

Expert opinion regarding a just and reasonable return on average common equity in MECL’s 2023 General Rate Application



prepared for IRAC Counsel by London Economics International LLC

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London Economics International LLC (“LEI”) was retained by Island Regulatory and Appeals Commission (“IRAC”) Counsel to prepare an expert report following review of the Maritime Electric Company Limited’s (“MECL’s”) 2023 General Rate Application (Docket No. UE20946), and to provide an expert opinion regarding a just and reasonable return on average common equity (“ROE”) for MECL for the upcoming 3-year rate-setting period beginning March 2023 ending February 2026.

LEI believes that the combination of MECL’s business and financial risk profile along with uncertain macroeconomic environment induced by high inflation warrant a higher ROE for MECL for this upcoming rate-setting period. LEI has recommended an ROE of 9.70% for the upcoming 3-year period, which LEI believes is reasonable for MECL in the current risk environment.

Table of contents

- LIST OF ACRONYMS4
- 1 EXECUTIVE SUMMARY5
- 2 BACKGROUND6
 - 2.1 ON WHOSE BEHALF HAVE YOU PREPARED THIS REPORT AND WHAT IS THEIR INTEREST IN THIS PROCEEDING?6
 - 2.2 CAN YOU PROVIDE SOME EXAMPLES OF YOU OR YOUR FIRM’S EXPERIENCE THAT IS RELEVANT TO THIS PROCEEDING?.....6
 - 2.3 WHAT IS MECL APPLYING FOR IN THIS PROCEEDING?.....8
 - 2.4 WHAT ROE AND EQUITY THICKNESS HAS MECL PROPOSED FOR ITS COST OF CAPITAL?.....8
 - 2.5 WHAT JUSTIFICATION HAS MECL PROVIDED FOR ITS PROPOSED COST OF CAPITAL?9
 - 2.5.1 Concentric’s risk analysis for MECL.....9
 - 2.5.2 Concentric’s assessment of MECL’s risk, ROE, and equity ratio relative to other utilities10
 - 2.5.3 Consideration of previous IRAC decisions/findings by Concentric.....11
- 3 PRIOR PROCEEDINGS13
 - 3.1 WHAT PRINCIPLES HAS IRAC USED TO APPROVE SIMILAR APPLICATIONS?.....13
 - 3.2 HOW HAS IRAC DECIDED ON MECL’S ROE AND EQUITY THICKNESS PROPOSALS IN PREVIOUS PROCEEDINGS?13
 - 3.3 WHAT HAS IRAC COMMENTED ON BUSINESS AND FINANCIAL RISK IN THE PREVIOUS PROCEEDING?.....15
- 4 BUSINESS RISK ASSESSMENT.....16
 - 4.1 MECL’S SMALL SIZE RELATIVE TO OTHER UTILITIES16
 - 4.2 MACROECONOMIC AND DEMOGRAPHIC TRENDS17
 - 4.3 SUPPLY AND OPERATING RISKS19
 - 4.4 DEFERRAL AND VARIANCE ACCOUNTS.....22
 - 4.5 ALTERNATIVE FUEL RISK AND DECARBONIZATION24

4.6	POLITICAL AND REGULATORY UNCERTAINTY	26
4.7	HAVE MECL’S BUSINESS RISKS MEANINGFULLY INCREASED SINCE THE PREVIOUS DECISION?	28
5	FINANCIAL RISK ASSESSMENT	31
5.1	HAVE MECL’S FINANCIAL RISKS CHANGED SINCE THE PREVIOUS PROCEEDING ACCORDING TO CREDIT RATING AGENCIES?	31
5.2	HOW DOES THE NEAR-TERM INFLATION OUTLOOK AFFECT MECL’S FINANCIAL RISKS?.....	31
5.3	HAS MECL’S LONG-TERM DEBT ACCESSIBILITY CHANGED SINCE THE PREVIOUS PROCEEDING?	32
5.4	DO MECL’S KEY PROJECTED FINANCIAL RATIOS DEMONSTRATE AN INCREASE IN FINANCIAL RISK?	32
5.5	HAVE MECL’S FINANCIAL RISKS INCREASED SINCE THE PREVIOUS APPLICATION?	34
6	ASSESSMENT OF ROE AND EVALUATION OF ESTIMATION METHODS	35
6.1	WHICH METHOD HAS LEI USED TO ESTIMATE ROE?	36
6.2	WHAT IS THE RISK-FREE RATE RECOMMENDED BY LEI?.....	37
6.3	WHAT LEVEL OF BETA DOES LEI RECOMMEND?	38
6.3.1	<i>Methodology/screening criteria used by LEI to choose the peer companies</i>	38
6.3.2	<i>Beta estimation</i>	41
6.4	WHAT EQUITY RISK PREMIUM DOES LEI RECOMMEND?.....	42
6.5	HAS LEI RECOMMENDED ANY ADDITIONAL RISK PREMIUM?	43
6.6	LEI’S RECOMMENDED ROE.....	45
6.7	IF THE WEATHER NORMALIZATION MECHANISM AND RESERVE ACCOUNT (“WNR”) IS NOT APPROVED FOR THE UPCOMING RATE-SETTING PERIOD, WHAT (IF ANY) IMPACT WILL THIS HAVE ON THE APPROPRIATE ROE FOR MECL?46	
6.8	HOW DOES LEI’S RECOMMENDED ROE AFFECT MECL’S CREDIT RATING DURING THE 2023-2025 PERIOD? 47	
6.9	WHAT IS LEI’S OPINION REGARDING THE PROPOSED CAPITAL STRUCTURE VIS-À-VIS ITS RECOMMENDED ROE? 49	
7	KEY CONCLUSIONS	53
8	APPENDIX: WORKS CITED.....	54

Table of figures

FIGURE 1. SUMMARY OF RECOMMENDATIONS.....	5
FIGURE 2. MECL REVENUE REQUIREMENT FORECASTS AND AMOUNT ATTRIBUTABLE TO RETURN.....	8
FIGURE 3. CONCENTRIC’S SUMMARY OF RESULTS ASSOCIATED WITH THEIR PEER GROUPS ON ROE	10
FIGURE 4. CONCENTRIC’S COMPARISON OF AUTHORIZED EQUITY RATIOS IN CANADA AND THE US	11
FIGURE 5. HISTORICAL RATE CASES AND APPROVED EQUITY THICKNESS	14
FIGURE 6. SELECTED FINDINGS ON BUSINESS AND FINANCIAL RISK IN PREVIOUS PROCEEDING.....	15
FIGURE 7. DEMOGRAPHIC COMPOSITION OF THE ATLANTIC PROVINCES, 2018 TO 2022.....	18
FIGURE 8. MECL DEFERRAL AND VARIANCE ACCOUNT APPLICATIONS IN 2019 GRA	23
FIGURE 9. MECL CUSTOMERS AND TOTAL ELECTRICITY DELIVERED, 2019 TO 2021	26
FIGURE 10. SUMMARY OF BUSINESS RISK FACTORS FOR MECL	29
FIGURE 11. SUMMARY OF BUSINESS RISKS ASSESSED BY S&P	30
FIGURE 12. SUMMARY OF FINANCIAL RISKS ASSESSED BY S&P.....	31
FIGURE 13. SUMMARY OF INFLATION OUTLOOK FOR THE 2023-2025 PERIOD	32
FIGURE 14. DESCRIPTION OF KEY CREDIT METRICS	33
FIGURE 15. ASSESSMENT OF MECL’S KEY FINANCIAL RATIOS	34
FIGURE 16. SUMMARY OF ROE ESTIMATED ACCORDING TO VARIOUS METHODS AND CONCENTRIC RECOMMENDATION	35
FIGURE 17. ESTIMATION OF FORWARD-LOOKING US 30-YEAR GOVERNMENT BOND YIELD I.E., RISK-FREE RATE....	38

