Automatic Adjustment Mechanism
Manitoba Public Utilities Board

The Public Utilities Board

14.0 Overall Rate of Return and Capital Structure

14.1 1993 Allowed Overall Rate of Return and Capital Structure

Order 8/94 dated January 29, 1994 ("1994 Decision") contains the last full decision of the Board with respect to the overall rate of return and capital structure of Centra. At that time, the Board approved a return on equity ("ROE") range of 10.75 to 11.75 percent (with a midpoint for rate setting purposes of 11.25 percent), and a capital structure which included 39.83 percent equity. This decision resulted in an overall allowed rate of return of 10.17 percent for rates in effect from January 1, 1994 to December 31, 1994 as outlined below:

	Capital Structure	Weight Percent	Cost Rate Percent	Weighted Average Cost of Capital
Long-term debt	$129,847,432	47.945	10.460	5.02
Short-term debt	33,103,000	12.223	5.500	0.67
Equity	107,875,000	39.832	11.250	4.48
Total	**$270,825,432**	**100.000**		**10.17**

In the 1994 Decision, the Board outlined the considerations underlying its decision with respect to various areas of disagreement between Centra's and the CAC/MSOS expert witnesses, including the weight which the Board attached to the various methodologies proposed by the witnesses for determining an appropriate return on equity. These decisions expanded on the rationale which the Board had previously followed as described in Order 156/91.

14.2 Formula-based Return on Equity Proposal

By letter to the Board dated August 26, 1994, Centra proposed a mechanical formula to adjust the Board's currently allowed return on equity for the current application. A meeting was held at the Board offices on September 21, 1994 with representatives of Centra, CAC/MSOS and others to review the proposal. CAC/MSOS rejected the proposed formula and advocated the continued use of expert testimony, albeit on a narrowed basis. In response, Centra offered certain amendments to the proposed formula which CAC/MSOS also rejected. Centra's application for ROE has been filed on a basis consistent with its amended proposal for a formula based approach.

Formula = Benchmark long Canada bond rate
+ change in long Canada bond rate from Benchmark rate
+ implied spread between long Canada bond rate and ROE

This approach for determining ROE departs from the past practice of annually introducing expert evidence by witnesses retained by Centra and Intervenors. A formula based approach was recently approved by the British Columbia Utilities Commission ("BCUC") following a generic hearing into the matter. A similar generic hearing was recently conducted by the National Energy Board ("NEB") and a formula based approach was approved.

As a basis for proposing a formula approach for establishing the ROE in the current application, Centra suggested that the formula would:

- reflect changes in capital markets;
- avoid use of time consuming and costly expert witness testimony;
- improve efficiency of hearing process by reducing hearing time devoted to ROE;
- determine an ROE fair to both shareholders and consumers;
- avoid debate on issues upon which the Board has already rendered decisions by following the Board's last decision;
- produce an allowed ROE that approximates the result had detailed ROE expert testimony been filed; and
- be practical and readily understood by all interested parties.

Centra suggested that the option to re-examine the formula be considered at least every three years, at which times interested parties could request a full ROE hearing with witnesses. Centra further suggested that the formula be allowed to operate for the 1995 and 1996 future test years, within a range of movement in the benchmark long Canada bond yield. Centra proposed that the validity of the formula be accepted for changes in the benchmark long Canada bond yield of plus or minus 2 percentage points (200 basis points or "bps").

14.3 1995 Application

Centra's original application included an overall rate of return of 10.75 percent based on a 40.553 percent equity component of total capital.

Centra amended its requested overall rate of return and capital structure on several occasions and, with its final revision on February 9, 1995, requested approval of an overall rate of return of 10.87 percent as outlined below:

	Capital Structure	Weight Percent	Cost Rate Percent	Weighted Average Cost of Capital
Long-term debt	$135,609,800	47.385%	10.287%	4.87%
Short-term debt	34,213,100	11.955%	8.500%	1.02%
Equity	116,361,600	40.660%	12.250%	4.98%
Total	**$286,184,500**	**100.000%**		**10.87%**

14.3.1 Capitalization

Centra's requested capital structure includes an increase in the equity component of almost 1 percent to 40.66 percent, notwithstanding that Board Order 8/94 had indicated that the equity component should not exceed 40 percent.

Centra's application also included the impact of a proposed long-term debt issue of about $50 million in the fall of 1995. The debt issue is not expected to greatly impact Centra's level of long-term debt or cost of long-term debt for the 1995 test year. However, the issue will serve to reduce Centra's level of short-term debt relative to the Company's limit on short-term borrowing of some $70 million.

