C1-16

YUKON ENERGY CORPORATION

AND

THE YUKON ELECTRICAL COMPANY LIMITED

1996/97 GENERAL RATE APPLICATION

VOLUME I

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Tab

Income tax expense for YECL is forecast to decrease from $1.8 million allowed in the Board's 1994 decision to $1.7 million in 1996 and then increase to $2.2 million in 1997. The fluctuation is due mainly to the timing of incurring rate case and deferred overhaul expenditures which are deductible for tax purposes in the year in which they are incurred.

Table 2.6 at the end of this section summarizes the combined Yukon forecast for 1995, 1996 and 1997 for the following parameters:

- mid-year capital structure;
- mid-year rate base;
- mid-year cost rates; and
- return by each cost component of the capital structure.

Increases in average return are forecast for both YEC and YECL which reflects the impact of various factors that are reviewed below. YEC's average return is forecast to be 7.73% in 1995 (7.59% if a 10.5% allowed return is achieved) and 9.95% and 9.74% in 1996 and 1997 respectively. The similar numbers for YECL are 9.49% in 1995 (9.67% if an 11% allowed return is achieved) and 10.68% and 10.76% in 1996 and 1997 respectively.

The increase in the average return to YEC is due to two factors. First, the interest rate on the 7% Government of Canada flexible term note will increase to 7% in 1996 from 1.44% in 1994 (while the mine was closed) as sales on WAF will now be greater than the threshold in the abatement formula contained in the note. (The note contains an abatement formula which provides for a reduction in interest and principal payments when sales on the WAF grid are below 310 GW.h. This is the case at any time the Faro mine is not operating.) Secondly, the balance of the increase in the average

dividend and loan back for 1995 is estimated to be approximately $1.3 million.)

- To set the interest rate on intercompany loans to YEC from YDC at a level which reflects current market conditions for companies of similar size and business risk to YEC. Interest rates for all new loans from YDC to YEC will be fixed at 120 basis points above the average of long-term Government of Canada Bonds as of September 30, as specified by the Canadian Bond Rating Service. The interest rate for existing loans is not adjusted as each reflects the long-term cost of borrowing at the time it was issued. The interest rate anticipated for the 1995, 1996 and 1997 loans is 9.45% per annum. YTG has confirmed that interest costs, as determined by the above policy, reflect the likely costs if the funds are borrowed through YTG.

The new OIC 1995/90 requires the Board (and hence the Companies) to review and approve rates in accordance with the regulatory principles of other electric utilities in Canada. As a result, the Companies have excluded YEC's short-term debt from the calculation of returns as indicated by the precedents set by YECL, Alberta Power Limited and others. This policy ensures that changes to YTG rate relief policy or projections do not effect the calculation of the revenue requirement for rate making purposes.

YECL meets its financing requirements with a combination of internally and externally generated funds. External financing is obtained from the parent company, Alberta Power Limited (APL), which in turn obtains external financing from its parent, Canadian Utilities Limited (CU). This method of external funding benefits YECL since the credit strength of APL and CU is greater than that of YECL and, therefore, financing costs are lower than if YECL had to borrow directly from the public capital markets.

recover a normal commercial return on YEC's equity, less one-half of one percent (0.5%). As in previous GRAs, the normal commercial return applicable to YEC is assumed to be the same as the fair return applicable on YECL's common equity.

Accordingly, YEC is requesting a rate of return on common equity of 12.75% for the 1996 and 1997 test years.

THE YUKON ELECTRICAL COMPANY LIMITED
1996/97 GRA
FINANCIAL EVIDENCE

Financing/Return on Common Equity

A. FINANCING

YECL meets its financing requirements with a combination of internally and externally generated funds. External financing is obtained from the parent company Alberta Power Limited (APL) who in turn obtains external financing from its parent Canadian Utilities Limited (CU). This method of external funding benefits YECL since the credit strength of APL and CU is greater than that of YECL and therefore financing costs are lower than YECL borrowing directly from the public capital markets.

Recent Financing Activity

Since the last appearance before the Board in July 1993, YECL has completed one preferred share financing and one debenture financing. Both issues were to the parent company APL. The proceeds from these financings were used to meet requirements for capital expenditures and general corporate purposes.

With the exception of the cost rate, the preferred share and debenture issues have the same terms and conditions as the corresponding financings issued by CU in the public markets and mirrored down to APL. The cost rate, however, is higher

sank into recession and the monetary authorities temporarily deferred their battle with inflation in order to kick start the economy.

In July 1993 it was widely expected that interest rates would begin to increase as a result of stronger economic growth and a rising rate of inflation. However, as the economy expanded, inflation actually declined resulting in a further decline in interest rates to levels not seen for more than 30 years. The bank rate had gone from a peak of 14.05% in May 1990 to a 30 year low of 3.87% on February 1, 1994, a drop of 1,018 basis points. The yield on long Canada bonds, on the other hand, only declined 377 basis points over the same period from 10.86% to 7.09% on January 12, 1994.

