

**NEWFOUNDLAND AND LABRADOR
BOARD OF COMMISSIONERS
OF PUBLIC UTILITIES**

**TESTIMONY ON THE AUTOMATIC ADJUSTMENT
MECHANISM, THE EMBEDDED COST OF DEBT,
AND THE TEST-YEAR COST OF BORROWING
IN REGARD TO THE NEWFOUNDLAND & LABRADOR
HYDRO 2006 GENERAL RATE APPLICATION**

**TESTIMONY OF DR. WILLIAM T. CANNON
ON BEHALF OF THE CONSUMER ADVOCATE**

October 27, 2006

TESTIMONY OF DR. WILLIAM T. CANNON

Q: Please state your name, profession, and employment.

A: My name is William T. Cannon. I am Chair of the Faculty Board and the Commerce '83 Teaching Fellow in Finance at the Queen's University School of Business in Kingston, Ontario. I am also Chair of the Pension Committee of the Board of Trustees at Queen's University. I have been teaching finance courses at Queen's for 32 years. I received my Ph.D. in Business Economics from Harvard University in June 1976. A summary of my background and qualifications appears in Appendix A.

Q: What experience do you have testifying before Canadian regulatory boards and advising participants in regulatory proceedings?

A: I have presented written and oral rate-of-return and capital structure evidence before Canadian regulatory boards for the past 25 years. I have advised the Ontario Energy Board Staff and Special Counsel, and appeared before the Ontario Energy Board ("OEB"), in numerous Enbridge/Consumers' Gas and Union Gas rate hearings since January 1982, as well as in the 1989 Tecumseh Gas Storage, the 1996 Centra Gas Ontario, and the 1999 Ontario Hydro Services Company rate hearings. On behalf of the British Columbia Petroleum Corporation ("BCPC") and CanWest Gas Supply Inc., I presented evidence before the National Energy Board ("NEB") in four Westcoast Energy rate hearings between 1983 and 1990. I have testified on behalf of the Ontario Ministry of Environment and Energy (the "Ministry") before the NEB in the 1991 TransCanada PipeLines ("TCPL") rate hearing, advised the Ministry in connection with the NEB's 1993 Inter-Coastal PipeLine and TCPL hearings, testified on behalf of the Ministry and the Industrial Gas Users Association in the NEB's 1994 Multi-Pipeline Cost of Capital Hearing (RH-2-94), and advised the Ministry in connection with the proposed revision of the Undertakings of the Ontario gas distribution utilities to facilitate their diversification into non-gas-utility businesses. I also testified in several Pacific Northern Gas rate hearings before the British Columbia Utilities Commission during the 1980s and advised the BCPC in connection with the 1986 Inland Natural Gas rate hearing.

In June 2003, at the request of the OEB Staff, I presented written evidence as part of the OEB's Review of its *1997 Draft Guidelines on a Formula-Based Return on Common Equity*. These Guidelines include procedures for an annual automatic adjustment of gas distribution utility allowed equity returns during years when there is no general cost of capital hearing.

1 In addition to participating in rate hearings, I have also assisted the OEB in connection
 2 with a number of its other responsibilities. During the 1984-1986 period, I was engaged
 3 by OEB Staff to examine and present evidence in the hearings that were called to
 4 consider (a) Inter-City Gas' takeover of Northern and Central Gas, (b) Unicorp Canada's
 5 takeover of Union Enterprises Limited, and (c) Gulf Canada's indirect acquisition of
 6 Consumers' Gas shares. In the fall of 1989, I testified on behalf of OEB Staff in the
 7 Westcoast-ICG(Ontario) change-of-control hearing, and in the summer of 1990 I
 8 testified before the Board in the hearing convened to consider British Gas' proposed
 9 acquisition of a controlling interest in Consumers' Gas. During the latter part of 1992, I
 10 advised OEB Staff in connection with Westcoast Energy's takeover of Union Energy.

11
 12 More recently, at the request of OEB Staff, I have advised the OEB in connection with
 13 the restructuring of the regulation of Ontario's municipal electric utilities ("MEUs").
 14 These involvements have included the design of a performance-based rate-regulatory
 15 ("PBR") regime, the establishment of appropriate cost of capital and capital structure
 16 parameters to employ within the MEUs' PBR framework, and formulation of the filing
 17 guidelines for applications for mergers, acquisitions, amalgamations and divestitures
 18 among Ontario's MEUs, pursuant to the OEB's adjudication of these applications.

19
 20 Q: What is the purpose of the evidence you are now presenting?

21
 22 A: I have been retained by the Consumer Advocate of Newfoundland and Labrador: (1) to
 23 evaluate, and provide an opinion on, the appropriateness of Hydro's proposed automatic
 24 adjustment mechanism ("AAM") as outlined in Hydro's Exhibit MGB-1; (2) to
 25 recommend changes to the proposed AAM where appropriate to better meet the
 26 purposes of the AAM; and (3) to provide a forecast of Hydro's likely cost of borrowing
 27 money by way of long-term debt issues during the 2007 test year.

28
 29 Q: Please provide your evaluation of Hydro's proposed automatic adjustment mechanism
 30 ("AAM")

31
 32 A: In my view, the operation of an AAM for determining Hydro's annual allowed return on
 33 rate base should (1) be based on an up-to-date estimate of Hydro's embedded cost of
 34 debt for the test year and (2) should incorporate, in the year-by-year calculation of the
 35 range for the allowed return on rate base, a weighted average cost of capital ("WACC")
 36 value that, subject to forecast error, is as close as possible to the actual WACC likely to
 37 be experienced by Hydro in each future year. Hydro's proposed AAM fails in both

1 these respects. First, the test-year embedded cost of debt in Hydro's application is now
2 out of date. Second, Hydro's proposed AAM fails to reflect the WACC that the
3 Company is likely to experience in future years by virtue of the fact that the embedded
4 cost of debt in the WACC calculation is held constant, for each year after the test year,
5 at the 8.39% value that has been calculated by Hydro to be the embedded cost of its debt
6 during 2007, as shown in Schedule IV of the Finance and Accounting Evidence section
7 of Hydro's Application. The detrimental consequence of having the actual future
8 embedded cost of debt that Hydro is likely to experience systematically *fall below* the
9 fixed 8.39% value in the proposed AAM formula is that the return on equity that Hydro
10 is likely to earn will systematically *exceed* its allowed return on equity.

11
12
13 Q: With respect to your first point, is 8.39% still the appropriate value to reflect Hydro's
14 embedded cost of debt for the 2007 test year?