Centra indicated that its total financing requirements were based on an average of the 1994 and 1995 year-end capital outstanding. The equity component was determined based on the average of beginning and year-end balances. The long-term debt component was calculated based on a thirteen month weighted average balance. The short-term debt requirement was determined as the difference between total financing requirements and equity and long-term debt financing as calculated.

14.3.2 Long-term Debt

As indicated above, Centra proposes to issue $50 million in long-term debt at an estimated coupon rate of 10 percent (10.08 percent imbedded cost) in the fall of 1995. The long-term debt issue is intended to take advantage of the improved bond ratings which Centra received in late 1994 from both the Canadian Bond Rating Service ("CBRS") and the Dominion Bond Rating Service ("DBRS"). In improving Centra's bond ratings, both CBRS and DBRS noted a number of underlying positive factors including the regulatory environment and improving financial performance. Centra expects that these favourable bond ratings will reduce the cost to the ratepayers of future debt issues.

Due to the timing of the new debt issue, Centra projects only a marginal decline of 17.3 bps in the weighted cost of long-term debt from 10.46 percent to 10.287 percent.

14.3.3 Short-term Debt

The level of short-term debt projected for 1995 is expected to decline somewhat due to both the new long-term debt issue and a higher requested equity financing component. The cost of short-term debt is expected to increase 300 bps to 8.5 percent over the currently allowed cost of 5.5 percent. This increase in the cost of short-term debt is consistent with increases in short-term financing costs since the last hearing.

14.3.4 Return on Equity

Centra did not request a full ROE hearing either to support a particular ROE or to evaluate the proposed formula included in this GRA. Centra contended that a full ROE hearing in 1994 and Board Order 8/94 provided adequate support and direction to enable all parties to evaluate the requested ROE calculated by a formula approach. Further, Centra indicated that no other significant changes had occurred in the capital markets or business risks of Centra since the last full ROE hearing which would invalidate the use of a formula approach.

Centra derived an "implied spread" from the Board's decision in Board Order 8/94, by subtracting an estimate of the benchmark long Canada bond yield from the ROE approved by the Board. Centra estimated the benchmark long Canada bond yield based on the long Canada spot yield (7.5 percent) recommended by Centra's expert witness and the forecasted long Canada yield (8 percent) recommended by CAC/MSOS's expert witness at the 1994 hearing. In so doing, Centra calculated an implied spread range of 3.25 to 3.75 percent or a midpoint of 3.5 percent.

The ROE approved by the Board in 1994 was based on a historical test year whereas the current application was filed under a future test year. Therefore, Centra recommended that the implied spread be reduced by a further 25 bps to 3.25 percent to reflect the lower corporate risk associated with a future test year. Centra's expert's testimony in 1994 and CAC/MSOS's expert concurred that 25 bps was a reasonable estimate

Centra's application indicated that the "risk free" component of Centra's underlying ROE, represented by 30 year long Canada bonds, would be 9 percent for 1995. Centra's expert witness from Scotia McLeod forecast that rate of return on long Canada bonds would be about 9.25 percent to 9.5 percent for 1995. An average of the November 1994 Consensus Forecast's[1] 3 month and 12 month forecast of 10 year Canada bonds, adjusted for the spread between 10 year and 30 year bonds at the end of November 1994, resulted in an estimated long Canada bond yield of 9.12 percent for 1995.

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[1] The Consensus Forecast is published monthly by Consensus Economics Inc., London, England, and includes among other information, three month and twelve month forecasted yields for 10 year Canada bonds.

Accordingly, Centra calculated an ROE of 12.37 percent, being the implied spread of 3.25 percent plus the average long Canada bond yield forecast of 9.12 percent based on Consensus Forecast. Centra's application also proposed to round the ROE to the nearest 25 bps, with the result that Centra's requested ROE was reduced to 12.25 percent. The 1 percent increase in Centra's requested ROE from the 11.25 percent currently allowed is attributed to the increase of 137 bps in the long Canada rate over the average of the two rates advocated by the expert witnesses in 1994, and offset by 25 bps for the impact of a future test year.

In support of the 1 percent increase in the ROE, Centra's expert witness from Scotia McLeod indicated that, in her experience, equity returns move in "lock-step" with changes in the benchmark long Canada bond yield for yields of less than 10 percent. For every 1 bps increase or decrease in the long Canada bond yield, the ROE would increase or decrease accordingly, providing the long Canada bond yield did not exceed 10 percent.

