REHEARING DECISION

IN THE MATTER OF an application by Liberty Utilities (Gas New Brunswick) LP, as represented by its general partner, Liberty Utilities (Gas New Brunswick) Corp. for an order approving its return on equity, cost of debt, and capital structure.

(Matter No. 491)

November 18, 2022

NEW BRUNSWICK ENERGY AND UTILITIES BOARD

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NEW BRUNSWICK ENERGY AND UTILITIES BOARD:

Chairperson:	François Beaulieu
Members:	John Patrick Herron
	Stephanie Wilson
Board Counsel:	Véronique Otis
Counsel for Board Staff:	Abigail Herrington
Chief Clerk:	Kathleen Mitchell

APPLICANT:

Liberty Utilities (Gas New Brunswick) LP:	Len Hoyt, K.C.

INTERVENER:

J.D. Irving, Limited:	No one appeared

ACTING PUBLIC INTERVENER:	Richard Williams, K.C.

A. Introduction

[1] Liberty Utilities (Gas New Brunswick) LP, as represented by its general partner, Liberty Utilities (Gas New Brunswick) Corp. (Liberty or Utility), applied to the New Brunswick Energy and Utilities Board (Board) for a review of its cost of capital on March 31, 2021.

[2] Since October 2019, Liberty has been the general franchisee for gas distribution in New Brunswick. Before 2019, Enbridge Gas New Brunswick Limited Partnership, represented by its general partner, Enbridge Gas New Brunswick Inc., held the general franchise.

[3] In its application, Liberty sought approval of a return on equity (ROE) of 11.5 percent, a cost of debt of 3.315 percent, and a capital structure with an equity ratio of 50 percent. It also sought any additional orders, decisions, or directions as the Board deemed necessary or appropriate.

[4] Following the last cost of capital review in 2010, the Board approved a cost of capital to be comprised of an ROE of 10.9 percent, a cost of debt equal to the previous parent company's (i.e., Enbridge Inc.) borrowing rate plus 100 basis points, and a capital structure with an equity ratio not exceeding 45 percent.

[5] A hearing was conducted by videoconference on July 19, 20 and 22, 2021.

[6] Liberty's witness panel included Mr. Gilles Volpé, Vice President/General Manager, and Mr. David Lavigne, Director, Finance and Regulatory, both from Liberty. The panel also included Mr. James Coyne, Senior Vice President, and Mr. John Trogonoski, Assistant Vice President, both from Concentric Energy Advisors, Inc. (Concentric). Mr. Coyne and Mr. Trogonoski were declared experts in the areas of cost of capital for regulated utilities and associated financial, market and risk analysis.

[7] Ms. Heather Black, the Public Intervener, submitted the written evidence of Dr. Laurence Booth, a Professor of Finance and CIT Chair in Structured Finance at the Joseph L. Rotman School of Management, University of Toronto. Dr. Booth appeared as the Public Intervener's witness and was declared an expert in corporate financing and valuation.

[8] J.D. Irving, Limited (JDI) was granted intervener status but did not file any evidence or make any submissions at the hearing.

[9] The Board issued a decision on October 29, 2021 (Decision), setting Liberty's ROE at 8.5 percent, approving a cost of debt of 3.315 percent and a capital structure with an equity ratio of 45 percent.

[10] On November 26, 2021, Liberty applied for judicial review with the Court of Appeal of New Brunswick (Court of Appeal). It sought to set aside the Board's determination regarding Liberty's ROE of 8.5 percent.

[11] In *Liberty Utilities (Gas New Brunswick) LP, as represented by its general partner, Liberty Utilities (Gas New Brunswick) Corp. v. New Brunswick Energy and Utilities Board*, 2022 N.B.C.A. 29 (Court of Appeal Decision), the Court of Appeal allowed Liberty's application and ordered that the matter be remitted to the Board for rehearing. In its decision, the Court of Appeal stated that the rehearing would either yield a different or similar outcome, but proper reasons were required.

[12] A rehearing was conducted by videoconference on September 20, 2022. The Board heard oral submissions from Mr. Len Hoyt, counsel for Liberty, and Mr. Richard Williams, the Acting Public Intervener. No one appeared on behalf of JDI.

[13] At the commencement of the rehearing, Liberty submitted that it took no issue with the Board's determinations of the cost of debt, the capital structure, or Liberty's company-specific risk premium of 1.5 percent, that was set in the Decision.

[14] In this decision, the Board will review Liberty's current ROE considering the evidence of the hearing and the oral submissions of the hearing and rehearing. It will also discuss the issues of the cost of debt and capital structure.

B. Legislative Framework

[15] The following provisions of the *Gas Distribution Act*, *1999*, S.N.B. 1999, c. G-2.11 (GDA) are relevant to this proceeding:

> 52(3) The Board may make an order approving or fixing just and reasonable rates and tariffs that a gas distributor shall charge its customers for the distribution of gas or for supplier of last resort services.
>
> 52(5) In approving or fixing just and reasonable rates and tariffs, the Board

(a) may adopt any method or technique it considers appropriate, including an alternative form of regulation,

C. Analysis

[16] In New Brunswick, the distribution of natural gas and supplier of last resort services is regulated under the GDA. Section 52 sets out the Board's jurisdiction in approving or fixing just and reasonable rates and tariffs and the method and technique it considers appropriate.

[17] The Board has adopted a cost-of-service model for Liberty's gas distribution operations, which determines the rates and tariffs it can charge to its customers. As stated in the Court of Appeal Decision, an important element of determining the cost-of-service is setting Liberty's cost of capital.

[18] The cost of capital that the Board is required to set consists of three components, namely the cost of debt, the capital structure, and the ROE for Liberty. Each of these components will be evaluated separately but not in isolation.

[19] The legal framework for determining a fair return on invested capital in a regulated utility is referred to as the fair return standard. This standard will be addressed below.

1. Fair Return Standard

[20] The relationship between a regulated utility's return on capital and just and reasonable rates was established by the Supreme Court of Canada (Supreme Court) in *Northwestern Utilities v. City of Edmonton*, [1929] S.C.R. 186. The Supreme Court described fair and reasonable rates as rates that are fair not only to consumers but also to the regulated utility so that it may secure a reasonable return on its invested capital. It held that a fair return means a return as large as the utility would receive if it were investing the same amount of capital in other securities possessing a level of attractiveness, stability, and certainty equal to that of the utility.