15
16 A: No, it is not. The 8.39% embedded cost of debt value, as calculated in Schedule IV of
17 Hydro's Finance and Accounting Evidence and corrected in Response to CA 214, is
18 based on the assumption that Hydro's \$225 million new debt issue, then planned for
19 later in 2006, would carry a 5.00% annual coupon. Subsequently, we have learned, in
20 Response to CA 213, that this issue has now been sold to investors at a coupon rate of
21 4.30%. The debt discount and underwriting fees associated with this issue were 0.825%
22 of the face value of the debentures, amounting to \$1,856,250 in total.

23
24 Q: What then do you estimate will be Hydro's embedded cost of debt for 2007, factoring in
25 the lower cost associated with the recent new debt issue?

26
27 A: I estimate that Hydro's embedded cost of debt for the 2007 test year will be 8.26%,
28 0.13% lower than the value presently in Hydro's Application. In dollar terms, this
29 represents a reduction in Hydro's projected interest costs for 2007 of \$1.59 million. The
30 calculations supporting my estimate are set out in Schedules 1-A and 1-B at the end of
31 this testimony.

32
33
34 Q: With regard to your second point above, why does incorporating a constant or
35 unchanging value for the embedded cost of debt for years beyond the test year in
36 Hydro's proposed AAM make the formula-calculated WACC a less-than-ideal
37 reflection of the WACC that Hydro is likely to experience during the post-2007 years?

1 A: The reason is simply that Hydro's embedded cost of debt is bound to change in the years
2 beyond the test year as (1) Hydro retires its maturing debt issues and replaces these with
3 newly-issued debt at a rate that is very likely to be lower than that which was being paid
4 on the matured issue, and (2) because of the progressive accumulation of sinking fund
5 balances from year to year and the build up of interest earnings on these sinking funds.
6 For example, during 2008 Hydro will retire \$200 million of its maturing AA Series
7 debenture on which it had been paying a coupon rate of 5.50% annually. This will
8 probably be replaced by a newly-issued debenture of approximately the same size at a
9 coupon rate that is likely to be in the range of 4.00% to 5.00%. If this turns out to be
10 true, then Hydro's annual interest costs from that date on will be reduced by \$1.0
11 million to \$3.0 million, having the effect of reducing Hydro's embedded average cost of
12 debt. The operation of Hydro's sinking funds may also lower its future embedded
13 average cost of debt, as the sinking fund balances build up over time and the total
14 interest earned on these (larger) balances increases – offsetting Hydro's interest
15 (outflow) expenses to a greater and greater extent. The direction and magnitude of this
16 latter effect will, of course, depend on the extent of any new debt financing undertaken
17 to compensate for the financial flows into the sinking funds and a comparison of the
18 rates earned on the sinking fund balances with the rates paid by Hydro on any new
19 short-term or long-term borrowings.

20
21
22 Q: What do you recommend to improve the operation of an AAM for Hydro, should the
23 Board decide to approve an AAM?

24
25 A: Hydro knows now what debenture issues will have to be retired over the envisioned life
26 of the AAM as well as the amounts of the sinking fund payments it will make each year
27 on those of its debt issues which carry sinking fund provisions. Similarly, based on its
28 forecasted rate base growth and targeted capital structure, Hydro can forecast the likely
29 timing and magnitudes of the new debt issues it will require over the corresponding
30 horizon. Based on these projections, I am recommending that Hydro be asked to
31 estimate, during the current hearing, its likely embedded average cost of debt for each of
32 the years 2008, 2009, and 2010, based on the relevant interest rate forecasts for these
33 years as provided by its two lead underwriters and either approved or amended by the
34 Board in the light of the testimony it hears from all interested parties. The forecasted
35 embedded average debt costs would then be approved and recorded as pre-established
36 components of the WACC portion of the automatic adjustment formula for each of the
37 years 2008, 2009, and 2010.

1 Q: As Hydro has so far declined to provide an estimate of its embedded cost of debt for
2 years beyond 2007 until it updates its five-year financial projections (see Responses to
3 CA 177 and 178 and IC 165), are you able to provide the Board with estimates of
4 Hydro's embedded cost of debt for the years 2008 through 2010?

5
6 A: Yes, I am. I have estimated that Hydro's embedded cost of debt will be 8.23% for 2008
7 (see Schedules 2-A and 2-B for supporting calculations), 8.16% for 2009 (see Schedules
8 3-A and 3-B), and 8.11% for 2010 (see Schedules 4-A and 4-B).

9
10
11 Q: How have you arrived at these estimates?

12
13 A: I have followed the same calculation procedures as those employed by Hydro in
14 Schedule IV of its Finance and Accounting Evidence, with supporting calculations in
15 the same format as those presented in Hydro's Response to IC 166. I have also made
16 the following assumptions:

17
18 (1) Hydro's average total net debt will remain at the projected 2007 level of \$1,267
19 million for each of 2008, 2009, and 2010. This implies that any net rate base growth
20 will be financed out of Hydro's retained earnings.

21
22 (2) Hydro will sell a new debenture issue in the amount of \$200 million during 2008 to
23 replace the \$200 million Series AA debenture that will mature that year (see Hydro's
24 Response to CA 176), and this new debenture will carry an annual coupon rate of
25 4.50% and have debt discount and underwriting/issuing expenses conservatively
26 estimated to total \$1.9 million, or 0.95% of face value.

27
28 (3) Hydro will be able to earn, during each year, an average return of 4.30% per annum
29 on its new sinking fund contributions and on the newly-accrued earnings from
30 previous years' accumulated sinking fund investments.

31
32 (4) The cost of Hydro's promissory notes and other forms of short-term borrowing will
33 average 4.00% each year.

34
35
36 Q: What observations or conclusions do you draw from your forward-looking estimates of
37 Hydro's embedded cost of debt?

1 A: First, my estimates indicate that Hydro's embedded cost of debt will be substantially
2 lower during the test year, and during the subsequent 2008-2010 period that the AAM is
3 likely to be in place for, than the 8.39% figure that Hydro has used in its Exhibit MGB-1
4 evidence. Using my estimates for the embedded cost of debt, as opposed to Hydro's
5 8.39% figure, yields a much lower weighted average cost of capital (WACC) and return
6 on rate base (RORB) for Hydro than those which have been set out in Hydro's
7 Application. For the test year, using my estimate of 8.26%, instead of Hydro's 8.39%,
8 for the embedded cost of debt lowers Hydro's WACC by 0.11% – from 7.74% to 7.63%
9 – and its RORB by 0.11% as well – from 7.63% to 7.52%. In dollar terms, the
10 warranted reduction in the RORB amounts to about \$1.62 million. Even larger
11 reductions in Hydro's projected WACC and RORB can be expected for 2008, 2009, and
12 2010, as the difference between Hydro's 8.39% embedded-cost-of-debt figure and its
13 most-likely future-year value grows wider.