FIGURE 18. SHARE OF AVERAGE GROSS PP&E RELATED TO ELECTRICITY SUPPLY (FY 2019 TO FY 2021)	40
FIGURE 19. PEER COMPANIES CHOSEN BASED ON LEI'S SCREENING CRITERIA	40
FIGURE 20. ESTIMATION OF BETA.....	41
FIGURE 21. ESTIMATION OF ADDITIONAL RISK PREMIUM	44
FIGURE 22. ESTIMATION OF LEI'S RECOMMENDED ROE.....	45
FIGURE 23. WNR BALANCE (JANUARY 2016 – DECEMBER 2020).....	47
FIGURE 24. MATRIX OF BUSINESS AND FINANCIAL RISKS AND ASSOCIATED RATINGS	48
FIGURE 25. ALLOWED ROE AND EQUITY PORTION TRENDS TO REGULATED ELECTRIC UTILITIES IN THE US	49
FIGURE 26. KEY STATISTICS OF MECL AND OTHER ATLANTIC UTILITIES	50
FIGURE 27. ALLOWED ROE AND EQUITY PORTION TRENDS IN GREAT BRITAIN AND AUSTRALIA	52

List of acronyms

BCUC	British Columbia Utilities Commission
CAPM	Capital Asset Pricing Model
CER	Canada Energy Regulator
CGTS	Charlottetown Thermal Generating Station
Concentric	Concentric Energy Advisors
CPI	Consumer Price Index
DCF	Discounted Cash Flow
DSM	Demand-Side Management
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ECAM	Energy Cost Adjustment Mechanism
EPA	Electric Power Act
ESM	Earnings sharing mechanism
ERP	Equity Risk Premium
EVs	Electric Vehicles
FBC	FortisBC Electric
FFO	Funds From Operations
FMBs	First Mortgage Bonds
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRA	General Rate Application
GWh	Gigawatt hours
HDDs	Heating Degree Days
IRAC	Island Regulatory and Appeals Commission
LEI	London Economics International LLC
SAIDI	System Average Interruption Duration Index
MECL	Maritime Electric Company Limited
MED	Major event days
NBEM	New Brunswick Energy Marketing Corporation
NSP	Nova Scotia Power
NSUARB	Nova Scotia Utility and Review Board
NGTL	Nova Gas Transmission Limited
OEB	Ontario Energy Board
OFGEM	Office for Gas and Electricity Markets
OPG	Ontario Power Generation
PEIEC	Prince Edward Island Energy Corporation
PPAs	Power Purchase Agreements
PP&E	Gross Property, Plant, And Equipment
PPAs	Power Purchase Agreements
ROE	Return On Equity/ Return on Average Common Equity
S&P	Standard And Poor's
WNR	Weather Normalization Mechanism and Reserve Account
WEO	World Economic Outlook

1 Executive Summary

London Economics International LLC (“LEI”) was retained by the Island Regulatory and Appeals Commission (“IRAC”) Counsel to prepare an independent expert report following review of the Maritime Electric Company Limited’s (“MECL’s”) 2023 General Rate Application (Docket No. UE20946), and to provide an expert opinion regarding a just and reasonable return on average common equity (“ROE”) for MECL for the upcoming 3-year rate-setting period beginning March 2023 ending February 2026.

MECL is seeking approval for an ROE of 9.95% with a capital structure comprising 40% common equity and 60% debt. MECL proposes to use this common equity thickness and ROE for the rate-setting period beginning March 1st, 2023, ending February 28th, 2026. The current approved cost of capital is based on 40% average common equity and a maximum return on average common equity of 9.35%, which IRAC approved in MECL’s previous rate case proceeding in 2019.

LEI independently estimated the ROE for MECL’s upcoming rate-setting period using the capital asset pricing model (“CAPM”) and recommends an ROE of 9.70%. In conjunction with the recommended ROE of 9.70%, LEI believes MECL’s proposed capital structure of 40% equity portion is reasonable, and will allow for rating agencies to maintain MECL’s investment grade credit rating for the upcoming rate-setting period. A summary of LEI’s assessment and recommendations is shown below.

Figure 1. Summary of recommendations

Parameter	LEI’s assessment and recommendations
Business risks	<ul style="list-style-type: none"> Compared to the previous (2019) rate case decision, there has been a moderate increase in macroeconomic uncertainty Risk associated with MECL’s small size should be considered in estimating MECL’s ROE Compared to the previous (2019) rate case decision, there has been no meaningful change in risks associated with demographics, supply/operations and the political/regulatory environment
Financial risks	<ul style="list-style-type: none"> Compared to the previous (2019) rate case decision, there has been no material change in financial risks The projected key financial ratios considered by rating agencies do not pose a risk to MECL’s credit rating for the upcoming rate-setting period
Return on equity and capital structure	<ul style="list-style-type: none"> LEI recommends an ROE of 9.70% for the upcoming rate setting period, which is 35 basis points higher than currently approved ROE, and reasonably accounts for macroeconomic uncertainty and MECL’s small size Proposed common equity ratio of 40% is reasonable, in combination with LEI’s recommended ROE

2 Background

2.1 On whose behalf have you prepared this report and what is their interest in this proceeding?

London Economics International LLC ("LEI") was retained by the Counsel for the Island Regulatory and Appeals Commission ("IRAC") to provide an independent expert report presenting LEI's review and opinion on the proposed return on equity ("ROE") for the upcoming rate-setting period (i.e., March 2023 through February 2026) in Maritime Electric Company, Limited ("MECL")'s 2023 General Rate Application ("GRA"). LEI's scope also included reviewing the evidence prepared by MECL's expert, Concentric Energy Advisors ("Concentric").

2.2 Can you provide some examples of you or your firm's experience that is relevant to this proceeding?

LEI staff have relevant experience in cost of capital matters, reviewing regulatory dockets and supporting regulatory staff with filing interrogatories. A selection of pertinent previous work is highlighted below.

- **LEI staff have experience analyzing cost of capital for Canadian regulators:** In the first half of 2021, LEI was retained by the Ontario Energy Board ("OEB") staff as a capital structure expert in respect of Ontario Power Generation ("OPG")'s 2022-2026 Payment Amounts Application (EB-2020-0290). As part of its engagement, LEI provided analysis of evidence and support to OEB staff to prepare interrogatories, prepared an expert report following a detailed review of the analysis of risk set out in the application and provided an independent opinion on the risk faced by OPG. LEI also responded to several interrogatories with respect to the expert report.
- **LEI staff have also conducted capital structure analysis for industry clients:** LEI was engaged by a large Ontario gas utility to conduct an independent capital structure review to assess the reasonableness of the utility's common equity component. The project included assessment of the utility's business and financial risk profile compared to OEB filings and peers, examining information on utility capital structures, evaluating the utility's request, and providing recommendations on the same.
- **LEI has experience testifying before US and Canadian regulators.** Below are examples:
 - In 2008, LEI was asked by OEB staff to develop an overall framework which can be used to evaluate the risk to equity and an appropriate capital structure for OPG's regulated assets, relative to other power sector assets for which capital structures and returns on equity have been determined or could be observed. Mr. AJ Goulding served as the testifying expert. [OEB Proceeding No. EB-2007-0905]
 - LEI was retained to provide regulatory support for Black Swan Energy in its response to the application of NOVA Gas Transmission Limited ("NGTL") to the Canada Energy Regulator ("CER"). LEI reviewed the application and assisted in trial preparation. LEI prepared an expert report to form the basis of Black Swan's

intervenor evidence, and responded to information requests (“IRs”). Mr. AJ Goulding served as the testifying expert. [CER Proceeding No. RH-001-2019]