[21] The fair return standard has been discussed in numerous Canadian regulatory decisions. In the decision in *TransCanada Pipelines Ltd. (Re)*, 2013 LNCNEB 2, at paragraph 565, the National Energy Board (now Canada Energy Regulator) held that the standard is required:

(a) to be comparable to the return available from an enterprise of like risk (the comparable investment requirement);

(b) to help maintain the financial integrity of the regulated enterprise (the financial integrity requirement); and

(c) to promote further capital investment (the capital attraction requirement).

[22] The Court of Appeal Decision confirmed that the above requirements carry equal weight and must be factored into the Board's analysis. The Board considers that the fair return standard is the appropriate framework by which to determine a fair return in this proceeding and that the standard is satisfied when each requirement is met. The Board's application of the standard will be discussed later in this decision.

2. Cost of Debt

[23] At the rehearing, Liberty did not take issue with the Board's decision regarding the cost of debt; however, the Board will address this issue in the following paragraphs.

[24] In his opening statement, Mr. Volpé submitted that the Board should approve a cost of debt of 3.315 percent. Liberty is not seeking a premium above the cost of debt of Liberty Utilities (Canada) LP. Liberty's proposal represents the actual cost of debt related to its acquisition by its parent company.

[25] In his report, Mr. Coyne stated that the current cost of debt is based on a 30-year debt issuance by Liberty's parent company, Liberty Utilities (Canada) LP, of $200 million in February 2020, with a 3.315 percent interest rate. The Board notes that Liberty's debt cost of 3.315 percent is 74 basis points lower than the average embedded debt cost of 4.06 percent for the North American proxy group of companies selected by Concentric. Dr. Booth testified that Liberty is financed with a favourable rate and took no issue. During the hearing, Ms. Black had no comments on the proposed cost of debt.

[26] The Board finds that the cost of debt is favourable to ratepayers and was reflective of interest rates in the capital markets at the time of filing. Based on the foregoing, the Board concludes that the proposed cost of debt of 3.315 percent is reasonable and is approved.

3. Capital Structure

[27] At the rehearing, Liberty did not take issue with the Board's determination in the Decision regarding the Utility's capital structure; however, this issue will be addressed below.

[28] The capital structure of a regulated utility includes both its debt and equity. The debt-to-equity ratio caps the equity percentage upon which Liberty may earn a return. Liberty requests that the Board approves a capital structure with an equity ratio of 50 percent. In its 2010 decision, the Board approved a capital structure with an equity ratio not exceeding 45 percent.

[29] In his report, Mr. Coyne recommended a minimum of 45 percent equity ratio. His analysis was based on comparing the equity ratios of other investor-owned gas distributors in Canada and the United States (U.S.), in addition to assessing Liberty's risk compared to 2010.

[30] Mr. Coyne submitted that Liberty's risk should be evaluated through two principal sources: (a) the business risk; and (b) the financial risk. Both risks need to be considered in setting the capital structure. Concentric's evidence characterized business risk as the risk inherent in the company's operations, regardless of how the company is financed. Financial risk exists to the extent that a company incurs fixed obligations in financing its operations.

[31] The risk assessment evidence of Mr. Coyne indicated that Liberty had a higher risk than most other investor-owned gas distributors in Canada, as well as the Canadian and North American proxy group companies selected by Concentric. In particular, he submitted that "[…] Liberty is significantly smaller both in terms of customer count and implied market capitalization than its peer group; Liberty has greater volumetric risk and declining average use per customer; and Liberty's competitive risk and supply risk both have increased since 2010." For those reasons, he recommended that the deemed equity ratio for Liberty be maintained at a minimum of 45 percent, noting that 50 percent was "[…] not an unreasonable target."

[32] During the hearing, however, Mr. Coyne testified that the existing capital structure of 45 percent equity was low for Liberty's risk profile and recommended it be increased to 50 percent. He stated that it was reasonable for Liberty to have an above-average deemed equity ratio given its small size. He provided examples of additional business risks (e.g., market risk and competitive risk), which were greater than 2010, compared to the proxy group companies in Canada and the U.S.

[33] In addition, Mr. Coyne testified that Liberty's current deemed equity ratio was lower than any of the authorized equity ratios for the operating companies of the U.S. gas proxy group. He stated

that a return to 50 percent would restore the equity ratio approved by the Board until it was reduced to 45 percent in 2010.

[34] Dr. Booth recommended that the Board approve a capital structure with an equity ratio of 40 percent. In his view, evaluating the business risk was important because "[…] it is the primary driver of any company's overall risk, that is financial risk, and how much debt a firm uses, is layered on top of its business risk."

[35] According to Dr. Booth, the underlying business risks for regulated utilities are extremely low since they are regulated. In Liberty's case, he stated that "[…] its small size is more than offset by the amortisations in [its] revenue requirement that increase its credit worthiness." He also stated that regulatory tools could essentially manage short and long-term business risks.

[36] During the hearing, Mr. Hoyt argued that some risks had decreased since 2010, and others had increased. In particular, the risk associated with environmental regulations on carbon emissions and the political desire to achieve decarbonization targets have since become significant risks. He also argued that, not only was Liberty's overall business risk not much different than in 2010, but it was also higher in comparison to most of the operating utilities held by the Canadian, the U.S., and the North American proxy groups of companies.

[37] As for Ms. Black, she submitted that Liberty's equity ratio should remain at 45 percent. She argued that the Board must consider the relationship between the ROE and the equity ratio in determining the capital structure. She stated that a utility with a higher equity ratio requires a lower ROE to be compensated equally for the same risk. Ms. Black also stated that an equity ratio of 50 percent was unjustified and inconsistent with this concept.

[38] Ms. Black argued that the Board should disregard the U.S. comparators offered by Mr. Coyne to evaluate the reasonableness of his recommended equity ratio for Liberty, since it was lower than all the U.S. comparators. She submitted that in its 2018 decision, the Alberta Utilities Commission found that allowed capital structures for U.S. utilities should not be held up as representative of the capital structures required by Canadian utilities to satisfy the fair return standard.