14
15 Furthermore, if Hydro is allowed to use a figure for the embedded cost of debt in its
16 AAM that is higher than that which is reasonably expected to pertain, then it will have
17 the effect of raising Hydro's expected return on equity above its allowed rate of return.
18 For example, if Hydro's test year WACC is set on the basis of a 8.39% embedded debt
19 cost and its actual embedded debt cost turns out to be 8.26%, as I estimate it will be for
20 2007, then, all other things being equal, Hydro will earn a return on equity in 2007 equal
21 to 5.97%, or 0.77% more than the allowed equity return Hydro proposes in its
22 Application and uses in its illustrated WACC calculation on page 3 of Exhibit MGB-1.

23
24 The second important observation I draw from my forward-looking embedded cost of
25 debt estimates is that they are non-stationary and that there is every reason to believe
26 that these values will change over time, in a predictable fashion, as Hydro refinances its
27 major debt issues and invests its sinking fund contributions and earnings.

28
29
30 Q: What are the advantages of your recommendation that Hydro's AAM formula for each
31 year be pre-specified with embedded cost of debt values that vary from year to year to
32 reflect a realistic projection of what these values will likely be in future years?

33
34 A: The most important advantage that implementation of my recommendation would result
35 in is removing the systematic bias with respect to Hydro's over-earning its allowed
36 return on equity, during the period when the AAM is in operation, as a result of
37 differences between Hydro's likely embedded average debt costs during 2008, 2009,

1 and 2010 and the fixed 2007 value (either 8.39% or some revised figure), that could
2 have been foreseen at the time of this hearing.

3
4 The second advantage is that the forecasted embedded average costs of Hydro's debt for
5 2008, 2009, and 2010 would be established and approved up front – at the time of this
6 hearing – and not require new evidence to be submitted, heard, and acted upon, by the
7 Board in subsequent years, which would otherwise be contrary to the purpose of having
8 an AAM and contrary to the Board's decision with respect to the treatment of the
9 embedded cost of debt in Order No. P.U.19 (2003) on pages 67-68.

10
11 Finally, my recommendation to use pre-established, forecasted embedded-debt-cost
12 values for years 2008, 2009, and 2010 in no way reduces the incentive for Hydro to seek
13 out the lowest financing costs it can secure during these years, since, all other things
14 being equal, Hydro can still expect to over-earn its allowed return on equity if it issues
15 new debt at rates below these used to forecast the future embedded costs of debt.

16
17
18 Q: On page 10 of the Finance and Accounting Evidence section of its pre-filed evidence,
19 and pursuant to the derivation of its test-year cost of equity capital, Hydro forecasts its
20 marginal cost of debt in 2007 to be 5.20%, based on a forecasted average 30-year
21 Government of Canada bond yield of 4.65% during 2007 and a borrowing risk premium
22 (or credit spread) of 0.55% for Hydro. Do you believe that this estimate – developed
23 some time prior to Hydro's filing its Application at the beginning of August 2006 – is
24 still the best estimate of Hydro's likely marginal cost of issuing long-term debt during
25 the 2007 test year?

26
27 A: No, I do not. Financial market conditions have changed significantly over the past three
28 months and bank and investment dealer interest rate forecasts for 2007 have been
29 lowered to reflect the expected slowing of North American economies over the next
30 year. Consequently, I believe that Hydro's marginal cost of long-term debt for 2007
31 will be significantly lower than the 5.20% figure that is presently in Hydro's
32 Application.

33
34 I understand that Hydro will soon be up-dating its evidence with respect to the marginal
35 cost of debt and, hence, its requested return on common equity for the test year. I will
36 be prepared to comment on Hydro's revised marginal cost of debt estimate and its
37 requested return on common equity should the need arise.

1

2 Q: Does this complete the textual portion of your pre-filed evidence?

3

4 A: Yes, it does. However, due to the fact that this evidence is being presented in advance
5 of receiving and reviewing Hydro's five-year financial plan and its response to CA 216
6 NLH, the circumstances may require that the foregoing evidence be supplemented as
7 appropriate.

APPENDIX A

SUMMARY OF BACKGROUND AND QUALIFICATIONS OF

DR. WILLIAM T. CANNON

Commerce '83 Teaching Fellow in Finance, School of Business, Queen's University

Education

- 1976 Ph.D. Business Economics, Harvard University.
- (1971-1974) Attended a joint doctoral program between the Harvard Business School and the Economics Department of Harvard College; Fields of concentration: Business Finance and Monetary Economics
- 1969 M.B.A. York University.
- 1967 B. Com. University of Manitoba.

Positions Held

- 2005 – present Commerce '83 Teaching Fellow in Finance, School of Business, Queen's University
- 1974 - 2005 Associate Professor of Finance, School of Business, Queen's University.
- Have taught in several Executive Development Programs offered by the Queen's School of Business
- 1971 - 1974 Employed as the Research Assistant to Dean Lawrence E. Fouraker
- Prepared case studies for, and taught some of the classes in, the Harvard Business School's Executive Program
- 1969 - 1971 Employed at the Head Office of The Bank of Nova Scotia as Assistant to the then Deputy Chief General Manager, Dr. Robert M. MacIntosh (subsequently President of the Canadian Bankers' Association)

Consulting Relationships and Experience

- Have advised the Ontario Energy Board in connection with the restructuring and regulation of Ontario's electricity distribution system in the areas of capital structure policies, allowed rates of return, performance-based regulation (PBR), and mergers, acquisitions, amalgamations, and divestitures.
- Have advised the Ontario Energy Board with respect to the March 1997 "Draft Guidelines on a Formula-Based Return on Common Equity For Regulated Utilities," and the Review of these Guidelines during 2003.
- Have advised the Staff of the Ontario Energy Board during the O.E.B. hearings in connection with Inter-City Gas' takeover of Northern and Central Gas (Nov.-Dec. 1984), Unicorp Canada's takeover of Union Enterprises (March-May 1985), Westcoast Energy's takeover of ICG Ontario (Sept.-Dec. 1989) and British Gas' takeover of Consumers' Gas (March-July 1990), and prepared and defended testimony in these cases; have also advised O.E.B. Staff and prepared evidence in connection with Gulf Canada's application to acquire (indirectly) shares in Consumers' Gas (Sept.-Oct. 1986) and in connection with Westcoast Energy's takeover of Union Energy in E.B.R.L.G. 36 (Oct.- Nov. 1992).
- Have advised the Ontario Energy Board in connection with its review of the policies and capital budgeting procedures surrounding the expansion of the natural gas distribution system in Ontario (E.B.O. 134).
- Have advised the Ontario Ministry of Environment and Energy in connection with the NEB's 1993 Inter-Coastal Pipe Line hearing and the proposed revision of the Undertakings of the Ontario gas distribution utilities to facilitate their diversification into non-gas-utility businesses.