In further support of its requested increase in the ROE of 1 percentage point to 12.25 percent, Centra indicated that:

- an ROE of 12.25 percent is less than those returns currently allowed comparable companies in other jurisdictions;
- Centra's expert witness from Scotia McLeod recommended an ROE of 13 to 13.5 percent (including an allowance for flotation costs);
- the ROE must increase given increases in long-term interest rates over the past year;
- the requested ROE of 12.25 percent is less than that applied for by Union Gas and Centra Gas Ontario before the Ontario Energy Board ("OEB");
- a higher ROE is essential to maintaining Centra's interest coverage ratio which is necessary to support Centra's recently increased bond rating;
- a higher ROE is necessary to support both further improvements in Centra's bond rating as well as to support possible bond issues in 1996 and beyond.

Centra also requested that the Board approve the use of the formula for the 1996 test year provided that the forecast long Canada yield based on the Consensus Forecast Average is within plus or minus 2 percent of the current forecast long Canada bond yield now at 9.12 percent. In other words, the formula would continue to operate for forecast long Canada yields of between 7.12 and 11.12 percent.

14.4 Intervenors' Position - Return on Equity

CAC/MSOS filed evidence from its witnesses, Drs. Booth and Berkowitz, which critiqued the formula approach advanced by Centra as well as offering a number of alternatives to Centra's requested ROE.

14.4.1 Formula Approach for ROE

CAC/MSOS's witnesses accepted the use of long Canada bond yields as a basis for the determination of a formula driven ROE. They advocated the use of the Consensus forecast as an independent measure of the 10 year Canada bond yield. The witnesses also supported the use of the market spread between 10 year and 30 year Canada bonds at the end of November as an appropriate means of adjusting the Consensus forecast yields for 10 year Canada bonds to a 30 year Canada bond yield. During cross-examination, the witnesses confirmed Centra's calculation of the forecast long Canada bond yield of 9.12 percent determined on this basis.

CAC/MSOS's witnesses raised two fundamental disagreements with the formula proposed by Centra. Firstly, Drs. Booth and Berkowitz objected to the determination of the implied spread of 3.25 percent by reference to the spot rate for long Canada bonds provided by Centra's witness at the 1994 hearing. CAC/MSOS suggested that if this consideration was eliminated, the resulting implied spread would be 3 percent, a full 25 bps lower.

Secondly, the witnesses for CAC/MSOS disagreed with Centra's contention that the ROE should move in lock-step with the underlying change in the long Canada rate. They suggested that the implied spread is not necessarily fixed for a range of long Canada bond returns. CAC/MSOS advocated the use of an adjustment factor, proposed to be about 80 percent. Under CAC/MSOS's proposal, the ROE would increase or decrease by only 80 bps for every corresponding increase or decrease in the benchmark long Canada bond yield of 100 bps.

Based on their own forecast of long Canada bond yields of 8.5 to 8.9 percent, an adjustment factor of 80 percent and a currently allowed rate of return of 11.25 percent, Drs. Booth and Berkowitz concluded that a formula based ROE would be in the range of 11.65 to 11.72 percent.

14.4.2 Use of Formula

Notwithstanding the acceptance of the mechanics of the formula by CAC/MSOS's witnesses, CAC/MSOS proposed that the adoption of a formula approach be postponed for a year. CAC/MSOS indicated that both BCUC and NEB conducted generic hearings on the use of a formula in conjunction with a full ROE hearing. Since a full ROE hearing has not been undertaken to support the ROE calculated by the formula, CAC/MSOS opposes its adoption.

Drs. Booth and Berkowitz concurred with the recommendation by Centra that the formula be subject to a review at least every three years. However, CAC/MSOS suggested that a full ROE hearing should be required, rather than be optional as suggested by Centra.

CAC/MSOS's witnesses also concurred that the formula should only continue to apply during the three year window within a stipulated band of long Canada bond yields. Whereas Centra suggested the band be plus or minus 2 percent of the current forecasted long Canada bond yield of 9.12 percent, CAC/MSOS suggested the band be plus or minus 1 percent. The witnesses indicated that the recent volatility in the marketplace and capital markets warranted the use of a narrower band. However, during cross examination, the witnesses also acknowledged that they had recommended a 2 percent band at a recent NEB hearing and the selection of 1 percent was largely judgmental.

14.4.3 ROE - Alternative Determination

Drs. Booth and Berkowitz also provided some broad updates to the expert evidence they have historically submitted to the Board and other tribunals. In providing the information, the witnesses acknowledged that it did not constitute a full ROE presentation in keeping with Centra's expressed wish of limiting the time committed to hearing expert evidence. Rather, the evidence was largely drawn from their evidence filed at a Union Gas rate hearing in November 1994.