- LEI supported an electricity distribution company (ENMAX Power Corporation) in Alberta, Canada, in its application to restructure rates to move from cost-of-service to a performance-based approach. LEI prepared a filing for the company’s regulator proposing a formula-based tariff-setting scheme, based on an LEI-developed formula for periodic adjustments to an average tariff metric based on an inflation factor, efficiency factor, the impact of capital investments, operational performance relative to defined metrics, and defined mechanisms for additional adjustments based on force majeure and financial performance outside a defined range. LEI team members provided strategic advice to the CEO and other senior managers on presenting the firm’s proposal to the regulator and stakeholders; and provided expert testimony in support of the firm's filing to its regulator. Mr. AJ Goulding served as the testifying expert. [AUC Application No. 1550487]
- LEI was engaged by the Nova Scotia Utility and Regulatory Board (NS UARB) to assist in setting performance standards for Nova Scotia Power (“NSP”) in respect of reliability, response to adverse weather conditions, and customer service for Nova Scotia. Mr. AJ Goulding and Mr. Amit Pinjani served as testifying experts. [Proceeding No. 2016 NSUARB 193]
- **LEI staff are familiar with cost of capital frameworks for regulated utilities:** LEI has been engaged by OEB staff to provide quarterly updates on the macroeconomic conditions facing the utility sector in Ontario, and their potential impact on the cost of capital parameters. LEI prepared quarterly reports for the 2019-2021 term of this engagement. LEI then successfully competed in the 2021-2023 solicitation, and is currently undertaking this engagement for OEB staff once again, which includes providing analysis associated with cost of capital, interest rate and inflation parameters.
- **LEI staff have experience in regulatory practices across Canada:** As an example, LEI was engaged by the Commission of Inquiry Respecting the Muskrat Falls Project in 2019 to serve as an expert to the Inquiry. LEI prepared a report addressing the following topics: a comparison of Newfoundland and Labrador's electricity regulation system relative to other jurisdictions; assessing the system's ability to deal with challenges stemming from interconnection, including energy marketing; exploring the province's energy policy; recommending changes to the province's electricity pricing model; and assessing the potential role for renewable energy generation expansion. Mr. AJ Goulding served as the testifying expert. [LEI Report at Exhibit P-04457]
- **LEI has provided extensive analysis associated with financing/refinancing activities:** LEI has served as the independent market expert during the financing or refinancing of numerous zero-emitting resources in North America and other global jurisdictions. For instance, LEI has provided the independent market advisor report associated with refinancing of multiple hydro, solar, and wind assets owned by companies other than OPG across North America, as well as in Latin America and the Middle East.

2.3 What is MECL applying for in this proceeding?

In its 2023 GRA, MECL is applying for higher rates, which represent a 3.0% “average increase in current customer costs” per year, effective on March 1st in 2023, 2024 and 2025.¹ This rate increase is based on MECL’s forecasted revenue requirements for 2023 to 2025. The forecasted amounts, including the portion of each amount that is attributable to return on equity, is shown in Figure 2 below.

Figure 2. MECL revenue requirement forecasts and amount attributable to return

MECL application elements	Calendar Year		
	2023	2024	2025
Forecasted net revenue requirement (CAD 000s)	233,068	245,356	256,992
<i>Of which, return (CAD 000s)</i>	18,660	19,850	21,066
Increase in revenue requirement attributable to increase in return (%)	22.2%	9.7%	10.5%

Notes: The other elements of forecasted total revenue requirement included in MECL’s application are energy supply costs, energy cost adjustment mechanism (“ECAM”) deferral adjustment, transmission and distribution, general and administrative, depreciation, finance charges and income taxes. MECL has also calculated the revenue requirement from basic rates, which is the forecasted amounts above less other revenue.

Source: Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 6.0 – Rate Base and Revenue Requirement.* June 20th, 2022. Page 96.

2.4 What ROE and equity thickness has MECL proposed for its cost of capital?

MECL is seeking approval of a capital structure of 40% common equity and 60% debt, and an ROE of 9.95%. MECL proposes to use this common equity thickness and ROE for the rate-setting period beginning March 1st, 2023, ending February 28th, 2026.²

The current approved cost of capital is based on 40% average common equity and a maximum return on average common equity of 9.35%, which IRAC approved in MECL’s previous rate case pursuant to *Order UE19-08*.³

¹ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 3.0 – Introduction.* June 20th, 2022. Pages 9-12.

² Ibid. *Section 5.0 – Cost of Service and Projections.* Page 64.

³ Island Regulatory and Appeals Commission. *Order UE19-08.* September 27th, 2019. Page 53.

2.5 What justification has MECL provided for its proposed cost of capital?

MECL argues that *“the risks facing Maritime Electric support a higher cost of capital,”*⁴ which is reflected in an allowed ROE that is 60 basis points higher than the current approved maximum ROE. MECL notes, *“Expert evidence filed with this Application indicates that Maritime Electric has above-average business risk in comparison to other Canadian utilities, and its risk warrants a higher return. Maritime Electric’s business risks continue to be defined by longstanding factors, including its small size, lack of geographic diversity, economic conditions on PEI, operating risks associated with major weather events, and government policy uncertainty.”*⁵

Concentric was retained by MECL to estimate the cost of capital for MECL for the purpose of establishing the required ROE and capital structure for the next rate-setting period. Concentric concludes that a common equity ratio of 40% and an ROE of 9.95% *“would be at the lower end of estimates, in our judgment, that would satisfy the requirements of a fair return,”* primarily based on a proxy group analysis of US electric utilities which Concentric notes *“is most representative of Maritime Electric’s business and financial risk profile.”*⁶ To arrive at their conclusion on ROE and equity thickness, Concentric assessed three broad areas detailed in the following subsections.

2.5.1 Concentric’s risk analysis for MECL

Key findings from Concentric’s risk analysis were related to:

- **Current economic conditions:** Concentric indicates that the COVID-19 pandemic triggered a fresh wave of financial volatility and uncertainty that continues due to the impacts of the pandemic and other factors, leading equity investors to demand higher returns as compensation; interest rates in the US and Canada are also forecasted to increase in the next few years due to changes in monetary policy and rising inflation.⁷
- **MECL’s business and financial risk:** Concentric contends that MECL faces business risk stemming from its small size, economic context, energy supply and operating challenges, deferral and variance accounts (and relative lack thereof), and political and regulatory uncertainty, among other factors. However, Concentric does not argue that MECL’s business risk is meaningfully greater in the present application than it was in the prior GRA, stating: *“Maritime Electric continues to have many of the same business and operating risks as in prior GRA filings ... our view is that the business risk of Maritime Electric remains above average”*.⁸

⁴ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.0 – Cost of Service and Projections.* June 20th, 2022. Page 64.

⁵ Ibid. *Section 3.0 – Introduction.* Pages 8-9.

⁶ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report.* June 2022. Page 4.

⁷ Ibid. Page 33. Note that the Concentric report was dated as June 2022. Since July 1st, 2022, and as of January 27th, 2023, the policy interest rates have increased by 300 basis points by Bank of Canada and 275 basis points by the US Federal Reserve.

⁸ Ibid. Page 69.

2.5.2 Concentric’s assessment of MECL’s risk, ROE, and equity ratio relative to other utilities

In its assessment, Concentric constructed three proxy groups:

- a first group comprising six *Canadian* companies⁹ that are regulated, trade publicly and engage in electric and natural gas utility service;
- a second group of ten *US* companies,¹⁰ nine of which have electric utilities as subsidiaries and one of which is an electric utility in its own right; and
- a third *North American* group,¹¹ comprised of the ten US companies and four (of the six) Canadian companies that “are primarily engaged in the provision of electricity.”¹²

Concentric calculated the ROE for Canadian, US and North American proxy groups using four methods, as summarized in Figure 3 below. Based on the range of ROEs calculated, Concentric concludes that MECL’s requested ROE of 9.95% “is reasonable, if not conservative,” with the most weight for comparative purposes placed on the US electric proxy group.¹³

Figure 3. Concentric’s summary of results associated with their peer groups on ROE

	Canadian Regulated Utilities	US Electric	North American Electric	Average
Constant Growth DCF	12.08%	9.77%	10.12%	10.7%
Multi-Stage DCF	10.48%	8.96%	9.21%	9.6%
CAPM	10.35%	10.79%	10.48%	10.5%
Risk Premium		10.01%	10.01%	10.0%
Average	11.0%	10.0%	10.1%	10.4%

Notes: DCF = Discounted Cash Flow; CAPM = Capital Asset Pricing Model.