- Have advised the Ontario Energy Board, the Government of Ontario, the B.C. Petroleum Corporation, and CanWest Gas Supply Inc. on rate-of-return regulatory matters and testified as an expert witness in various Consumers' Gas, Union Gas, Centra Gas Ontario, Tecumseh Gas Storage, Westcoast Energy, TransCanada PipeLines, and Pacific Northern Gas rate hearings, as well as the NEB's 1994 Multi-Pipeline Cost of Capital Hearing (RH-2-94).
- Have advised the B.C. Petroleum Corporation regarding debenture valuation.
- Have consulted to Toronto-Dominion Bank (TD Securities Inc.), Royal Trust Company, and the Bank of Montreal

Other Endeavors

- Member of Investment Committee of The Community Foundation of Greater Kingston, 2000 - present
- Manage numerous private investment portfolios
- Have conducted extensive research into corporate financing strategies, portfolio management strategies, the development of financial instruments, and the asset and liability management policies of financial intermediaries
- Have written numerous case studies on business financing and investment problems, and on investment and portfolio management and other financial intermediary management problems

Academic Awards & Honours

2005	Awarded the QSB "Commerce '83 Teaching Fellowship in Finance"
1999, 2002	Recipient of Commerce Teaching Excellence Awards.
1994, 1996	Recipient of Queen's MBA Teaching Excellence Awards.
1981	Recipient of the Queen's University Alumni Award for Excellence in Teaching.
1967 - 1969	Fellow in the CIBC's Centennial International Fellowship Programme administered through the Faculty of Administrative Studies at York University.
2003	ICBC Arnoldi Award for long-standing contribution to ICBC (Inter-Collegiate Business Competition)

Regulatory Consulting Publications

"Cost of Capital," paper presented at CAMPUT's Queen's Conference on Energy Regulation, July 2005 and July 2006.

"Review of the Board's Guidelines For Setting ROE," prefiled written testimony before the Ontario Energy Board in RP-2002-0158 and EB-2002-0484, June 2003

"A Discussion Paper on Adjudicating Mergers, Acquisitions, Amalgamations and Divestitures by Participants Within Ontario's Electricity Market," prepared for the Ontario Energy Board, June 1999.

"A Discussion Paper on the Determination of Return on Equity and Return on Rate Base For Electric Distribution Utilities in Ontario," prepared for the Ontario Energy Board, December 1998.

"The Appropriate Return on Equity For the Transco and Disco Business Operations of the Ontario Hydro Services Company", prepared for the Staff of the Ontario Energy Board in connection with the Ontario Hydro rate hearing, January 22, 1999.

"Prefiled Testimony in Connection With the Application of Union Gas Limited Before the Ontario Energy Board in E.B.R.O.499," September 1998.

"Prefiled Testimony in Connection With the Applications of Union Gas Limited and Centra Gas Ontario Inc. Before the Ontario Energy Board in E.B.R.O. 493/494." July 1996

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 487." May 1994.

"Written Evidence of Dr. William T. Cannon Filed On Behalf of Minister of Environment and Energy For Ontario and Industrial Gas Users Association Before the National Energy Board in RH-2-94." September 1994.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 485." July 1993.

"Prefiled Testimony in Connection With the 1991 Application of TransCanada PipeLines Ltd. Before the National Energy Board in RH-1-91." April 1991.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 473." October 1991.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 464." March 1990.

"Prefiled Testimony in Connection With the Applications of British Gas PLC and GW Utilities Limited, GW-CG Investments Limited, and In Connection With a Reference From the Lieutenant Governor in Council, Regarding the Proposed Change of Control of The Consumers' Gas Company Ltd. in E.B.R.L.G. 35 et al." June 1990.

"Prefiled Testimony in Connection With the 1990 Application of Westcoast Energy Inc. Before the National Energy Board in RH-1-90." September 1990.

"Prefiled Testimony in Connection With the Application of Tecumseh Gas Storage Limited Before the Ontario Energy Board in E.B.R.O. 455." June 1989.

"Prefiled Testimony in Connection with the 1989 Application of Westcoast Energy Inc. Before the National Energy Board in RH-2-89." September 1989.

"Prefiled Testimony in Connection With the Applications of Inter-City Gas Corporation and Westcoast Energy Inc. Regarding the Proposed Change in Control of ICG Utilities (Canada) Ltd. and ICG Utilities (Ontario) Ltd. Before the Ontario Energy Board in E.B.R.L.G. 34." November 1989.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 452." June 1988.

"Prefiled Testimony in Connection With the December 1986 Application of Westcoast Transmission Company Limited Before the National Energy Board." August 1987.

"Prefiled Testimony in Connection With the Application The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 414." May 1986.

Prepared background materials for Ontario Energy Board Staff in Connection with Gulf Canada's Indirect Acquisition of Consumers' Gas, which were reproduced in Special Counsel's Submission to the Ontario Energy Board in E.B.R.L.G. 30, October 1986.

"Prefiled Rate-of-Return Testimony in Connection With the Application of Pacific Northern Gas Ltd. Before the B.C. Public Utilities Commission." April 1985.

"Prefiled Testimony in Connection With Ontario Energy Board Reference Re Union Enterprises Limited and Unicorp Canada Corporation in E.B.R.L.G. 28." April 1985.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 403." May 1985.

"Prefiled Testimony in Connection With the Applications of Inter-City Gas Corp. et al, and Norcen Energy Resources Ltd. Before the Ontario Energy Board in E.B.O. 118, 119." December 1984.

"Prefiled Testimony in Connection With the December 1, 1982 Application of Westcoast Transmission Company Limited before the National Energy Board." April 1983.

"Prefiled Testimony in Connection With the Application of Union Gas Ltd. Before the Ontario Energy Board in E.B.R.O. 382." January 1982.

"Prefiled Testimony in Connection With the Application of The Consumers' Gas Company Ltd. Before the Ontario Energy Board in E.B.R.O. 386." July 1982.