In February 1994 the downward trend in interest rates was reversed when the U.S. Federal Reserve began to raise short term interest rates to head off inflation. Between February 1994 and February 1995 the Federal Reserve raised the federal funds rate seven times for a total of 300 basis points. Despite a Canadian inflation rate of close to zero in 1994 the Bank of Canada had to follow the Federal Reserve's lead due to increasing pressure on the Canadian dollar. Long term interest rates in both countries followed suit. In Canada, the bank rate climbed to 8.60% on March 7, 1995 and long government bond yields peaked at 9.53% on January 18, 1995.

Between February and July of 1995 interest rates in Canada and the U.S. declined in anticipation that the Federal Reserve's pre-emptive strike on inflation would slow the economy and allow monetary policy to loosen. On July 6, 1995 the Federal Reserve cut the federal funds rate by 25 basis points. In mid July reports of unexpectedly strong U.S. economic data knocked the whole idea of economic

a return on common equity of 13.25% for each of 1996 and 1997. Therefore, the rate, amount, type and timing of financings is dependent on variances from these rate case assumptions as well as the conditions and receptivity of the financial markets.

YECL is wholly owned by APL which in turn is wholly owned by CU. All of the external financing requirements of YECL are met by this corporate structure.

YECL issues debt, preferred shares and common shares to APL to mirror APL's mid-year target capital structure. Traditionally the capital structures of regulated utilities in Alberta have contained a higher proportion of preferred share equity than those of utilities in other jurisdictions. This heavier use of preferred share financing reflected its low after-tax cost to consumers as a result of provincial and federal income tax rebates. The Alberta government eliminated the provincial income tax rebate in 1990. The federal government followed suit in its February 1995 budget when it eliminated the Public Utilities Income Tax Transfer Act. With the elimination of both provincial and federal income tax rebates, the cost advantage of preferred equity has diminished. Consequently, Alberta Power is adjusting its target capital structure ranges from 38%-43% debt, 22%-26% preferred shares and 32%-37% common equity to 45%-50% debt, 12%-17% preferred shares and 34%-39% common equity. YECL proposes to make a similar adjustment.

In order to finance 1996 and 1997 requirements and in order to maintain an appropriate capital structure, the Company anticipates total external financing of $4,000,000. In 1996, $3,400,000 of debentures will be issued at a forecast coupon rate of 8.87%. $3,000,000 of the proceeds will be used to fund the

Sherwin's and Ms. McShane's APL evidence is attached in Appendix A. Although the APL rate case is only for the 1996 test year, interest rates for 1997 are not forecast to change substantially from 1996 levels. Therefore it has been assumed that had Dr. Sherwin and Ms. McShane been asked to recommend a rate of return for APL for the 1997 test year it would be identical to their recommendation for 1996.

Given the greater investment risks of YECL relative to APL and other utilities (see are discussion below), YECL believes that it should be entitled to a rate of return on common equity for each of 1996 and 1997 of 13.25%. This is 50 basis points more than the return requested by APL based on Dr. Sherwin's and Ms. McShane's evidence.

Unique Business and Financial Risks of YECL

Risk is the probability of failing to achieve an anticipated return or of suffering an impairment of capital. Risk can be distinguished between business risk, financial risk and investment risk.

Business risks encompass market demand, operational costs, physical hazards and regulation. YECL's small size and economic and geographic environments expose it to a greater degree of business risk than most utilities located in other areas of Canada.

Market demand risks relate to the volatility of sales and their impact on return on equity. Realization of sales forecasts in YECL's service territory is subject to many variables including the weather, cyclical volatility of industrial sales, concentration

Regulatory risk arises from the regulatory philosophy and decisions in a given jurisdiction, particularly with respect to the relative level of allowed return and the opportunities provided to earn that return. Two key elements in the investor's perception of regulatory risk are the consistency of the Board's decisions and the extent to which the Board is viewed as balancing shareholder and consumer interests.

Financial risks reflect the degree of leverage in the capital structure. YECL is presently capitalized by debentures, preferred shares and common stock in proportions similar to other utilities.

Investment risks reflect the combination of business and financial risks as perceived by the investor. The combination of greater business risk and similar financial risk would lead to the conclusion that a YECL investor is exposed to a greater investment risk than investors of other utilities.

C. CONCLUSION

In determining the financing program for YECL for the 1996 and 1997 test years, the Company has considered capital structure targets and current and prospective costs of capital. It is concluded that for the two test years total external financing of $4,000,000 will be required including $3,400,000 and $600,000 of 8.87% Debentures in 1996 and 1997 respectively.