Source: Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Figure 1. Page 4.

⁹ Companies chosen by Concentric for the Canadian proxy group: Algonquin Power and Utilities Corp., AltaGas Ltd., Canadian Utilities Limited, Emera, Inc., Enbridge, Inc., and Hydro One Ltd.

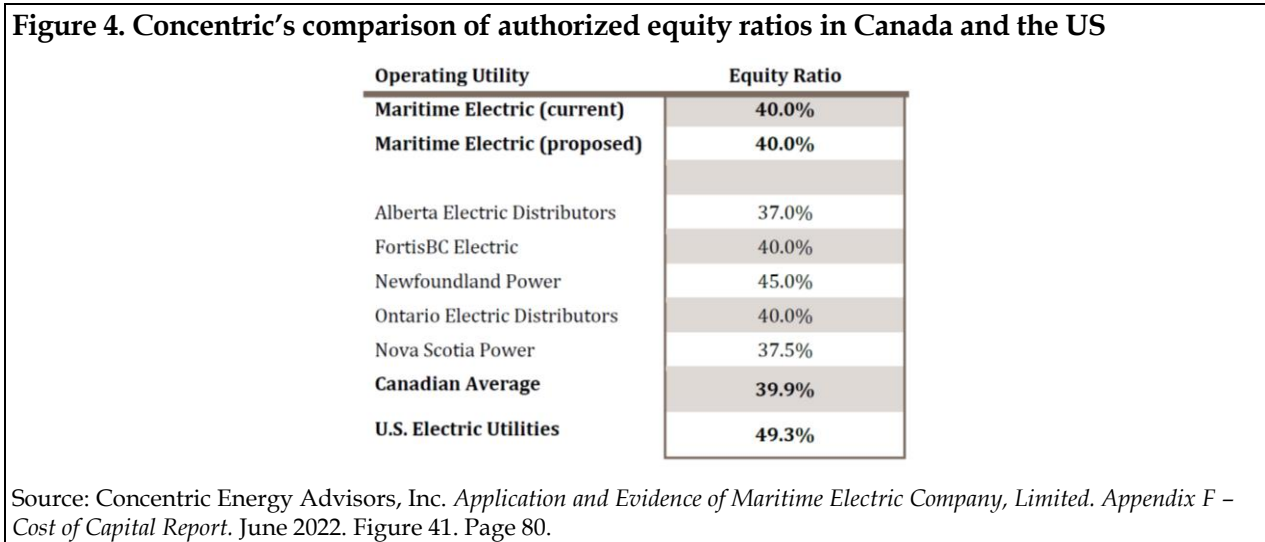
¹⁰ Companies chosen by Concentric for the US proxy group: ALLETE, Inc., Alliant Energy Corp., Duke Energy Corporation, Edison International, Entergy Corp., Evergy, Inc., IDACORP, Inc., NextEra Energy Inc., OGE Energy Corporation and Portland General Electric Company.

¹¹ Companies chosen by Concentric for the North American proxy group: Algonquin Power and Utilities Corp., Canadian Utilities Limited, Emera, Inc., Hydro One Ltd., ALLETE, Inc., Alliant Energy Corp., Duke Energy Corporation, Edison International, Entergy Corp., Evergy, Inc., IDACORP, Inc., NextEra Energy Inc., OGE Energy Corporation and Portland General Electric Company.

¹² Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Pages 35-37.

¹³ Ibid. Page 4.

Further, Concentric finds that MECL’s equity thickness is similar to the average among the Canadian proxy companies, but below the average equity thickness for US electric utilities, as shown in Figure 4 below.¹⁴



Concentric recommends a 40% equity ratio, in line with statutory limits, but notes that *“this is lower than that justified by its risk profile.”*¹⁵

As part of this assessment, Concentric argues that MECL’s business risk is *“comparable”* to that of utilities it selects for the US proxy group,¹⁶ but higher than that of Canadian proxy group companies.¹⁷ As evidence for this view, Concentric points to the fact that *“U.S. Electric proxy group companies derive approximately 98 percent of regulated income and 97 of regulated revenues from electric utility service.”*¹⁸ All of MECL’s operating income and revenue comes from regulated electric service.¹⁹ Concentric also highlights factors such as MECL’s degree of regulated generation risk, fuel and purchased power cost risk, regulatory lag, volume/demand risk, capital cost recovery risk and operating cost recovery mechanisms, to justify their comparison between MECL and the US proxy group.²⁰

2.5.3 Consideration of previous IRAC decisions/findings by Concentric

As part of the current application, Concentric states that it has made an upward adjustment of 50 basis points to results for the DCF and CAPM methods *“for flotation costs and financing flexibility,”*

¹⁴ Ibid. Page 80.
¹⁵ Ibid. Page 4.
¹⁶ Ibid. Page 75.
¹⁷ Ibid. Page 73.
¹⁸ Ibid.
¹⁹ Ibid.
²⁰ Ibid. Pages 75-76.

arguing that *“this is consistent with the 2019 Commission order (Order UE19-08) authorizing an ROE of 9.35 percent for Maritime Electric, which implicitly included 50 basis points for flotation costs and financing flexibility.”*²¹ While it is unclear why Concentric is suggesting the use of flotation costs as it relates to the Order (given the Order does not mention flotation costs), LEI found reference to flotation costs in the testimony given by Dr. Booth in 2019 to the Commission.²²

As part of the current application, Concentric acknowledges that MECL has not requested an earnings sharing mechanism (“ESM”), and notes: *“... from a policy perspective, the hard cap on Maritime Electric’s earnings restricts the Company’s ability to earn above its authorized ROE, unlike many other regulated utilities in Canada and the U.S., and does not provide a financial incentive for Maritime Electric to pursue operating efficiencies and cost savings. Under an ESM, customers also benefit from enhanced efficiency and savings.”*

It is notable that in the previous application, MECL had proposed a symmetrical ESM with a deadband of +/- 50 basis points around the proposed ROE of 9.35%.²³ If approved, this would have allowed MECL to share 100% of earnings above ROE of 9.85% with customers, and if MECL’s earnings were below the ROE of 8.85%, it would be able to increase customer rates in the following rate year so that it earns an ROE of no less than 8.85%. In its Order, the Commission allowed the ROE of 9.35% (with an equity ratio of 40%), but disallowed MECL’s proposal for an ESM, stating the following: *“Due to MECL’s pattern of over-earning, the Commission believes that the approval of the earnings sharing mechanism would amount to approval of an allowed ROE of 9.85 percent. The end result would be a higher rate of return for the Company, and a corresponding decrease in the amount of over-earnings refunded to ratepayers.”*²⁴

Concentric also points to Order UE10-03 in its analysis, particularly the Commission’s statements that ROEs and equity ratios for Nova Scotia Power and Newfoundland Power are relevant to MECL, that IRAC views the difference between MECL and Ontario distribution utilities as significant, and that IRAC sees MECL as higher risk than FortisBC and the benchmark BC ROE rate,²⁵ and the Commission’s statement in Order UE06-03 that *“the small size of Maritime Electric makes the Company more risky than other electric utilities in Canada.”*²⁶ For full context, however, the Commission in its Order stated that while it *“agrees that the Company operates with a higher degree of business risk than other investor owned utilities in Atlantic Canada ... due, in part to the relative small size of the Company,”* IRAC maintains that *“this risk is, however, mitigated somewhat through the operation of the Energy Cost Adjustment Mechanism.”*²⁷

²¹ Ibid. Page 51.