Other Research And Publications (Excluding Case Studies)

Cannon, W.T. (2005) "Cost of Capital" – QSB monograph on theoretical and practical approaches to estimating a firm's overall cost of capital.

Cannon, W.T. (2003) "The Capital Asset Pricing Model Approach To Estimating the Cost of Equity Capital" – QSB monograph (a) dealing with the estimation of equity capital costs in an efficient market environment and (b) providing a review of recent studies of the "market risk premium."

Cannon, W.T. (2003) "Cyclically-Normalized, Real Economic Earnings" – QSB monograph reviewing the need for, and procedures for, adjusting corporate earnings reports to make the figures relevant for stock valuation purposes.

Cannon, W.T. (2001). "Hedging Corporate Interest Rate Risk." Queen's School of Business monograph.

Cannon, W.T. (2001). "Preferred Share Financing." Queen's School of Business monograph.

Cannon, W.T. (2001). "Explaining and Forecasting Interest Rates." Queen's School of Business monograph.

Cannon, W.T. (2001). "The Canadian Life Insurance Industry." Queen's School of Business monograph.

Cannon, W.T. (2000). "The Evolution of the Canadian Banks During the Latter Half of the 20th Century and a Peek At Their Future." Queen's School of Business monograph.

Cannon, W.T. (2000). "The Consumer Credit Market in Canada." Queen's School of Business monograph.

Cannon, W.T. (2000). "The Residential Mortgage Market in Canada." Queen's School of Business monograph.

Cannon, W.T. (1999). "Mapping Ontario's Electric Distribution Terrain", Standard & Poor's Canadian Focus, November 1999.

Cannon, W.T. (1996). "Pro Forma Financial Statement Forecasting For Assessing the Impact of Strategic and Policy Choices and Environmental Changes." Queen's School of Business monograph.

Cannon, W.T. (1996). "A Guide to the FRICT Analysis Framework For Making Corporate Financing Decisions." Queen's School of Business monograph on a practical approach to analyzing business financing decisions.

Cannon, W.T. (1996). "The Fundamental Securities Analyst's Common Stock Valuation Model." Queen's School of Business monograph on the practical approaches to common stock valuation used by fundamental securities analysts.

Cannon, W.T. (1995). "Financial Leverage, Income, and Risk." Queen's School of Business monograph.

Cannon, W.T. (1994). "A Practical Framework For Making Capital Budgeting Decisions." Queen's School of Business monograph.

Cannon, W.T. (1993). "Financial Ratio Analysis For Stock Valuation Purposes." Queen's School of Business monograph.

Cannon, W.T. (1987). "The Aggregate Customer Net Benefit Test - A New Framework for Gas Utility Capital Budgeting Decisions." Published as Appendix C of the Ontario Energy Board Staff Discussion Paper "A Review of the Expansion of the Natural Gas System in Ontario." in E.B.O. 134, Feb. 2, 1987.

Cannon, W.T. & Neave, T. (1985). "Consumer Credit." The Canadian Encyclopedia, Hurtig Publishers Ltd., Edmonton.

Cannon, W.T. (1981). "Integrating the Pure Theory of Financial Intermediation." paper submitted to the Journal of Financial and Quantitative Analysis; returned for revision.

Cannon, W.T. (1981). "Financing and Stabilization Policies in a Cyclical Industry: The Case of Inco in the Seventies." Technical Paper No. 1, Center for Resource Studies, Queen's University, Kingston, Ontario, June 1981.

Cannon, W.T. (1979). "Financing With Floating-Rate Term Preferred Shares." Paper presented at the Spring 1979 Conference of the Financial Research Foundation of Canada, at Niagara-On-The-Lake.

Cannon, W.T. (1979). "New Mining Ventures: The Case for Preserving After-Tax Financing." Paper published by the Center for Resource Studies, Queen's University, in August 1979.

Cannon, W.T. (1977). "Integrating the Pure Theory of Financial Intermediation." paper presented at the C.A.A.S. Meeting in Fredericton, N.B., in June 1977; abbreviated version of this paper is published in the Proceedings of this Meeting.

Cannon, W.T. (1976). "Models of Pure Financial Intermediation, With Specific Application to Firms in the Savings and Loan Industry." Unpublished PhD thesis completed for Harvard University in May 1976.

Courses Taught at Queen's University

MBAST 822 - Finance II
 MBAST 823 - Applied Corporate Finance
 MBAST 825 - Financial Institutions
 MBAST 923 - Finance Concentration
 Business 821 - Financial Management
 Business 922 - Corporate Financial Planning I
 Business 923 - Corporate Financial Planning II
 Business 924 - Investment and Portfolio Management
 Business 926 - Canadian Financial Institutions and Markets
 Business 929 - Management of Financial Institutions
 Commerce 322 - Corporate Financial Planning - I
 Commerce 323 - Corporate Financial Planning - II
 Commerce 324 - Investment and Portfolio Management
 Commerce 326 - Canadian Financial Institutions and Markets
 Commerce 329 - Management of Financial Institutions
 Commerce 485 - Independent Business Project
 Commerce 501 – Undergraduate Thesis course
 EMBA – supervision of several theses

Professional Associations

American Finance Association

Administrative Activities - Queen's University and School of Business

2000 -	Chair of the Pension Committee of the Board of Trustees of Queen's University and of its Investment Policy and its Investment Manager Search Sub-Committees.
2002 -	Chair of the Faculty Board of the Queen's School of Business and its Academic Appeals Committee.
2004 - 2005	Chair of Internal Academic Review Committee for Linguistics Unit
2002 - 2006	Member of the School of Business Undergraduate Program Committee, also in 1979-1983, and 1996-1997.
2006 -	Member of Chancellor A. Charles Baillie Teaching Award Selection Committee
2001 -	Member of the Internal Advisory Board of the Queen's Financial Economics Group
2001 - 2004	Member of the MBA For Commerce Grads Program Development Committee
2002 -	Faculty Advisor to Queen's Investment Club
1998 - 2000	Chair of the Senate Budget Review Committee.
1991 - 2000	Vice-Chair of the Pension Committee of the Board of Trustees of Queen's University, and its Investment Policy and its Investment Manager Search Sub-Committees.
1997 - 1999	Business School representative on the Queen's University Senate, also in 1983-1986.
1997 - 1998	Member of the Joint Board-Senate Principal Search Committee.
1992 - 1993	Member of the School of Business Promotion, Tenure, and Renewal Committee, also from 1984-88.
1990	Member of the Principal's Advisory Search Committee on the Dean of Women.
1990	Member of the Principal's Advisory Search Committee on the Director of Residences.
1988 - 1996	Chair of the Queen's University Residences (Ban Righ) Board.
1987 - 1995	Member of the School of Business Research Committee.
1987 - 1988	Principal's Delegate on the University Residences Board.
1987 - 1988	Member of the Board of Directors of the Queen's Bookstore (also 1981-1985) and Principal's Taskforce on Bookstore Operations, 1983-1985.
1985 - 1986	Member of the Student Services Sub-Group.
1983 - 1997	Secretary of the School of Business' Advisory Council.
1983 - 1985	Member of the Senate Committee on Academic Development.
1978 - 1981	Elected Member of the Senate Budget Review Committee.
1978 - 1981	Treasurer and Executive Committee Member of the Queen's University Faculty Association.
1977 - 1980	Treasurer and Executive Committee Member of the Queen's University Faculty Club.