[39] The Board agrees with Ms. Black. The Board finds that Mr. Coyne's reliance on an increased business risk cannot be demonstrated by comparing it to 2010 or its peers. There is no evidence of any risk that warrants an increased ratio that is not already considered in the ROE analysis.

[40] Under cross-examination, Mr. Coyne acknowledged that Canadian and U.S. regulators have different approaches to equity ratios. He testified that Canadian regulators tend to focus more on a deemed equity ratio than U.S. regulators, who give more deference to utility management. As explained by Ms. Black, the differences in the U.S. regulatory process result in U.S. equity ratios being higher than Canadian equity ratios.

[41] The Board finds that the U.S. equity ratios are not comparable to Canadian equity ratios. Accordingly, the Board is not satisfied that there is sufficient evidence of a change in circumstances, including Liberty's business and financial risks, which would justify a change in the equity ratio. As a result, the Board approves a capital structure with an equity portion of 45 percent.

4. Return on Equity

a. Methodology for Determining the ROE

[42] The required ROE must be estimated, as it cannot be accurately determined in advance. The appropriate ROE for a regulated utility is typically determined using financial models and was the subject of expert evidence during the hearing.

[43] Financial modelling, however, is not an adequate basis upon which to set an ROE. The fair return standard requires the consideration of all relevant facts and the application of reasonable judgment.

[44] To establish a fair ROE for Liberty, the Board will first consider the results of financial models as appropriate in the circumstances, adjust those results to add an allowance for flotation costs, and compare those adjusted results with the allowed ROEs of other utilities. These considerations will enable the Board to establish an estimated ROE for a "benchmark" Canadian gas utility. The Board will then add a premium to the benchmark ROE representing Liberty's specific characteristics and risks relative to comparable utilities.

[45] This evaluation process will produce an ROE estimate for Liberty that the Board will consider together with its capital structure to set its allowed cost of equity. This process is addressed in the paragraphs below.

b. Financial Models

[46] The Board must determine which model, variation of a model, or combination of models it shall rely on in this proceeding to establish the appropriate ROE for Liberty.

[47] The Board was presented with expert analysis using various models. For example, Concentric relied upon the equity risk premium (ERP) model, variations of the capital asset pricing model (CAPM), and a constant growth discounted cash flow (DCF) and multi-stage DCF models.

[48] In his report, Mr. Coyne stated that each model has inherent weaknesses and relies on assumptions. He submitted that regulators must use multiple models and employ reasonable judgment to ensure a reasonable estimate of the required ROE. His estimate of the cost of equity for Liberty was obtained using the DCF and ERP models and the CAPM, with alternative inputs and model specifications designed to test the reasonable range of the results. Mr. Coyne combined the results from each model into averages to arrive at a reasonable range.

[49] During the hearing, Mr. Hoyt stated in final argument that it is now common for Canadian regulators to consider and rely upon the results of multiple models.

[50] The Board finds that each financial model has strengths and weaknesses and relies on various assumptions. The Board will consider more than one model in its assessment of a fair ROE but does not accept Mr. Coyne's approach of averaging the results. Averaging the results may not balance out the respective strengths and weaknesses of each model and may, instead, amplify the impact of some weaknesses that appear in multiple results.

[51] As stated earlier, Concentric relied upon various financial models. Two of those were the ERP and constant growth DCF models. The Board notes that regulators in Canada do not commonly use the ERP model. Liberty acknowledged that Concentric had to rely on a large sample of U.S. gas distribution companies when this model was used, as there was an insufficient number of Canadian ROE decisions to develop a statistically meaningful analysis. There was no evidence related to this model pertaining to Canadian companies, nor did Dr. Booth develop an equity risk premium estimate. Accordingly, the Board finds that the ERP model is not appropriate for use as part of the Board's assessment.

[52] As discussed later, the constant growth DCF model is based on an assumption of perpetual growth that makes it unreasonable. The Board will not rely on this model to determine a fair ROE.

[53] Instead, the Board shall rely primarily on the CAPM to establish a benchmark ROE. The CAPM has been widely used and accepted by Canadian regulators and was used in 2010 to set Liberty's ROE. The Board shall rely on the multi-stage DCF model as a basis for comparison against the results of the CAPM, as discussed later in the decision.

[54] The Board acknowledges that the CAPM has shortcomings. The model is sensitive to the assumptions and inputs used to construct it. Mr. Coyne and Dr. Booth agreed that the mechanical application of the CAPM method in the context of all-time low-interest rates would produce results that are too low.

[55] Mr. Coyne accounted for these shortcomings by relying on a forward-looking version of the CAPM and averaging the results of multiple models. Dr. Booth used a historical approach and made specific adjustments to certain components of his model based on his judgment.

[56] While the CAPM is relied upon, the Board shall mitigate the model's shortcomings using a mixed historical and forward-looking approach. Furthermore, the Board shall exercise its judgment to adjust the model's output to reflect the impact of the unusual financial and economic conditions as presented through the evidence in this proceeding.

i. Capital Asset Pricing Model

[57] The CAPM is based on the premise that investors are willing to take more risk as ROE increases. The model produces an estimated ROE for a benchmark utility using a formula that establishes a risk-free rate of return and adds a premium calculated as the return for the market as a whole (i.e., market risk premium) multiplied by a coefficient (beta) representing the relative risk of a benchmark utility compared to the market.

[58] The Board must develop its CAPM by selecting appropriate assumptions and inputs and then calculating the results for each component of the model.

(1) Risk-Free Rate

[59] The risk-free rate is the return that an investor can expect without any risk of losing the investment. In most jurisdictions, a long-term government bond yield serves as a proxy for a risk-free rate.

[60] Mr. Coyne and Dr. Booth recommended the Government of Canada 30-year bond as the appropriate proxy, which the Board accepts. Both experts agreed that the Board should begin with

a forecast for the 10-year government bond, which is readily available. To this, the Board should add the historical difference between 10-year and 30-year government bonds.