²² Booth, Laurence. *Fair Return for Maritime Electric Company (MEC) - Evidence of Laurence D. Booth before the Island Regulatory and Appeals Commission*. March 2019. Page 64.

²³ Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019. Page 18.

²⁴ Ibid. Page 19.

²⁵ Ibid. Page 55-56.

²⁶ Ibid. Page 59.

²⁷ Island Regulatory and Appeals Commission. *Order UE06-03*. June 27th, 2006. Para. 28.

3 Prior proceedings

3.1 What principles has IRAC used to approve similar applications?

Under section 24(1) of the *Electric Power Act* (“EPA”), IRAC is responsible for determining “a just and reasonable” rate of return based on its rate base, “in addition to the expenses as the Commission may allow as reasonable and prudent ... and to all just allowances made by the Commission.” Section 21(2) of the EPA states that the Commission will also be responsible for “[determining] the value of the assets, used and useful, of the public utility in the production, transmission, distribution and furnishing of electric energy.” However, in MECL’s 2019 GRA, it requested a return on average common equity, instead of a return on rate base.²⁸ IRAC approved this approach in *Order UE19-08*.²⁹

In *UE19-08*, IRAC’s 2019 Order, the Commission wrote that its responsibility to determine a rate of return that is just and reasonable “requires the Commission to balance the interests of ratepayers and the interests of the utility.”³⁰ This responsibility is also laid out in PEI’s *Electric Power Act*, section 24(1), which states that MECL “shall be entitled to earn annually such return [on investment] as the Commission considers just and reasonable.”

In determining a just and reasonable return, IRAC follows the “fair return” standard set out by the Supreme Court of Canada in 1929 in *Northwestern Utilities Ltd v. Edmonton (City)*.

The Fair Return Standard

In deciding on a just and reasonable rate of return, the Commission has adopted the Supreme Court of Canada’s definition of “fair return,” as outlined in *Northwest Utilities v. Edmonton (City)* from 1929:

“By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company’s enterprise.”

As IRAC has explained, “It is the role of the Commission to determine the [ROE] that is just and reasonable in the circumstances.”

Source: Island Regulatory and Appeals Commission. *Order UE16-04R*. July 11, 2016. Paras. 61-63.

3.2 How has IRAC decided on MECL’s ROE and equity thickness proposals in previous proceedings?

In the previous rate application, IRAC approved an ROE of 9.35% (*UE16-04R*, “2016 Order,” and *UE19-08*, “2019 Order”). Looking back further, between 2011 and 2016, MECL’s ROEs were set by legislation, known as the PEI Energy Accord, which fixed the ROE at 9.75% between March 1st, 2011, and February 29th, 2016.³¹ IRAC has also approved average common equity ratios of

²⁸ Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019. Page 16.

²⁹ Ibid. Page, 19.

³⁰ Ibid. Page 15.

³¹ Island Regulatory and Appeals Commission. *Order UE16-04R*. July 11th, 2016. Paras. 10, 69.

40% (2019 Order for 2019-2021, or until otherwise varied by the Commission) and 40.9% (2016 Order, for 2016 only, shifting to 40% in 2017-2018).

In the 2016 Order, IRAC approved a settlement between the PEI Government and MECL which reduced MECL’s initial request of 9.7% ROE (with an allowed range of 9.5%-9.9%) down to 9.35%. This represented a 40 basis points reduction from MECL’s legislated ROE under the PEI Energy Accord (2011-2016). The Commission noted that such a reduction “is consistent with what has been seen in other Canadian jurisdictions, including in Atlantic Canada, as noted in the review undertaken by Grant Thornton.”³² The Commission also agreed that “a ROE risk premium is appropriate due to the unique risk factors that exist in this Province,” such as “the frequency in which the regulatory framework in this Province has been changed over the last twenty years” and “the Company’s responsibilities for electric supply which are unique when compared to other Canadian distribution utilities.”³³ The Commission noted, however, that it would not provide a concrete value for such a premium, but would rather assess the appropriate level based on the conditions at the time of MECL’s application.

The table below summarizes MECL’s applied for and approved ROE and average common equity ratio in the previous four rate-setting periods, utilizing publicly available information.

Figure 5. Historical rate cases and approved equity thickness

Rate case	Return on equity		Average common equity ratio	
	Applied for	Approved	Applied for	Approved
UE20940 (2010)	9.75%	9.75%	-	-
PEI Energy Accord (2011-2016)	-	9.75%	-	42.7% (2011)
	-	9.75%	-	41.7% (2012)
	-	9.75%	-	43.5% (2013)
	-	9.75%	-	43.1% (2014)
	-	9.75%	-	41.9% (2015)
UE20942 (2016)	9.7% (allowed range of 9.5% - 9.9%)	9.35%	40.5%	40.9% (2016) 40% (2017-2018)
UE20944 (2019)	9.35% (target)	9.35% (maximum)	40%	40%

Notes: Actual average common equity ratios may differ from the ratios used in rate setting. Between 2011 and 2016, rates for MECL were set through legislation. In the 2016 rate case, MECL initially applied for the ROE and common equity ratio shown above, but as a result of a settlement between MECL and the PEI Government, MECL revised its application to request an ROE of 9.35%, based on an average common equity ratio of 40.9% in 2016 and 40% in 2017-2018. IRAC approved this amended request.

Source: IRAC orders in the dockets noted above; Legislative Assembly of Prince Edward Island. *Annual Acts – Chapter 9 (Bill No. 25) – Electric Power (Electricity-Rate Reduction) Amendment Act. Schedule 1.* 2010.; Legislative Assembly of Prince Edward Island. *Annual Acts – Chapter 6 (Bill No. 26) – Electric Power (Energy Accord Continuation) Amendment Act. Schedule 4.* 2012.

³² Ibid. Para. 74.

³³ Ibid. Para. 75.

3.3 What has IRAC commented on business and financial risk in the previous proceeding?

In the 2019 Order, IRAC stated that it “*prefers and accepts the expert evidence*” of the expert retained by Commission Staff, Dr. Laurence Booth, over the evidence of MECL’s expert, John P. Trogonoski of Concentric Energy Advisors, “*where their evidence differs.*”³⁴ Dr. Booth found that MECL is “*a low risk Canadian utility.*”³⁵ He also noted that “*the definition of a ‘fair return’ in Canada does not require a regulator to follow the allowed ROEs of other utilities.*”³⁶

IRAC’s few key findings are provided below in Figure 6.

Figure 6. Selected findings on business and financial risk in previous proceeding

Risk identified	IRAC's key findings	Relevant to current proceedings?	LEI comments
MECL's small size compared to other utilities	“Dr. Booth does not view MECL's size as a risk factor, noting that size does not influence MECL's ability to earn its allowed ROE, nor does it affect MECL's access to bond markets.” (IRAC)	✓	LEI has contended in this report that MECL’s smaller size has an influence on MECL’s ROE (see Sections 4.1 and 6.5)
Impact of regulatory and government involvement in MECL's business	“Dr. Booth also views regulatory and government involvement in this Province as being positive. He noted, for example, that the Provincial Government essentially funded the cost of the Point Lepreau refurbishment, thereby taking the liability off MECL's books. As a further example, Dr. Booth explained that the Government owned the new submarine cables and leased them to MECL, further reducing risk to the Company.” (IRAC)	✓	While LEI acknowledges PEI's long-standing history of government involvement in the energy sector, recent history demonstrates that the PEI government has taken steps to support MECL’s finances, indicating that business risks associated with government involvement are not significant (see Section 4.6)

Source: Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019.; Booth, Laurence. *Fair Return for Maritime Electric Company (MEC) - Evidence of Laurence D. Booth before the Island Regulatory and Appeals Commission*. March 2019.