In determining a rate of return on common equity the Company has relied on the evidence of independent rate of return experts recently filed in Alberta for its parent company APL requesting a return of 12.75%. YECL has also considered its

Appendix A

Summary of Dr. Sherwin's and Ms. McShane 's APL Evidence

In their evidence filed with the EUB Dr. Sherwin and Ms. McShane recommend a fair rate of return for APL of 12.75% for 1996. Dr. Sherwin's and Ms. McShane's recommendation as to a fair and reasonable rate of return was based on present and prospective interest rates as well as the application of three different techniques for measuring the equity return requirement: the comparable earnings test, the discounted cash flow test and the risk premium test.

The comparable earnings test relies on the principle that regulation is a surrogate for competition and utilities should be allowed a return commensurate with the returns expected to be earned on the book value of competitive industrials of approximately similar risk to utilities. This technique is also consistent with the original cost rate base methodology used by regulators for public utilities.

Dr. Sherwin and Ms. McShane performed three comparable earnings tests. In their first analysis, they relied on the average realized book returns over the entire 1983-1991 business cycle for a sample of 22 Canadian industrial companies comparable in risk to high grade utilities. As utilities are generally characterized by relatively low volatility with respect to earnings and stock market performance, they selected these industrial companies using 4 risk criteria: coefficient of variation of ROE, coefficient of variation of EBIT, stock beta and standard deviation of market return. The first two risk criteria are accounting oriented and the latter two are market oriented. Over the 1983-1991 business cycle these 22 stable industrial companies averaged a return on common equity of 13.4%. Since prospective inflation is expected to be lower than in the last business cycle, Dr. Sherwin and Ms. McShane considered the 1985-1993 and 1986-1994 periods as

approximately 2.7%. They also found that their industrial sample had achieved an average long-term growth rate of 9.0%. This growth rate was based on studies of historical growth in dividends for 5-year and 10-year holding periods ending in each of the years 1987 to 1994. The result was a bare bones cost of equity of 11.7%.

Dr. Sherwin and Ms. McShane conducted a second DCF test on the eight industrial companies in their Canadian sample for which there were earnings forecasts available. The result was a bare bones cost of 11.9%. Thus for Canadian industrial companies the two DCF tests resulted in a range of 11.7% to 11.9% for the bare bones cost estimate. Adjusting for risk differences between high grade utilities and industrials, Dr. Sherwin and Ms. McShane concluded that the bare bones cost of equity for a typical high grade utility was 11.5%.

In a third DCF test Dr. Sherwin and Ms. McShane used available earnings estimates to calculate projected growth rates for their sample of 23 U.S. industrial companies and after adjusting the results for relative risk differences concluded that the bare bones cost for a typical high grade utility was 12.7%.

Giving weight to both the Canadian and U.S sample results produced a bare bones cost of equity for high grade utilities in the range of 11.5% to 12.7%. Dr. Sherwin and Ms. McShane then adjusted this bare bones cost to achieve a market-to-book ratio of 1.15 to permit the utility to defray flotation costs, attract capital and maintain a reasonable degree of financing flexibility. Dr. Sherwin and Ms. McShane concluded that the three DCF tests resulted in a fair return for high grade utilities of 12.9% to 13.2% (midpoint 13.1%).

The risk premium test is based upon the premise that an investor in a common stock assumes greater risk than the investor in a long term government bond and that the common stock investor requires compensation for this risk.

Sherwin and Ms. McShane concluded that the appropriate market risk premium was in the range of 5.0% to 6.0% at a bond yield of 8.00%. This market risk premium was then reduced to reflect the lower risk of high grade utilities resulting in a utility risk premium of 3.5%-4.0%.

On balance, Dr. Sherwin's and Ms. McShane's risk premium tests indicated a required risk premium for high grade utilities of 3.50%-3.75% at a bond yield of 8.00% for a bare-bones cost of equity in the range of 11.50%-11.75%. After an adjustment to achieve a market-to-book ratio of 1.15 to permit the utility to defray flotation costs, attract capital and maintain a reasonable degree of financing flexibility, the risk premium tests indicated a fair return for high grade utilities of 12.4%-12.7% (midpoint 12.6%).

In arriving at a final rate of return recommendation, Dr. Sherwin and Ms. McShane gave a heavy weighting to their risk premium results. Little weight was given to the comparable earnings and DCF tests due to the greater uncertainty and subjectivity of these tests. They concluded that a fair rate of return on common equity for a typical high grade utility was in the range of 12.25% to 12.75%. Because APL's common equity ratio is lower than that of the typical high grade utility, Dr. Sherwin and Ms. McShane recommended that a fair rate of return on common equity for APL should be at the top of their range, or 12.75%.