[61] Mr. Coyne recommended using the 2022 through 2024 forecast produced by Consensus Economics Inc. He then added the average difference between the 10-year and the 30-year government bonds for February 2021, which he noted as the most recent available data. Mr. Coyne concluded that a risk-free rate of 2.57 percent for Canada was reasonable.

[62] Dr. Booth proposed using the 10-year bond forecast for 2025 of 2.70 percent, as found in the Government of Canada's 2021 budget. He added the average difference between the interest rates of the 10-year and 30-year bonds since 1987 to arrive at a base value of 3.07 percent. He then recommended two adjustments to this base value.

[63] The first adjustment was for bond-buying by central banks, which he suggested lowered returns. The second was for an unusual decrease in long-term bond returns, as investors sell corporate bonds and buy government bonds during times of uncertainty. Combining these two adjustments, the risk-free rate would increase by 85 to 115 basis points.

[64] While Mr. Coyne acknowledged that returns on long-term government bonds have been low, he made no specific adjustment to his CAPM.

[65] During the hearing in final argument, Mr. Hoyt submitted that the use of the 2022 to 2024 forecast, as opposed to the current risk-free rate, reflected the current market reality that near-term bond yields remained near all-time lows. He further submitted that investors factor higher interest rate levels into their forward-looking return expectations.

[66] Ms. Black submitted that while she accepted Concentric's use of the 2022 to 2024 forecast as a basis for its risk-free rate estimate, adding the current spread between 10-year and 30-year government bonds was inappropriate. In her view, the method used by Dr. Booth, using the long-term average spread, resulted in a more appropriate estimate.

[67] Despite the differences in the forecasts and approaches regarding the spread used by Mr. Coyne and Dr. Booth, Ms. Black noted that other regulators had accepted both approaches in the past. As such, Ms. Black submitted that it would be reasonable for the Board to consider a risk-free rate between 2.57 percent and 3.07 percent.

[68] Although Mr. Coyne and Dr. Booth both used reasonable approaches to estimating the 10-year bond forecast and the historical spread, Dr. Booth's recommendation is derived from data using federal government sources for interest rates. In its rebuttal evidence, Concentric stated that Dr. Booth's logic on interest rates was reasonable.

[69] The Board shall rely upon the Government of Canada's 10-year bond forecast for 2025 and the long-term average spread recommended by Dr. Booth to set the risk-free rate in this proceeding. The Board sets the risk-free rate at 3.07 percent.

[70] The Board acknowledges that market conditions have been unusual for a considerable period because of historically low interest rates on long-term bonds. Mechanical application of the CAPM in the context of these unique market conditions will produce results that are too low unless the Board accounts for those conditions in its analysis.

[71] While the Board does not strictly apply Dr. Booth's two recommended adjustments of 85 to 115 basis points upward to the risk-free rate, the underlying factors identified by Dr. Booth are considered as part of the Board's assessment of its CAPM results further in this decision.

(2) Market Risk Premium

[72] The second component of CAPM is the market risk premium. This represents the extra return an investor can expect by investing in equities rather than bonds.

[73] According to Mr. Coyne, it is appropriate to develop a market risk premium based on forecasts. Using analysts' forecasts of returns and the constant growth DCF model, Mr. Coyne arrived at a forecasted market risk premium for North American companies of 9.84 percent.

[74] Dr. Booth used a historical average of the difference between market returns and long-term government bond returns. This was calculated using roughly a century's worth of data. He also considered surveys of experts forecasting the market risk premium. Dr. Booth concluded that a range between 5.0 percent and 6.0 percent was reasonable.

[75] Mr. Hoyt argued that using historical data to estimate the market risk premium was inappropriate under current market conditions. In his view, historical data fails to account for the current low interest rate environment and will result in an understated market risk premium.

[76] Ms. Black argued that if the Board uses a forward-looking estimate, as suggested by Mr. Coyne, it should consider the results of a multi-stage DCF calculation, which, while still flawed, is more reasonable than the constant growth DCF calculation. She submitted that this forward-looking estimate should be combined with historical calculations to arrive at a market risk premium that recognizes the trade-off between the relevance of forward-looking data and the reliability of historical data. The Board agrees with Ms. Black.

[77] The constant growth DCF model will not be used to analyze the market risk premium, as this model is impaired by its assumption of perpetual growth. The Board finds that historical data should not be ignored; therefore, a forward-looking estimate using the multi-stage DCF model should be combined with historical data to arrive at a reasonable market risk premium.

[78] In response to an undertaking to combine a forward-looking estimate using the multi-stage DCF model with historical data, Mr. Coyne presented a market risk premium calculation based on these parameters which provided a premium of 6.23 percent.

[79] Accordingly, the Board concludes that this combined approach is reasonable and sets the market risk premium at 6.23 percent.

(3) Beta Coefficient

[80] The third component in the CAPM calculation is the beta coefficient, which captures the riskiness of a company, or group of companies, compared to the market as a whole.

[81] Mr. Coyne arrived at an average beta of 0.86, while Dr. Booth recommended a beta between 0.45 and 0.55.

[82] The Board must resolve several methodological issues to arrive at an estimate of the beta. The first issue deals with the proxy group. Mr. Coyne arrived at his beta based on a Canadian proxy group that included six companies and a U.S. gas proxy group that used four companies. The groups are identified in the table below:

Canadian Proxy Group	U.S. Gas Proxy Group
AltaGas Ltd.	Northwest Natural Gas Company
Canadian Utilities Limited	ONE Gas, Inc.
Emera Inc.	Spire, Inc.
Enbridge Inc.	Southwest Gas Corporation
Fortis, Inc.	
Hydro One Ltd.	

[83] During cross-examination, Dr. Booth questioned the inclusion of AltaGas Ltd. and Enbridge Inc. in the Canadian proxy group. He suggested that changes in both companies in recent years meant they were no longer reasonably representative of Canadian utilities.