CAC/MSOS's witnesses confirmed that, at least directionally, a number of their methodologies for assessing ROE supported an increase in Centra's currently allowed ROE. In conclusion, CAC/MSOS recommended an ROE increase of 25 bps to 11 percent compared to the ROE which they had recommended in the 1994 hearing. They also indicated that this return was consistent with the return which they recommended for Union Gas in November 1994.

14.5 Formula Approach - Other Jurisdictions

14.5.1 British Columbia Utilities Commission

BCUC recently conducted a generic hearing into a formula based determination of ROE in conjunction with a full ROE hearing. Extracts of the evidence presented to BCUC and the decision rendered were filed with the Board.

BCUC, which regulates a number of LDCs within the province of British Columbia, approved the use of formula driven ROE and an implied spread of 3 percent (including an allowance for flotation costs). A number of the other elements of the decision follow:

- As proposed during the course of this hearing, BCUC approved the use of a forecasted long Canada bond yield based on the November report of the Consensus Forecast adjusted for the spread in the marketplace during the last week of November between 10 year bonds and 30 year bonds.

- The formula applies for all long Canada bond yields less than 13 percent.
- The formula is subject to review at least every three years.
- Although expert evidence was introduced concerning an adjustment factor of less than one to be applied to changes in the benchmark long Canada bond yield, the use of such an adjustment factor was rejected by the BCUC.

Centra's expert witness indicated that the ROE approved by the BCUC in this decision was poorly received in the marketplace with adverse implications for the regulated companies. However, it was unclear whether the ROE determined was poorly received on the basis of the implied spread or on the basis of an inappropriate forecast long Canada bond yield.

14.5.2 National Energy Board

Since the generic hearing conducted by the BCUC concerning the use of a formula based ROE calculation, the NEB, which also regulates a number of gas utilities, has engaged in a generic hearing of its own. As with BCUC, the NEB conducted its generic hearing in conjunction with a full ROE hearing. Extracts of the expert evidence filed with the Board suggest the following:

- There is general concurrence among the expert witnesses that ROE does not move in lock-step with long Canada bond yields where those yields are more than about 10 percent. However, opinions among the experts differ as to whether ROE should move in lock-step with long Canada bond yields of less than about 10 percent. Opinions also differ as to what adjustment factor, if any, should be applied.
- An objective determination of the forecast long Canada bond yield is required.
- Some limitations (such as time and a range of long Canada yields) should be placed on the continued use of a particular formula.
- The use of a formula can improve efficiency in hearings and lower costs associated with the recurring filing of redundant and often polarized expert testimony.

14.6 Board Findings

14.6.1 Capital Structure

In Order 8/94, the Board approved "...an equity ratio not to exceed 40% as its allowed capital structure for Centra." Although the Board notes that no intervenor objected to the capital structure proposed by Centra, the Board does not find that an increase in the equity component to 40.66 percent is warranted. In response to Undertaking 31, Centra indicated that a decrease in the equity component of capital structure would be offset by an equivalent increase in short-term debt.

Accordingly, the Board will approve a capital structure consisting of 40 percent equity and 60 percent debt (47.385 percent long-term debt and 12.615 percent short-term debt).

14.6.2 Return on Equity

In reviewing the appropriateness of the formula approach proposed by Centra, the Board notes the detailed analysis of Centra's formula performed by CAC/MSOS's witnesses. With the exception of the issue of an adjustment factor, CAC/MSOS largely concurs with the components of the formula methodology proposed by Centra. The Board also notes that CAC/MSOS witnesses have proposed similar formula based methodologies in both Ontario and British Columbia.

The rate of return of 11 percent recommended by CAC/MSOS's witnesses was based on evidence adapted from a hearing concerning a different company in another jurisdiction. Furthermore, CAC/MSOS's proposed ROE is based on updates to CAC/MSOS's 1994 recommended ROE and disregards the higher ROE actually approved by the Board Order 8/94. These updates also included consideration of some methodologies which were not fully endorsed by the Board in prior Orders. Since CAC/MSOS did not offer any further evidence in the form of a more detailed and specific ROE examination, the Board rejects the CAC/MSOS's recommended ROE prepared on this basis. Further, the Board is not persuaded to delay applying Centra's ROE formula for a further year given CAC/MSOS's general concurrence with the formula methodology. **Accordingly, the Board will adopt the formula approach in principle, subject to certain conditions outlined below.**