**SUPPORTING
NUMERICAL
SCHEDULES**

Schedule 1-A

Newfoundland and Labrador Hydro
Forecast Average Cost of Debt
As At December 31
'(\$000s)

Series	Interest Rate %	Year of Issue	Year of Maturity	<u>Forecast</u> 2006	<u>Proposed</u> 2007
AC	5.05	2001	2006		
AA	5.50	1998	2008	200.0	200.0
V	10.50	1989	2014	125.0	125.0
X	10.25	1992	2017	150.0	150.0
Y	8.40	1996	2026	300.0	300.0
AB	6.65	2001	2031	300.0	300.0
AD	5.70	2003	2033	125.0	125.0
2006 new issue	4.50	2006	2016	225.0	225.0
2008 new issue	4.30	2008	?		
Total debentures				1425.0	1425.0
Capital Leases				0.5	0.3
Total long-term debt				1425.5	1425.3
Promissory notes				113.0	131.7
Less: Sinking funds				-173.5	-193.2
CF(L)Co. Share purchase debt				-19.4	-16.6
Non-regulated debt pool				-51.8	-100.7
Unamortized Debt discount & financing				-3.5	-2.9
Total Debt				<u>1290.3</u>	<u>1243.6</u>
Average Debt					<u><u>1267.0</u></u>
Embedded Cost of Debt (\$)					
Gross Interest				106.504	
Amortization of debt issue expenses				0.633	
Amortization of foreign exchange loss				2.157	
Guarantee fee				13.6	
CF(L)Co. Share Purchase Interest				-1.230	
Non-regulated Debt pool interest				-5.448	
Sinking fund interest				-11.6	104.683
Embedded Cost of Debt (%)					8.262%

Schedule 1-B

Canadian Bond Interest

(\$Thousands)

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2006-12-31</u>	<u>Year-end 2007-12-31</u>	<u>Average</u>	<u>Interest 2007-12-31</u>
5.50%	2008-04-30	200,000	200,000	200,000	11,000
10.50%	2014-06-15	125,000	125,000	125,000	13,125
4.30%	2016-10-01	225,000	225,000	225,000	9,675
10.25%	2017-07-14	150,000	150,000	150,000	15,375
8.40%	2026-02-27	300,000	300,000	300,000	25,200
6.65%	2031-08-27	300,000	300,000	300,000	19,950
5.70%	2033-07-14	125,000	125,000	125,000	7,125
2008 new issue					
		1,425,000	1,425,000	1,425,000	101,450

Capital Leases

5.476%	494	337	415	23
	494	337	415	23

Short-Term Debt

4.187%	113,010	131,744	120,176	5,032
	113,010	131,744	120,176	5,032

Gross Interest Expense

106,504

Discount & Issues Expense

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2006-12-31</u>	<u>Year-end 2007-12-31</u>	<u>Average</u>	<u>Amortization 2007-12-31</u>
5.50%	2008-04-30	362	91	227	272
10.50%	2014-06-15	344	298	321	46
4.30%	2016-10-01	1,817	1,631	1,724	186
10.25%	2017-07-14	605	548	577	57
8.40%	2026-02-27	5,534	5,246	5,390	289
6.65%	2031-08-27	-6,646	-6,377	-6,511	-269
5.70%	2033-07-14	1,393	1,341	1,367	52
4.50%	2008 new issue				
		3,504	2,861	3,182	633

Sinking Fund by Series (2007)

<u>Sinking Fund</u>		<u>Estimated Opening Balance</u>	<u>Annual Contribution</u>	<u>Estimated Annual Earnings</u>	<u>Estimated Average Balance</u>	<u>Estimated Average Earning Rate</u>	<u>Estimated Closing Balance</u>
10.50%	140615	76,572	-	5,288	79,188	6.68%	81,860
10.25%	170714	40,713	1,500	2,680	42,719	6.27%	44,893
8.40%	260227	36,676	2,400	2,384	39,912	5.97%	41,460
6.65%	310827	15,414	3,000	959	17,011	5.64%	19,373
5.70%	330714	4,088	1,250	268	4,788	5.60%	5,606
Total		173,463	8,150	11,579	183,617	6.31%	193,192

Guarantee Fee**Canadian Bonds**

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2006-12-31</u>
5.50%	2008-04-30	200,000
10.50%	2014-06-15	125,000
4.30%	2016-10-01	225,000
10.25%	2017-07-14	150,000
8.40%	2026-02-27	300,000
6.65%	2031-08-27	300,000
5.70%	2033-07-14	125,000
4.50%	2008 new issue	
		1,425,000

Short-Term Debt	113,010
Sinking Funds	-173,463
Total Guaranteed Debt	1,364,547
Guarantee Fee @ 1%	13,645

Schedule 2-A

Newfoundland and Labrador Hydro
Forecast Average Cost of Debt
As At December 31
'(\$000s)

Series	Interest Rate %	Year of Issue	Year of Maturity	Forecast 2007	Forecast 2008
AA	5.50	1998	2008	200.0	-
V	10.50	1989	2014	125.0	125.0
X	10.25	1992	2017	150.0	150.0
Y	8.40	1996	2026	300.0	300.0
AB	6.65	2001	2031	300.0	300.0
AD	5.70	2003	2033	125.0	125.0
2006 new issue	4.30	2006	2016	225.0	225.0
2008 new issue	4.50	2008	?	-	<u>200.0</u>
Total debentures				1425.0	1425.0
Capital Leases				0.34	0.18
Total long-term debt				1425.34	1425.18
Promissory notes				131.7	200.7
Less: Sinking funds				-193.2	-214.0
CF(L)Co. Share purchase debt				-16.6	-16.6
Non-regulated debt pool				-100.7	-100.7
Unamortized Debt discount & financing				-2.9	-4.2
Total Debt				<u>1243.6</u>	<u>1290.4</u>
Average Debt					<u><u>1267.0</u></u>
Embedded Cost of Debt (\$)					
Gross Interest				107.112	
Amortization of debt issue expenses				0.642	
Amortization of foreign exchange loss				2.157	
Guarantee fee				13.636	
CF(L)Co. Share Purchase Interest				-1.23	
Non-regulated Debt pool interest				-5.448	
Sinking fund interest				-12.6	104.259
Embedded Cost of Debt (%)					8.229%