[84] The Board is satisfied that excluding AltaGas Ltd. and Enbridge Inc. from the Canadian proxy group results in a more appropriate beta. The Board is not convinced that these two companies are reasonably representative of Canadian utilities. AltaGas' utility operations are no longer primarily based in Canada. As a company with significant pipeline assets, Enbridge has a much different risk profile than that of a regulated utility such as Liberty. The Board finds that the appropriate beta is one that reasonably represents the relative risk of Canadian utilities.

[85] The Board acknowledges that the lack of stand-alone publicly traded natural gas distribution companies in Canada presents a challenge for analyzing proxy group results. The Board will consider the data of the four remaining Canadian utilities in Mr. Coyne's Canadian proxy group and the data in his U.S. proxy group in setting the beta coefficient.

[86] A second issue is whether the beta should be calculated on a weekly or monthly basis. While Mr. Coyne used a beta calculated weekly, it is Dr. Booth's opinion that this introduces a bias into the calculation. Dr. Booth suggested that a monthly beta calculation is more appropriate.

[87] The Board has previously used a beta calculated monthly and is not persuaded that a shift in calculating beta values to a weekly basis is required. The Board notes that betas are biased when estimated over high frequencies, such as using weekly data. Accordingly, the Board will use monthly beta values in this proceeding.

[88] During the hearing, the use of the Blume adjustment was raised. This adjustment reflects the tendency for a beta to revert towards the market mean of one over time. Mr. Coyne testified that the Blume adjustment was used in every regulatory proceeding where CAPM was involved across 50 U.S. states and the U.S.-based Federal Energy Regulatory Commission.

[89] Dr. Booth, however, testified that the adjustment was meant to evaluate unknown stocks, and no justification existed to use the Blume adjustment in the context of utilities.

[90] The Board is not convinced that the Blume adjustment is appropriate since an adjustment is not warranted for the betas of regulated utilities.

[91] In addition, Mr. Hoyt submitted that Dr. Booth's beta estimates failed to reflect current market conditions. He stated that both raw and adjusted betas for regulatory utilities in Canada and the U.S. have increased substantially in the last five years. He argued that utility companies were experiencing pressures that they had not in the past. He submitted that this could be explained by the shift in public policy towards decarbonization.

[92] Mr. Hoyt argued that the risks associated with decarbonization call into question the future growth prospects for gas distributors such as Liberty. This greater risk concerning the overall market translated to higher betas. He stated that even raw unadjusted betas were 0.79 and 0.77 for the Canadian and U.S. proxy groups based on the last five years.

[93] In final argument, Ms. Black referred the Board to the range of betas found in Mr. Coyne's Canadian proxy group. While the data is adjusted, the weekly betas show an average beta for Canadian companies of 0.87, and if AltaGas Ltd. and Enbridge Inc. were removed, the average would be lower. Referring to monthly betas contained in interrogatory responses prepared by Mr. Coyne, Ms. Black noted that the Canadian companies, excluding AltaGas and Enbridge, would have an average beta of approximately 0.50. She submitted that a range of 0.50 to 0.87 was reasonable.

[94] While the Board recognizes that Liberty is facing risks related to decarbonization and electrification, it notes that beta estimates become overstated by relying too heavily on short-term data. The Board finds that beta estimates must be viewed in the context of historical data to avoid getting caught up in daily volatility, which is reflected when the beta is set in the short term.

[95] Consequently, in reviewing the monthly betas as presented, excluding the values for AltaGas Ltd. and Enbridge Inc., the Board concludes that a beta within the range of 0.34 and 0.66 is reasonable. The Board is not persuaded that a change to the beta is warranted from 2010 and maintains the value at 0.55.

(4) CAPM Benchmark ROE

[96] As stated earlier, the Board will apply adjustments to the output of the CAPM to reflect the impact of unusual financial and economic conditions.

[97] Dr. Booth and Mr. Coyne noted that the extended period during which long-term government bond yields have been unusually low impacts CAPM estimates. Dr. Booth also identified the residual impacts of the 2008 financial crisis on historical bond market performance.

[98] The Board considers Dr. Booth's recommended adjustment of 85 to 115 basis points as a reasonable upward adjustment, giving a benchmark ROE of 7.35 percent to 7.65 percent, which does not include flotation costs. The resulting range is summarized below:

CAPM Benchmark ROE	
Risk-Free Rate	3.07%
Plus: Market Risk Premium * beta coefficient (6.23% * 0.55)	3.43%
Adjustment to account for prevailing market conditions	0.85% to 1.15%
Benchmark ROE (without flotation costs)	**7.35% to 7.65%**

ii. Discounted Cash Flow Model

[99] The DCF model estimates a utility's cost of equity based on the current dividend yield of its shares plus estimates of long-term growth. Its underlying premise is that investors value a given investment according to the present value of its expected cash flows over time.

[100] Mr. Coyne used the constant growth and multi-stage DCF models to estimate the ROE for a proxy group of Canadian utilities and a proxy group of U.S. utilities.

(1) Constant Growth Model

[101] The constant growth variation of the DCF model is based on analysts' forecasts of earnings growth and assumes that growth will occur perpetually at the same rate.

[102] Dr. Booth testified that, in his opinion, the constant growth DCF model is impaired by its assumption of perpetual growth at a constant rate based on analysts' earnings forecasts. He concluded that applying this assumption to individual companies or utilities was unreasonable. He recommended that the DCF model be used only for "[…] low risk dividend paying stocks or the market as a whole, where the expected dividends can be assumed to grow at some long run average growth rate […]."

[103] Ms. Black argued that the weakness in the constant growth DCF model is the assumption of perpetual growth and submitted that Canadian regulators have rejected this model for that reason.

[104] The Board agrees that the assumption of perpetual growth is a weakness, and, as stated earlier, it is unreasonable to consider the results of the constant growth DCF model in the analysis of a fair ROE for Liberty.

(2) Multi-Stage Growth Model

[105] Mr. Coyne's multi-stage growth DCF model tempers the assumption of perpetual growth by separating the growth assumptions used in the analysis into three time periods. Growth for the first five years of the analysis is based on analysts' earnings forecasts, while growth for years 11 and beyond is assumed to be equal to gross domestic product growth. Growth for years six to ten connects near-term growth with long-term growth by changing the growth rate yearly on a "pro rata basis."