³⁴ Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019. Pages 18-19.

³⁵ Ibid. Page 17.

³⁶ Ibid.

4 Business risk assessment

As discussed in detail in this section, while MECL's business risks have not materially changed since the last rate filing, there is a notable shift in the macroeconomic environment across North America (and globally) since the last rate filing. MECL's business risks, as discussed in the Concentric report, relate to six broad categories: (i) MECL's small size relative to other utilities; (ii) macroeconomic and demographic trends; (iii) supply and operating risks; (iv) deferral and variance accounts; (v) alternative fuel risk and decarbonization; and (vi) political and regulatory uncertainty. The subsections below discuss each risk category, followed by LEI's observations on change in business risks.

4.1 MECL's small size relative to other utilities

Concentric writes that *"The small size of Maritime Electric supports an equity ratio higher than the upper limit of 40.0 percent allowed by the [Electric Power Act] and/or an allowed ROE above the mean for the proxy groups."*³⁷ More specifically, Concentric argues that *"Due to its small size, Maritime Electric has greater risk associated with adverse economic conditions, as well as greater risk that customer demand could decrease significantly due to a major employer or industry experiencing a downturn or deciding to relocate."*³⁸ In support of its findings, Concentric points to a May 2021 ratings report on MECL from Standard & Poor's ("S&P"), which comments, *"Compared with its utility peers, the company has a small customer base and lacks geographic and regulatory diversity. Therefore, we consider MECL's business risk to be in the lower half of our excellent range relative to those of its utility peers and we ascribe a negative comparable rating analysis modifier to reflect this (emphasis added)."*³⁹

Concentric also points to IRAC's 2006 order in a previous MECL GRA as support for their position on MECL's small size and associated risks. In this Order, IRAC stated that *"The Commission has reviewed the Company's submissions on this matter and agrees that the Company operates with a higher degree of business risk than other investor-owned utilities in Atlantic Canada [i.e., Newfoundland Power and Nova Scotia Power]. This is due, in part, to the relative small size of the Company. In our view, this risk is, however, mitigated somewhat through the operation of the Energy Cost Adjustment Mechanism..."*⁴⁰

The expert retained by Commission Staff during the previous rate case, Dr. Laurence Booth, opined that he *"does not view MECL's size as a risk factor, noting that size does not influence MECL's ability to earn its allowed ROE, nor does it affect MECL's access to bond markets."*⁴¹

³⁷ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report.* June 2022. Page 59.

³⁸ *Ibid.* Page 61.

³⁹ S&P Global Ratings. *Maritime Electric Co. Ltd.* May 11th, 2021. Page 2. (Included as Appendix G to MECL's GRA.)

⁴⁰ Island Regulatory and Appeals Commission. *Order UE06-03.* June 27th, 2006. Para. 28.

⁴¹ Island Regulatory and Appeals Commission. *Order UE19-08.* September 27th, 2019. Page 17.

LEI acknowledges Dr. Booth's assessment that MECL's size does not have a material impact on its access to bond markets. This is supported by MECL's senior secured debt rating of 'A' from S&P, as of S&P's most recent MECL rating report from June 2022.⁴²

However, LEI is of the opinion that MECL's small size exposes it to more risks compared to a larger firm. Small (and medium-sized) firms typically tend to face more uncertainty compared to larger firms.⁴³ This is also reflected in the historical secondary market performance of small and large firms, which indicate that investors typically expect a higher risk premium for investing in smaller firms (as discussed later in this report - see Figure 21).

As such, LEI has quantified the additional risk faced by MECL later in this report (see Section 6.5). Among various merits in quantifying the additional risk on account of smaller size, size can also act as a reasonable representation for a variety of other risks faced by a firm, such as lower cash liquidity, fewer economies of scale, and volumetric risks. In MECL's case, the additional risks are muted by the nature of regulated business, i.e., a more stable revenue outlook and the ability to pass-through extraordinary costs to the consumers, but the risks are not completely eliminated.

Summary of risks associated with MECL's small size relative to other utilities

- Concentric has submitted that MECL is exposed to additional risks compared to a typical regulated utility because of its smaller size.
- While LEI acknowledges Dr. Booth's previous assessment that MECL's size does not have a material impact on its access to bond markets, LEI is of the opinion that MECL's small size cannot be ignored in assessing its risk premium. As such, LEI has quantified the additional risk premium on this account in a subsequent section of this report.

4.2 Macroeconomic and demographic trends

In discussing MECL's business risks from macroeconomic and demographic trends, Concentric uses projections out to 2040 from two Conference Board of Canada reports, dated August and September 2021.⁴⁴ Among other statistics, Concentric reports that PEI should see a *"surge in entries [of immigrants] over the next few years,"* although population growth should slow past 2030.⁴⁵ Labor force growth in the province is expected to be stronger than the national average, while gross domestic product ("GDP") growth is projected to be below the Canadian average.⁴⁶

⁴² MECL's senior secured rating is higher than MECL's issuer credit rating from S&P, which is BBB+. (Source: S&P Global Ratings. *Maritime Electric Co. Ltd.* June 17th, 2022. Page 5.)

⁴³ Statistics Canada. Economic Analysis (EA) Research Paper Series. *"Firm Size and the Risk/Return Trade-off"* by Amélie Lafrance. December 2013.

⁴⁴ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F - Cost of Capital Report.* June 2022. Pages 62-64.

⁴⁵ Ibid. Page 62.

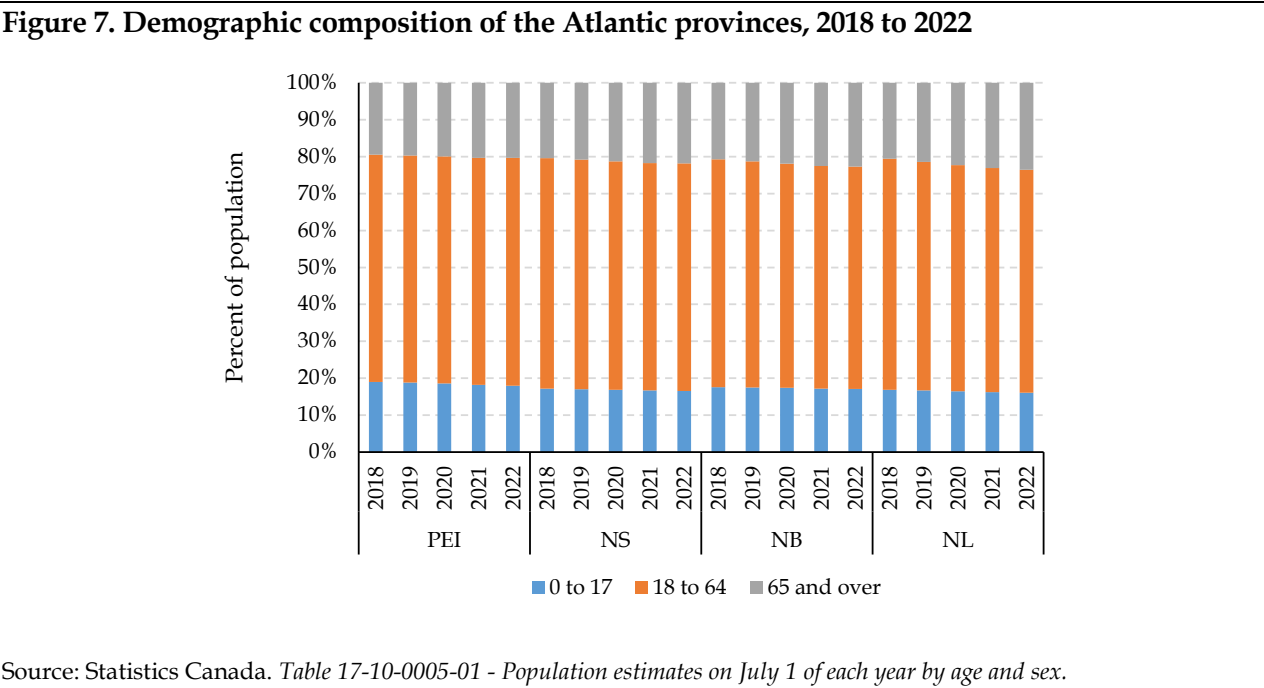
⁴⁶ Ibid. Page 63.