For the purposes of this application, Centra estimated an implied spread of 3.50 percent between the forecasted return on long Canada bonds and the calculated ROE. CAC/MSOS suggested that an implied spread of 3.25 percent would be more appropriate, determined by excluding the November 1993 yield of 7.50 percent on long-term Government of Canada bonds used by the Company's expert and relying instead on the 1994 forecast yield of 7.75 percent to 8.25 percent proposed by CAC/MSOS's expert. The Board's findings in Order 8/94 noted that both experts at the time agreed there was an expectation of increased long-term interest rates for 1994, which corroborates the higher forecasted yields proposed by CAC/MSOS. Therefore, it does not appear reasonable to determine the implied spread inherent in the return on equity allowed in Order 08/94 by reference to the spot rate which was in effect at November 1993. Expert testimony in 1994 confirmed a reduction of 25 bps in the implied spread to reflect the lower corporate risk associated with a future test year. Similar recommendations were advanced by both the Company and CAC/MSOS in the current hearing. **Accordingly, the Board will approve an implied spread for the current application of 3.0 percent (3.25 percent less 25 bps for future test year).**

The Board recognizes that both BCUC and NEB conducted a full ROE hearing in assessing the appropriateness of a generic ROE formula. In accepting the use of a formula, based in part on the 1994 hearing which did not contemplate a formula process, the Board does not accept as final the implied spread of 3.0 percent. Rather, the Board expects that all participants at the next full ROE hearing will fully examine the issue of an appropriate implied spread.

CAC/MSOS also proposed that future adjustments to the currently allowed ROE be based on 80 percent of the change in the underlying long Canada bond yield. CAC/MSOS's witnesses recently made a similar recommendation before the BCUC and NEB. In response to information requests filed by Centra and in cross-examination, CAC/MSOS acknowledged that the adjustment factor was somewhat arbitrary and was not fully supported by quantitative analysis. However, the Board notes that in prior years, the changes in long Canada bond yields did not necessarily translate into a similar corresponding change in ROE for Centra (i.e., past changes in ROE have not necessarily moved in lockstep with changes in the long Canada Bond yield). The Board believes that an adjustment factor is appropriate, although little corroborative evidence was given on the adjustment factor itself. **Accordingly, the Board will accept CAC/MSOS' recommendation of an 80 percent adjustment factor.**

Applying an implied spread of 3 percent to a forecasted long Canada bond yield of 9.12 percent yields a calculated ROE of 12.12 percent. Based on these findings, **the Board will approve a fair ROE range of 11.90 percent to 12.35 percent with a mid-point of 12.12 percent for rate setting purposes.**

The Board notes that the approved ROE of 12.12 percent is consistent with the year over year change in the long Canada bond rate, when adjusted by a factor of 80 percent and added to the currently allowed ROE of 11.25 percent, reduced by 25 bps for the effect of a future test year.

14.6.3 Limitations on Use of Formula Approach

On the basis that the components of the formula should be reviewed periodically in conjunction with a full ROE hearing, **the Board will require that a full ROE hearing be scheduled no later than in conjunction with the 1997 future test year application.**

Centra recommended that the formula continue to be applied for underlying yields in the long Canada bond of between 7.12 and 11.12 percent, based on the current forecast yield of 9.12 percent plus or minus 2 percent. CAC/MSOS recommended that the band be limited to plus or minus 1 percent. On the basis that a benchmark long Canada bond yield and implied spread would normally be established in conjunction with a full ROE hearing, and since the benchmark implied spread was determined with reference to the 1994 hearing. **The Board will approve the use of the formula provided the forecast yield of long Canada bonds are within a level of 8 percent plus or minus 2 percent.**

Nevertheless, the Board reserves the right to require a full ROE hearing prior to the 1997 test year as a result of unusual or significant changes in the economy, the capital markets, or Centra's underlying business and financial risk. When the next full ROE hearing is held, the Board will request parties to provide further evidence.

14.6.4 Overall Rate of Return

The Board will approve an allowed overall rate of return of 10.80 percent, based on the approved capital structure and an ROE of 12.12 percent as outlined below.

	Capital Structure	Weight Percent	Cost Rate Percent	Weighted Average Cost of Capital
Long-term debt	$135,609,800	47.385%	10.287%	4.88%
Short-term debt	36,100,800	12.615%	8.500%	1.07%
Equity	114,473,800	40.000%	12.12%	4.85%
Total	**$286,184,400**	**100.000%**		**10.80%**