[106] Dr. Booth testified that earnings growth rates are more volatile than dividend growth rates and may be subject to analyst optimism, all of which causes an upward bias in the results produced by the model.

[107] Mr. Coyne stated that analyst estimates are typically relied upon as an indicator of dividend growth rates and noted that any analyst optimism bias has declined over time.

[108] The Board finds that the multi-stage growth DCF model results will overstate the ROE because it relies on analyst estimates of earnings growth for the first stage of the analysis.

[109] Another factor to consider in evaluating the multi-stage growth DCF model is the inclusion of AltaGas Ltd. and Enbridge Inc. in Mr. Coyne's Canadian proxy group. As discussed previously, the Board does not consider these companies appropriate in this proxy group.

[110] Mr. Coyne's evidence related to the multi-stage growth DCF model provides the following ROEs for the Canadian proxy group, excluding AltaGas Ltd. and Enbridge Inc., and for the U.S. proxy group:

Multi-Stage DCF Model			
Canadian Proxy Group		**U.S. Gas Proxy Group**	
Canadian Utilities Limited	No Value	Northwest Natural Gas Company	8.46%
Emera Inc.	9.69%	ONE Gas, Inc.	7.83%
Fortis, Inc.	8.32%	Spire, Inc.	9.25%
Hydro One Ltd.	7.33%	Southwest Gas Corporation	8.35%
Mean (without flotation costs)	**8.45%**	**Mean (without flotation costs)**	**8.47%**

[111] As stated above, the Board considers these estimates to be optimistic. Accordingly, the Board will use the mean results from Mr. Coyne's multi-stage growth DCF model to inform the Board of the reasonableness of selecting a particular rate within the range of results of the CAPM analysis. This assessment is discussed later in this decision.

c. Flotation Allowance

[112] Another component in the financial modelling of a benchmark ROE is an allowance for floatation costs which represent the costs associated with issuing equities.

[113] In his report, Mr. Coyne noted that it is normal practice for Canadian regulators to allow an adjustment to reflect the risk associated with equity issuance and financing flexibility and that the Board has permitted such an adjustment in past proceedings.

[114] Both experts agreed that a flotation allowance of 0.50 percent was reasonable. The Board agrees with this assessment and adds 0.50 percent to the calculation of the benchmark ROE.

d. Other Evidence of Benchmark ROE

[115] The ROEs of other gas distribution utilities are also relevant considerations in the Board's development of a benchmark ROE.

[116] Dr. Booth testified that he regards Enbridge Gas, ATCO Gas, and Fortis BC Energy as "benchmark" utilities because they are big, province-wide utilities that face no competition from other gas distribution utilities and, therefore, are the lowest risk.

[117] The following table shows the current ROE for each of these utilities, as reported by Mr. Coyne in his written evidence:

Benchmark Utility	ROE	Equity Ratio
Enbridge Gas	8.34%	36.0%
ATCO Gas	8.50%	37.0%
FortisBC Energy	8.75%	38.5%
MEAN	**8.53%**	

e. Conclusion – Benchmark ROE

[118] The following table summarizes the results of the Board's benchmark ROE analysis:

	Result
Capital Asset Pricing Model (including flotation costs)	7.85% to 8.15%
Discounted Cash Flow Model (including flotation costs)	8.95%
Benchmark Utility Comparison	8.53%

[119] The Board considers that the multi-stage DCF model results constitute a reasonable basis for selecting the upper end of the range of its CAPM analysis, of 8.15 percent, for setting a benchmark ROE.

[120] Considering the CAPM result of 8.15 percent and the average ROE of the benchmark utility comparators of 8.53 percent, the Board establishes a benchmark ROE of 8.3 percent to set a fair ROE for Liberty.

f. Company-Specific Risk Premium

[121] The final component for determining the ROE is Liberty's company-specific risk premium. It is the difference between the required ROE for a benchmark utility and the ROE that Liberty requires to attract investment capital.

[122] In its 2010 decision, the Board examined five categories of risk for Enbridge Gas New Brunswick (EGNB), Liberty's predecessor, which included: (a) market risk; (b) competitive risk; (c) supply risk; (d) regulatory risk; and (e) deferral account recovery risk.

[123] The Board stated that while the relative risk in most categories had remained stable or declined, EGNB's "large and growing" deferral account made the utility far riskier than other mature utilities. This was because its ability to pay the debt in the deferral account was "[…] dependent on market forces which are out of EGNB's control." Considering the evidence and risk factors, the Board determined that a company-specific risk premium of 2.75 percent was appropriate in that proceeding.

[124] During the rehearing, Mr. Hoyt submitted that Liberty took no issues with the Board's determinations concerning the Utility's company-specific risk premium of 1.5 percent in its Decision.

[125] The Board, however, will examine the same five categories of risks in this proceeding as it did in 2010, as well as a new category relating to Liberty's peer group risk. All these categories are factored into the Board's determination of Liberty's company-specific risk premium.

i. Market Risk

[126] Mr. Coyne concluded that Liberty has greater market risk than in 2010 and had not added as many customers as it had forecast.

[127] In its written evidence, Liberty expressed that the size and nature of the New Brunswick market continue to restrict its ability to expand its customer base and increase its average throughput per customer. Specifically, Liberty noted that its growth has been limited to new home construction in areas currently served by a natural gas pipeline.

[128] According to Liberty, approximately 60 percent of the home heating market currently served by electricity is no longer a viable expansion target for Liberty. The availability of heat pumps has saturated the market, encouraging customers to adopt electricity as the primary heating source for new homes. Liberty also noted that New Brunswick consumers' rapid adoption of heat pumps has contributed to reducing the consumption of all fossil fuels. As a result, 2014 remains the high point for customers and throughput for Liberty. Additionally, Liberty points to political and environmental decarbonization trends as causing increasing difficulty for the utility to expand its operations in New Brunswick.

[129] Liberty also estimates that single end-use franchises (SEUFs) represent as much as 80 percent of the natural gas consumed in New Brunswick and expose Liberty to greater market risk than would otherwise be the case. In his opening statement, Mr. Volpé acknowledged that recent amendments to the GDA provide for a 10-cent per-GJ payment to Liberty from SEUFs but pointed out that the amounts, timing, and mechanics of those payments are still evolving.