The macroeconomic outlook has deteriorated compared to the outlook during MECL’s previous rate case decision in 2019. High inflation became the primary macroeconomic concern for 2022. In response, central banks across developed economies have taken aggressive action on their monetary policies in attempt to control inflation by raising their base lending rates, including the US Federal Reserve and the Bank of Canada, who have each implemented rate increases of 425 basis points between March 1st, 2022 and January 27th, 2023.

Accordingly, the IMF, in its October 2022 update to the World Economic Outlook (“WEO”),⁴⁷ has downgraded its global GDP growth forecast for 2023 to 2.7% from 3.2% in 2022. It has projected a mild decline in global inflation rates to 6.5% in 2023 (from 8.8% in 2022). This nonetheless is higher than recent historical trends. According to Consensus Forecasts, despite some easing in CPI growth, inflation may not fall back to the 2% target until 2027 for Canada.⁴⁸ The report also projects that CPI in US will remain above the 2% target for the rest of the decade. As a result, long-term government bond yields are likely to remain above 3% in the US and Canada until at least 2025.

With respect to demographics, Figure 7 shows that PEI is the youngest province in its Maritime context, as measured by the percentage of its population that is aged 0 to 17 in each year from 2018 to 2022, based on estimates by Statistics Canada. There is limited evidence of significant change in demographic outlook for PEI for the upcoming rate-setting period.

Figure 7. Demographic composition of the Atlantic provinces, 2018 to 2022



⁴⁷ International Monetary Fund. World Economic Outlook Update (October 2022).

⁴⁸ Consensus Forecasts. Surveys of International Economic Forecasts. October 10th, 2022.

Summary of risks associated with macroeconomic and demographic trends

- The *macroeconomic* outlook has worsened compared to the outlook during MECL's previous rate case decision in 2019
- No significant change in *demographic* outlooks compared to the outlook during MECL's previous rate case decision in 2019.

4.3 Supply and operating risks

Regarding supply and operating risks, Concentric identifies four major areas of risk:

- MECL *"does not have enough generation if its electricity supply is cut off from New Brunswick. This risk materialized in November 2018, when an ice storm cut off power to PEI for 24 hours";*⁴⁹
- *"Unlike many electric utilities in Canada and the U.S., Maritime Electric does not have a cost recovery mechanism or deferral account for storm-related costs to mitigate this risk, although it was allowed to defer the costs associated with Hurricane Dorian for future recovery in rates";*⁵⁰
- *"Future renewable energy supply sources are also expected to be largely from wind generation facilities. Given the intermittent nature of wind and solar as sources of generation, there are additional operational and contractual complexities for Maritime Electric which distribution utilities in other provinces do not face to the same degree";*⁵¹ and
- *"Maritime Electric has no control over the reliability of the wind facilities, which could be an additional risk associated with renewable energy."*⁵²

LEI discusses Concentric's comments as to MECL's lacking a storm cost deferral account in Section 4.4 below. In brief, LEI does not believe this is a major source of business risk. As Concentric points out, IRAC approved MECL's application for a stand-alone recovery of Dorian storm costs when MECL applied for the same. Furthermore, MECL has not applied for a general storm cost deferral account in this application and did not do so in the prior GRA.

Regarding risks from MECL's reliance on electricity from New Brunswick, the event referenced above by Concentric resulted in power from New Brunswick being lost for around 8.2 hours.⁵³ While the initial impact of the winter storm that precipitated this outage was significant, with 80,000 customers without power at the peak, more than half of these outages had been resolved by the evening of the same day.⁵⁴

⁴⁹ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report.* June 2022. Page 65.

⁵⁰ Ibid.

⁵¹ Ibid. Pages 65-66.

⁵² Ibid. Page 66.

⁵³ Maritime Electric Company Limited. *2023 Capital Budget Application. Section 3.0 – Introduction.* July 6th, 2022. Page 17.

⁵⁴ Ross, Shane and Kevin Yarr. *"Some Islanders will be without power until Friday, says Maritime Electric."* *CBC News.* November 29th, 2018.

Furthermore, MECL confirms that “externally caused outages ... are typically infrequent, with only one occurrence between 2012, and 2021,” i.e., the event referenced above.⁵⁵ Moreover, the event occurred around 10 months before MECL’s last ROE was set in IRAC’s *Order UE19-08* dated September 27th, 2019. MECL has prepared for and invested in restoration due to storms, fire, and collisions over the past years. For instance, in its 2023 Capital Budget Allocation filing, the budgeted amount for replacements due to storms, fire and collisions is “a provisional cost estimate for labor and material that will be required to replace distribution equipment (predominantly poles, transformers and wire) damaged as a result of unforeseen events that are beyond the Company’s control.”⁵⁶ Overall, there is insufficient evidence to indicate that disruptions of power flows from New Brunswick are an increased source of significant business risk.

That being said, the risk of disruption to physical power assets due to climate change and related weather events cannot be ignored going forward. In its most recent update, S&P has revised MECL’s business risk rating slightly lower (without affecting MECL’s overall rating) citing the risk of climate change, and LEI agrees that this may lead MECL to incur additional costs for storm damages.⁵⁷ However, it is notable the Commission recently approved deferral of Hurricane Fiona related costs, with actual recovery amount to be determined after the complete costs (net of government funding) are ascertained.⁵⁸ With the precedent for recovery associated with hurricanes (Dorian and Fiona), MECL faces limited cost recovery risks.

At a more general level, MECL’s System Average Interruption Duration Index (“SAIDI”) excluding major event days (“MEDs”) is lower than the average Index for Electricity Canada member utilities and for Atlantic utilities; and this has been true since 2016.⁵⁹ In 2020 and 2021, MECL’s SAIDI (all-in) was also slightly lower than the Atlantic and Canadian average.⁶⁰

Separately, LEI agrees with Concentric that MECL’s wind and solar generation is to likely increase in the future. In its recently released sustainability plan (discussed in more detail in Section 4.5 below), MECL estimates that it will need an additional 100 MW of wind energy and 120 MW of solar energy by 2030.⁶¹

⁵⁵ Maritime Electric Company Limited. *2023 Capital Budget Application. Section 3.0 – Introduction*. July 6th, 2022. Page 17.

⁵⁶ Maritime Electric Company Limited. *2023 Capital Budget Application. Section 5.0 – Distribution*. July 6th, 2022. Page 67.

⁵⁷ S&P Global Ratings. *Maritime Electric Co. Ltd.* June 17th, 2022. Page 2.

⁵⁸ IRAC. *Order UE22-08*. December 19th, 2022.

⁵⁹ Electricity Canada members are: ATCO Electric, BC Hydro, FortisAlberta, FortisBC, Hydro One, Hydro Quebec, Manitoba Hydro, Maritime Electric, NB Power, Newfoundland and Labrador Hydro, Newfoundland Power, Newmarket-Tay Power Distribution, Nova Scotia Power, Northwest Territories Power Corporation, SaskPower, Veridian Connections, Waterloo North Hydro, Yukon Electrical Co. and Yukon Energy. Atlantic utilities are: NB Power, Newfoundland and Labrador Hydro, Newfoundland Power, and Nova Scotia Power. Source: Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 4.0 – Customer Operations*. June 20th, 2022. Page 20.