Schedule 2-B

Canadian Bond Interest

(\$Thousands)

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2007-12-31</u>	<u>Year-end 2008-12-31</u>	<u>Average</u>	<u>Interest 2008-12-31</u>
5.50%	2008-04-30	200,000	-	100,000	5,500
10.50%	2014-06-15	125,000	125,000	125,000	13,125
4.30%	2016-10-01	225,000	225,000	225,000	9,675
10.25%	2017-07-14	150,000	150,000	150,000	15,375
8.40%	2026-02-27	300,000	300,000	300,000	25,200
6.65%	2031-08-27	300,000	300,000	300,000	19,950
5.70%	2033-07-14	125,000	125,000	125,000	7,125
4.50%	2008 new issue	-	200,000	100,000	4,500
		1,425,000	1,425,000	1,425,000	100,450

Capital Leases

5.476%	337	181	259	14
	337	181	259	14

Short-Term Debt

4.000%	131,744	200,650	166,197	6,648
	131,744	200,650	166,197	6,648

Gross Interest Expense

107,112

Discount & Issues Expense

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2007-12-31</u>	<u>Year-end 2008-12-31</u>	<u>Average</u>	<u>Amortization 2008-12-31</u>
5.50%	2008-04-30	91	-	46	91
10.50%	2014-06-15	298	252	275	46
4.30%	2016-10-01	1,631	1,445	1,538	186
10.25%	2017-07-14	548	491	520	57
8.40%	2026-02-27	5,246	4,958	5,102	289
6.65%	2031-08-27	-6,377	-6,108	-6,243	-269
5.70%	2033-07-14	1,341	1,289	1,315	52
4.50%	2008 new issue	-	1,900	950	190
		2,778	4,227	3,503	642

Sinking Fund by Series (2008)

<u>Sinking Fund</u>		<u>Estimated Opening Balance</u>	<u>Annual Contribution</u>	<u>Estimated Annual Earnings</u>	<u>Estimated Average Balance</u>	<u>Estimated Average Earning Rate</u>	<u>Estimated Closing Balance</u>
10.50%	140615	81,860	-	5,586	84,653	6.60%	87,446
10.25%	170714	44,893	1,500	2,908	47,097	6.17%	49,301
8.40%	260227	41,460	2,400	2,614	43,967	5.95%	46,474
6.65%	310827	19,373	3,000	1,159	21,453	5.40%	23,532
5.70%	330714	5,606	1,250	343	6,403	5.36%	7,199
	Total	193,192	8,150	12,610	203,572	6.19%	213,952

Guarantee Fee**Canadian Bonds**

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2007-12-31</u>
5.50%	2008-04-30	200,000
10.50%	2014-06-15	125,000
4.30%	2016-10-01	225,000
10.25%	2017-07-14	150,000
8.40%	2026-02-27	300,000
6.65%	2031-08-27	300,000
5.70%	2033-07-14	125,000
4.50%	2008 new issue	-
		1,425,000

Short-Term Debt	131,744
Sinking Funds	-193,192
Total Guaranteed Debt	1,363,552
Guarantee Fee @ 1%	13,636

Note: Sinking Fund assumed to earn 4.3% on new contributions and accrued earnings during the year.

Schedule 3-A

Newfoundland and Labrador Hydro
Forecast Average Cost of Debt
As At December 31
'(\$000s)

Series	Interest Rate %	Year of Issue	Year of Maturity	Forecast 2008	Forecast 2009
V	10.50	1989	2014	125.0	125.0
X	10.25	1992	2017	150.0	150.0
Y	8.40	1996	2026	300.0	300.0
AB	6.65	2001	2031	300.0	300.0
AD	5.70	2003	2033	125.0	125.0
2006 new issue	4.30	2006	2016	225.0	225.0
2008 new issue	4.50	2008	?	200.0	<u>200.0</u>
Total debentures				1425.0	1425.0
Capital Leases				0.18	0.00
Total long-term debt				1425.18	1425.00
Promissory notes				200.8	175.4
Less: Sinking funds				-214.0	-235.8
CF(L)Co. Share purchase debt				-16.6	-16.6
Non-regulated debt pool				-100.7	-100.7
Unamortized Debt discount & financing				-4.4	-3.7
Total Debt				<u>1290.4</u>	<u>1243.6</u>
Average Debt					<u><u>1267.0</u></u>
Embedded Cost of Debt (\$)					
Gross Interest				106.980	
Amortization of debt issue expenses				0.551	
Amortization of foreign exchange loss				2.157	
Guarantee fee				14.119	
CF(L)Co. Share Purchase Interest				-1.230	
Non-regulated Debt pool interest				-5.448	
Sinking fund interest				-13.698	103.431
Embedded Cost of Debt (%)					8.163%

Schedule 3-B

Canadian Bond Interest

(\$Thousands)

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2008-12-31</u>	<u>Year-end 2009-12-31</u>	<u>Average</u>	<u>Interest 2009-12-31</u>
10.50%	2014-06-15	125,000	125,000	125,000	13,125
4.30%	2016-10-01	225,000	225,000	225,000	9,675
10.25%	2017-07-14	150,000	150,000	150,000	15,375
8.40%	2026-02-27	300,000	300,000	300,000	25,200
6.65%	2031-08-27	300,000	300,000	300,000	19,950
5.70%	2033-07-14	125,000	125,000	125,000	7,125
4.50%	2008 new issue	200,000	200,000	200,000	9,000
		1,425,000	1,425,000	1,425,000	99,450
Capital Leases					
5.476%		181	-	91	5
		181	-	91	5
Short-Term Debt					
4.000%		200,824	175,425	188,125	7,525
		200,824	175,425	188,125	7,525