[130] The Board finds that the above conditions may represent a change from the market conditions in 2010 but notes that the risk associated with the SEUFs has decreased since 2010. Liberty now receives per-GJ payments from SEUF customers, which was unavailable in the 2010 proceeding.

[131] While Mr. Lavigne suggested that the revenue from SEUF fees would roughly cover the costs of taxes that Liberty will now start paying as a profitable company, these are unrelated issues.

[132] The Board concludes that Liberty’s overall market risk has decreased since 2010.

ii. Competitive Risk

[133] In his report, Mr. Coyne concluded that Liberty has greater competitive risk than in 2010. He noted that the relative differential between natural gas and electricity prices had been lower than anticipated and identified competition from heat pump appliances and the propane market as other sources of competitive risk.

[134] In its evidence, Liberty described the challenges to growing its operations in New Brunswick posed by the greater efficiency of heat pumps and competition from the propane market, as well as increased competition from the fuel oil market.

[135] Liberty noted that the greater efficiency of heat pumps has made it difficult to attract new customers and reduced demand for gas in non-peak winter months when heat pumps are cost-competitive against natural gas.

[136] Falling propane prices began in 2014 and caused Liberty to lose some natural gas customers. Price fluctuations in the fuel oil market have reduced throughput for Liberty, as some large customers retain the ability to "fuel switch" when market prices make it advantageous. While Mr. Volpé characterized these issues as continuing threats in his opening statement, Board approved retention and incentive programs have been in place for several years to mitigate the impact of these competitive forces.

[137] The Board, therefore, finds that Liberty's competitive risk has increased since 2010, mainly due to the challenges caused by the proliferation of heat pumps in the New Brunswick market.

iii. Supply Risk

[138] In 2010, EGNB identified the acquisition of sufficient natural gas supplies as a potential risk for the utility, as the Sable Offshore Energy Project (Sable Project) had an uncertain production life. The Sable Project has since closed, and Liberty currently sources its natural gas mainly from Ontario and Western Canada.

[139] Mr. Volpé testified that Liberty's supply risk has moderated "to some degree" since 2010 because natural gas supply is being provided from more stable markets. He further testified that this has resulted in more stable and lower overall prices than in 2010. Therefore, the Board finds that Liberty's supply risk is lower than in 2010.

iv. Regulatory Risk

[140] In his report, Mr. Coyne concluded that Liberty's risk related to regulation had not materially changed since 2010. He noted that Liberty incurs a higher regulatory risk than the other gas distribution utilities in its North American proxy group, as it lacks protection against volumetric risk.

[141] During cross-examination, Mr. Coyne testified that Liberty lacks revenue decoupling or weather normalization mechanisms, which are common for other gas distribution utilities. In final argument, Mr. Hoyt noted that the utility had applied for a revenue-smoothing mechanism in 2014, but that this request had been denied.

[142] At the hearing, Ms. Black took issue with Liberty's alleged lack of regulatory options to address volumetric risk. She submitted that Liberty comes before the Board annually and is not precluded from requesting further regulatory tools to address volumetric risk.

[143] The Board notes that Liberty can seek approval of regulatory mechanisms to protect against volumetric risk if it wishes to do so. The Board concludes that the regulatory risk has remained unchanged.

v. Deferral Account Recovery Risk

[144] The Board previously considered the risk of EGNB being unable to recover its large deferral account to be the utility's most pressing risk and set the company-specific risk premium at 2.75 percent in its 2010 cost of capital decision, largely to address this issue. In this proceeding, Mr. Coyne concluded that the deferral account was Liberty's most important risk at that time.

[145] In 2016, EGNB and the Province of New Brunswick negotiated a settlement that included a 25-year extension of the gas distribution franchise. Amendments to the GDA set the balance of the regulatory deferral account at $144.5 million and established a process for its recovery. Liberty stated in its evidence that, while the deferral account recovery risk is lower in absolute terms, there remains a danger that some portion of Liberty's deferral account will not be recovered.

[146] The Board notes that the GDA requires the Board to recognize and consider the $144.5 million deferral account as part of Liberty's regulated assets to be included in the revenue requirement and specifically provides for the recovery of $100 million of the balance on a fixed straight line amortization basis. Mr. Lavigne testified in cross-examination that, despite these statutory mechanisms for recovery, the collectability of the deferral account is still at risk.

[147] The Board finds that the deferral account recovery risk has decreased substantially since 2010 as amendments to the GDA in 2016 established a mechanism for recovery of the deferral account balance.

vi. Liberty's Peer Group Risk

[148] While the Board did not consider the issue of peer group risk in 2010, both Liberty and the Public Intervener raised this issue at the hearing.

[149] Liberty characterized the New Brunswick marketplace as one with a small population and industrial base spread over a broad area compared to other natural gas markets. It stated that New Brunswick's dispersed population makes it more expensive or even uneconomic to serve a significant portion of the franchise area, limiting further growth into communities not already served by Liberty.

[150] In Mr. Coyne's opinion, treating small regional gas distribution utilities as large mature utilities that serve a much larger customer base would not be appropriate. He recommended that the Board assess Liberty's ROE against the ROEs of similar local gas distributors in terms of customers and throughput.

[151] Dr. Booth characterized Liberty as comparable in size to Pacific Northern Gas (PNG) which, in his view, is the riskiest gas distribution utility in Canada. In cross-examination, he acknowledged that his opinion was based on information from 2010.

[152] At the hearing, Mr. Hoyt argued that it was "troubling" to hear Dr. Booth state that PNG is the riskiest gas distribution utility in Canada, based on information he has not revisited in 10 years. He submitted that Dr. Booth did not appear to understand the challenges of Liberty's gas distribution business in New Brunswick and added that there was no comparison provided of Liberty to risky gas distribution companies in Canada.

[153] In the Board's view, assessing risk against a peer group is an appropriate step in this proceeding. Liberty's risk is assessed against PNG and Heritage Gas Limited.

