, L6: Media reports following a number of outages caused by Whitehorse Rapids turbine No.4 indicated that Yukon Energy had found the problem to be in the governor system. Please describe the problem in detail and indicate whether the necessary repairs or replacements will be completed as part of this budget or whether it will result in additional costs.
LE-YEC 56	P 5-15, L6: Please provide a copy of the study completed in 2008, and outline what will be done in 2009 to improve the spill regulation.
LE-YEC 57	P 5-17, L 4: Please provide a copy of the assessment report.
LE-YEC 58	P 5-17, L 15: Please provide a copy of the report and the recommended solutions.
LE-YEC 59	P 5-17, L 28: Please provide an update on the upgrading or replacement of the power line carrier system.
LE-YEC 60	P 5-18, L 22: Why are portions of the project described here repeated separately on the following page (pole treatment, dead-end insulators)? Are they all one project as described here or is the description of the scope of this project incorrect?
LE-YEC 61	P 5-20, L 19: Are there any sources of power other than hydro and geothermal that Yukon Energy is studying, and if so what are they and what are the budgets for these studies?
LE-YEC 62	P 5-21, L 1: Has Western Copper advanced Yukon Energy the \$1 million? If not when and how will Western Copper pay Yukon Energy? Are there written agreements in place?

- LE-YEC 63 P 5-22, L1: Why is the cost of this 2008 assessment not included in the cost of the 2009 scaling of this same rock face as described on page 5-15, L 16?
- LE-YEC 64 P 5-22, L 14: We understand that the Aishihik Fisheries studies were completed. Please provide any reports compiled as part of this assessment and provide the conclusions of the work if not included in the reports. What are the practical implications of the results of this work on the Aishihik water licence?
- LE-YEC 65 P 5-22, L 26: The Mayo Lake dam was first built in the mid 1950s and extensively rebuilt in 1988 and 1989. Please describe in detail the portions of this dam need to be assessed.
- LE-YEC 66 P 5-23, L 1: Has the Alexco mine paid for this work in advance? If not what is the agreement between Yukon Energy and Alexco? Please provide a copy of any written agreements.

Tab 9 Audited Financial Statements

- LE-YEC 67 P 9-11, Amortization periods: The amortization of wind turbines in Europe is typically 20 years (sometimes 25 years in USA), and turbines typically have a design life of 20 years. This being the case it seems inappropriate to amortize them over 30 years, why does Yukon Energy do so?