Gross Interest Expense 106,980

Discount & Issues Expense

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2008-12-31</u>	<u>Year-end 2009-12-31</u>	<u>Average</u>	<u>Amortization 2009-12-31</u>
10.50%	2014-06-15	252	206	229	46
4.30%	2016-10-01	1,445	1,259	1,352	186
10.25%	2017-07-14	491	434	463	57
8.40%	2026-02-27	4,958	4,669	4,814	289
6.65%	2031-08-27	-6,108	-5,839	-5,974	-269
5.70%	2033-07-14	1,289	1,237	1,263	52
4.50%	2008 new issue	1,900	1,710	1,805	190
		4,227	3,676	3,952	551

Sinking Fund by Series (2009)

<u>Sinking Fund</u>		<u>Estimated Opening Balance</u>	<u>Annual Contribution</u>	<u>Estimated Annual Earnings</u>	<u>Estimated Average Balance</u>	<u>Estimated Average Earning Rate</u>	<u>Estimated Closing Balance</u>
10.50%	140615	87,446	-	5,895	90,394	6.52%	93,341
10.25%	170714	49,301	1,500	3,134	51,618	6.07%	53,935
8.40%	260227	46,474	2,400	2,911	49,130	5.93%	51,785
6.65%	310827	23,532	3,000	1,341	25,703	5.22%	27,873
5.70%	330714	7,199	1,250	417	8,033	5.19%	8,866
	Total	213,952	8,150	13,698	224,876	6.09%	235,800

Guarantee Fee**Canadian Bonds**

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2008-12-31</u>
10.50%	2014-06-15	125,000
4.30%	2016-10-01	225,000
10.25%	2017-07-14	150,000
8.40%	2026-02-27	300,000
6.65%	2031-08-27	300,000
5.70%	2033-07-14	125,000
4.50%	2008 new issue	200,000
		1,425,000

Short-Term Debt	200,824
Sinking Funds	-213,952
Total Guaranteed Debt	1,411,872
Guarantee Fee @ 1%	14,119

Note: Sinking Fund assumed to earn 4.3% on new contributions and accrued earnings during the year.

Schedule 4-A

Newfoundland and Labrador Hydro
Forecast Average Cost of Debt
As At December 31
'(\$000s)

Series	Interest Rate %	Year of Issue	Year of Maturity	<u>Forecast</u> 2009	<u>Forecast</u> 2010
V	10.50	1989	2014	125.0	125.0
X	10.25	1992	2017	150.0	150.0
Y	8.40	1996	2026	300.0	300.0
AB	6.65	2001	2031	300.0	300.0
AD	5.70	2003	2033	125.0	125.0
2006 new issue	4.30	2006	2016	225.0	225.0
2008 new issue	4.50	2008	?	<u>200.0</u>	<u>200.0</u>
Total debentures				1425.0	1425.0
Capital Leases				0.00	0.00
Total long-term debt				1425.00	1425.00
Promissory notes				175.5	244.6
Less: Sinking funds				-235.8	-258.8
CF(L)Co. Share purchase debt				-16.6	-16.6
Non-regulated debt pool				-100.7	-100.7
Unamortized Debt discount & financing				-3.8	-3.1
Total Debt				<u>1243.6</u>	<u>1290.4</u>
Average Debt					<u><u>1267.0</u></u>
Embedded Cost of Debt (\$)					
Gross Interest				107.853	
Amortization of debt issue expenses				0.551	
Amortization of foreign exchange loss				2.157	
Guarantee fee				13.647	
CF(L)Co. Share Purchase Interest				-1.230	
Non-regulated Debt pool interest				-5.448	
Sinking fund interest				-14.832	102.698
Embedded Cost of Debt (%)					8.106%

Schedule 4-B

Canadian Bond Interest

(\$Thousands)

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2009-12-31</u>	<u>Year-end 2010-12-31</u>	<u>Average</u>	<u>Interest 2010-12-31</u>
10.50%	2014-06-15	125,000	125,000	125,000	13,125
4.30%	2016-10-01	225,000	225,000	225,000	9,675
10.25%	2017-07-14	150,000	150,000	150,000	15,375
8.40%	2026-02-27	300,000	300,000	300,000	25,200
6.65%	2031-08-27	300,000	300,000	300,000	19,950
5.70%	2033-07-14	125,000	125,000	125,000	7,125
4.50%	2008 new issue	200,000	200,000	200,000	9,000
		1,425,000	1,425,000	1,425,000	99,450
Capital Leases					
5.476%		-	-	-	-
		-	-	-	-
Short-Term Debt					
4.000%		175,500	244,637	210,069	8,403
		175,500	244,637	210,069	8,403
Gross Interest Expense					107,853

Discount & Issues Expense

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2009-12-31</u>	<u>Year-end 2010-12-31</u>	<u>Average</u>	<u>Amortization 2010-12-31</u>
10.50%	2014-06-15	206	160	183	46
4.30%	2016-10-01	1,259	1,073	1,166	186
10.25%	2017-07-14	434	377	406	57
8.40%	2026-02-27	4,669	4,380	4,525	289
6.65%	2031-08-27	-5,839	-5,570	-5,705	-269
5.70%	2033-07-14	1,237	1,185	1,211	52
4.50%	2008 new issue	1,710	1,520	1,615	190
		3,676	3,125	3,401	551

Sinking Fund by Series (2010)

<u>Sinking Fund</u>		<u>Estimated Opening Balance</u>	<u>Annual Contribution</u>	<u>Estimated Annual Earnings</u>	<u>Estimated Average Balance</u>	<u>Estimated Average Earning Rate</u>	<u>Estimated Closing Balance</u>
10.50%	140615	93,341	-	6,217	96,450	6.45%	99,558
10.25%	170714	53,935	1,500	3,371	56,371	5.98%	58,806
8.40%	260227	51,785	2,400	3,223	54,597	5.90%	57,408
6.65%	310827	27,873	3,000	1,529	30,138	5.07%	32,402
5.70%	330714	8,866	1,250	492	9,737	5.05%	10,608
Total		235,800	8,150	14,832	247,291	6.00%	258,782

Guarantee Fee**Canadian Bonds**

<u>Issue</u>	<u>Maturity</u>	<u>Year-end 2009-12-31</u>
10.50%	2014-06-15	125,000
4.30%	2016-10-01	225,000
10.25%	2017-07-14	150,000
8.40%	2026-02-27	300,000
6.65%	2031-08-27	300,000
5.70%	2033-07-14	125,000
4.50%	2008 new issue	200,000
		1,425,000

Short-Term Debt	175,500
Sinking Funds	-235,800
Total Guaranteed Debt	1,364,700
Guarantee Fee @ 1%	13,647

Note: Sinking Fund assumed to earn 4.3% on new contributions and accrued earnings during the year.