[154] The Board does not accept Dr. Booth's assessment of the relative risk of PNG and Liberty. The lack of population density within the New Brunswick marketplace magnifies Liberty's risk. Further, the dispersed population and relatively small industrial market present significant challenges to growth. The Board concludes that Liberty's smaller annual throughput and less diverse and smaller customer base cause Liberty to be comparably risky to other members of its peer group.

[155] The Board was presented with evidence of the allowed ROEs for PNG (i.e., 9.5 percent) and Heritage Gas Limited (i.e., 11.0 percent) and considered this evidence in setting a company-specific risk premium for Liberty. These ROEs, however, were established several years ago under different market conditions and business environments and do not necessarily represent a minimum fair ROE for Liberty.

vii. Conclusion – Company-Specific Risk Premium

[156] Dr. Booth recommended that Liberty's company-specific risk premium should be 0.75 percent. Concentric recommended a premium reduction from 2.75 percent to 1.60 percent.

[157] Ms. Black argued that an additional reduction to this risk premium to 0.80 percent was warranted and reasonable. She stated that Concentric has vastly overstated Liberty's regulatory risk, and the Board's 2010 risk premium would have been based on its small size.

[158] The Board has considered the various risks facing Liberty compared to the risks it faced in 2010 and compared to its peers. Liberty has had more competitive risk since 2010. While its deferral account recovery risk has diminished significantly since 2010, investors may still perceive that Liberty faces higher regulatory risk than its peers.

[159] The Board finds that an appropriate company-specific risk premium for Liberty lies between 0.75 percent and 1.60 percent.

[160] As noted above, the Board finds the lack of population density within the New Brunswick marketplace magnifies Liberty's risk compared to its peer group. Its dispersed franchise area and significant bypass by SEUFs impact Liberty's growth. Given these challenges, the Board sets Liberty's company-specific risk premium at 1.50 percent.

g. Fair ROE for Liberty

[161] At the hearing, Mr. Hoyt submitted that 11.5 percent is an appropriate ROE for Liberty, as recommended by Mr. Coyne, following a review of changes in the risks facing Liberty since 2010 and a "first principles analysis" using a series of models. At the rehearing, Mr. Hoyt argued in favour of a 10 percent return on equity.

[162] Dr. Booth recommended an ROE of 8.25 percent for Liberty based on his financial modelling. Mr. Hoyt submitted that an ROE of 8.25 percent is untenable for Liberty and, if accepted, would be the lowest authorized ROE for any utility in Canada or the U.S.

[163] Ms. Black submitted that an ROE for Liberty of a "range around 10 percent" was reasonable and noted that, in her view, some amount above the output of financial models is warranted "given that Liberty's small size amplifies the impact of the risk it faces."

[164] At the rehearing, Mr. Williams stated, "[…] the Public Intervener argued for 10 percent, and we are not changing that argument at this point in time. 8.5 percent could be viewed as reasonable if there is an analysis and a roadmap as to how the Board got to 8.5 percent."

[165] As explained in this decision, the Board establishes a fair ROE by developing a return on equity estimate for a benchmark utility using financial models and comparator utilities, and adding a premium to represent Liberty's specific risk profile compared to other utilities.

[166] The resulting ROE is described in the following table:

Revised Adjustments to the ROE		
	As of January 1, 2011	Revised
Benchmark ROE	8.13%	8.3%
Company-Specific Risk Premium	2.75%	1.5%
Return on Equity	**10.9%**	**9.8%**

[167] The Board, therefore, approves a return on equity for Liberty of 9.8 percent.

5. Return on Capital Meets the Fair Return Standard

[168] The approved return on capital for Liberty is as follows:

Approved Return on Capital	
Cost of Debt	3.315%
Return on Equity	9.8%
Capital Structure	45% Equity

[169] The Board finds that this return on capital meets the three requirements of the fair return standard, as discussed earlier.

[170] The Federal Court of Appeal described the threshold necessary to meet the fair return standard as follows in *TransCanada Pipelines Ltd.* v. *National Energy Board*, [2004] 319 N.R. 171:

> [12] […] If the Board does not permit the utility to recover its cost of capital, the utility will be unable to raise new capital or engage in refinancing as it will be unable to offer investors the same rate of return as other investments of similar risk. As well, existing shareholders will insist that retained earnings not be reinvested in the utility.
>
> [13] In the long run, unless a regulated enterprise is allowed to earn its cost of capital, both debt and equity, it will be unable to expand its operations or even maintain existing ones. Eventually, it will go out of business. This will harm not only its shareholders, but also the customers it will no longer be able to service. The impact on customers and ultimately consumers will be even more significant where there is insufficient competition in the market to provide adequate alternative service.

[171] The Board considers that the three requirements of the fair return standard are satisfied where a utility can offer investors the same rate of return as comparable investments and recover its cost of debt. The utility will then be able to raise new capital, engage in refinancing, and maintain and expand its operations.

[172] A cost of debt of 3.315 percent represents the actual cost of debt related to Liberty's acquisition by Liberty Utilities (Canada) LP.

[173] The Board relied on evidence of the allowed returns of comparable utilities to determine a fair capital structure for Liberty and to set a specific risk premium for Liberty. It also used data from comparable utilities to develop financial models and establish a benchmark ROE.

[174] A return on equity of 9.8 percent with an equity ratio of 45 percent is comparable to other Canadian gas utilities with similar risk and, therefore, allows Liberty to offer investors a similar rate of return.

[175] The Board finds that this return will allow Liberty to attract new capital, engage in refinancing, and maintain and expand its operations.

D. Conclusion

[176] The following table summarizes Liberty's ROE, cost of debt, and capital structure and reflects the approved adjustments made in this proceeding. These adjustments are effective as of December 1, 2022.

Cost of Capital Component	Current Approved Return on Capital	Approved Return on Capital Effective December 1, 2022
Cost of Debt	Parent company's borrowing rate plus 100 basis points	3.315%
Return on Equity	10.9%	9.8%
Capital Structure	45% Equity 55% Debt	45% Equity 55% Debt

Dated at Saint John, New Brunswick, this 18th day of November 2022.

François Beaulieu
Chairperson

John Patrick Herron
Member

Stephanie Wilson
Member