⁶⁰ Note that MECL’s SAIDI (all in) was higher than both Atlantic and Canadian averages in 2018 and 2019, potentially due to the late-November ice storm in 2018 and post-tropical storm Dorian in 2019. Source: *Ibid.* Page 22.

⁶¹ Maritime Electric Company Limited. *Sustainability 2022 Report*. Page 6. July 2022.

While greater renewables integration involves closely maintaining system frequency (with intermittent resources), higher reserve margins and potential capacity build-out, the interconnection with New Brunswick provides a base of reliable power that can be called upon in situations where intermittent generation does not match forecasts (MECL's firm energy needs are primarily purchased from New Brunswick Energy Marketing Corporation ("NBEM") to meet MECL's forecasted load requirement).⁶² It is notable that as MECL adds to its on-Island generation capacity, its relative dependence on New Brunswick energy should decline.

Concentric views MECL's wind generation arrangements (i.e., the fact that they are not owned by MECL, but rather contracted from PEIEC) as a source of business risk, because MECL is not in control of the reliability of the generation units. While it is true that MECL is not directly in control of the assets, it does not follow that the reliability of the assets may suffer as a result. PEI has had commercial deployment of wind power since the early 2000s, with the North Cape Wind Farm being inaugurated as Atlantic Canada's first commercial wind project in 2001 (Phase I) and 2003 (Phase II).⁶³ LEI has not seen reports of major operational concerns associated with on-Island wind generation units.⁶⁴

Based on PEIEC's most recent, publicly available annual report for 2021-2022, all wind generation contracted by MECL is sold to the utility via Power Purchase Agreements ("PPAs"), on a per-kilowatt hour pricing basis.⁶⁵ Furthermore, PEIEC is contractually obligated to sell to MECL all wind power that it has purchased or produced.⁶⁶ This incentivizes the power producers to be online whenever possible, relative to arrangements in PPAs which compensate power producers on a cost of supply basis.⁶⁷ This provides appropriately aligned incentives and pricing stability to this component of MECL's power supply. Thus, the contracting arrangement between PEIEC and MECL likely decreases MECL's business risk related to power supply.

⁶² Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.1.1 – Introduction*. June 20th, 2022. Pages 41-42.

⁶³ Prince Edward Island Energy Corporation. *Annual Report 2020-2021*. For the Year Ended March 31st, 2021. Page 12.

⁶⁴ LEI notes that while wind powered turbines were recently shut for safety reasons during Storm Fiona, there was no damage to the structural integrity of the turbines from the storm. Source: *Saltwire*. October 6th, 2022.

⁶⁵ Grant Thornton. *Independent Auditor's Report*. June 22nd, 2022. Page 8. (Appendix A to PEIEC's Annual Report 2021-2022).

⁶⁶ *Ibid.* Page 27.

⁶⁷ In a cost of supply based PPA, the fixed costs incurred by a power producer are compensated irrespective of whether the plant is operational.

Summary of supply and operating risks

- Concentric identifies four separate sources of supply and operating risk, related to PEI's reliance on power from New Brunswick, the absence of storm cost deferral accounts, greater shares of intermittent renewable generation, and contracting of wind generation through PEIEC. Overall, the evidence does not indicate significant business risk from these factors.
- Loss of power from New Brunswick is exceedingly rare, with only one incident reported by MECL (i.e., the result of a storm in 2018).
- While greater renewables integration carries a degree of risk, the interconnection with New Brunswick provides a reliable base of power that can be relied upon when renewables do not meet forecast levels of generation.
- As MECL adds to its on-Island generation capacity, its relative dependence on New Brunswick energy may decline. There is also no evidence of operational risks associated with PEI's existing wind generation units.
- The use of PPAs for wind generation provide pricing stability for MECL and can help partially hedge against the risk identified by Concentric (i.e., reliance on power from New Brunswick).

4.4 Deferral and variance accounts

Concentric argues that *“Maritime Electric has very limited protection against costs that tend to fluctuate significantly from year to year, are material in nature, and over which utility management has no control. While several utilities in Canada have deferral and variance accounts to mitigate the risk associated with operating and capital costs, Maritime Electric has relatively few.”*⁶⁸ Concentric also writes that *“Maritime Electric has greater volumetric risk than FortisBC Electric and the Alberta electric utilities, comparable volume/demand risk as Newfoundland Power, and lower volume/demand risk than Nova Scotia Power.”*⁶⁹ Finally, Concentric states: *“while Maritime Electric has protection against pension and [Other Post-Employment Benefits] expenses, the Company does not have the ability to recover extraordinary storm costs despite operating in a service territory characterized by severe ice and wind storms.”*⁷⁰

While MECL does not have a dedicated deferral account for storm-related costs, after post-tropical storm Dorian, IRAC allowed *“the deferral of the operating costs incurred of \$3,002,884 in relation to post-tropical storm Dorian for future recovery from ratepayers”*⁷¹ by Order dated December 23rd, 2019. The Commission also recently approved deferral of Storm Fiona related costs, with the actual recovery amount to be determined after the complete costs (net of government funding) are ascertained.⁷² As such, there is little reason to conclude that the absence of such an account

⁶⁸ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Page 66.

⁶⁹ Ibid. Page 67.

⁷⁰ Ibid. Page 72.

⁷¹ Island Regulatory and Appeals Commission. *Order UE19-11*. December 23rd, 2019.

⁷² IRAC. *Order UE22-08*. December 19th, 2022.

raises MECL’s business risk, particularly given the fact that MECL’s previous stand-alone storm cost deferral applications were approved.

Figure 8 below provides a summary of the deferral and variance account applications included in MECL’s previous GRA, and IRAC’s disposition in *Order UE19-08*.

Figure 8. MECL deferral and variance account applications in 2019 GRA

Account applied for (either new or continuing)	IRAC decision	Reasoning
<i>Energy Cost Adjustment Mechanism ("ECAM")</i>	MECL required to review ECAM as it currently exists.	IRAC was concerned about MECL's use of ECAM, since MECL was treating it as a rate stabilization mechanism and using it to recover all energy related costs.
<i>Rate of Return Adjustment ("RORA")</i>	MECL required to apply full balance in first rate year to offset rate increase, and any remaining balance to future rate years. RORA to no longer be used as a deferral account; over-earnings will be refunded to ratepayers within sixty days of end of calendar year.	Accepting MECL's proposal to refund the RORA balance over three years <i>"would amount to returning the over-payments to present-day and future ratepayers, rather than to the ratepayers who actually contributed to the excess earnings."</i>
<i>Weather Normalization Mechanism and Reserve ("WNR")</i>	Not approved on a permanent basis; continuation approved on an interim basis until February 28, 2022.	<i>"In light of the nominal account balances from 2016 to present, the commission questions whether the cost of tracking and administering the deferral account justifies its means."</i>
<i>Deferred amortization of accumulated reserve variance for MECL asset depreciation</i>	Not approved; MECL to include amortization of accumulated reserve variance in revenue requirement.	Deferral is not <i>"in the best interest of future ratepayers to whom these expenses are ultimately being deferred."</i> IRAC is also <i>"concerned about the corresponding over-valuation of the Company's rate base"</i> if amortization were deferred.

Note: The information above is taken from *Order UE19-08*. See below for details on how the various accounts have changed since this Order. 'Accumulated reserve variance for MECL asset depreciation' refers to the difference between the accumulated depreciation recorded by MECL at the time, and the "theoretical reserve calculated by Gannett Fleming," the consultants that submitted a depreciation study.

Source: Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019.

Since *Order UE19-08*, IRAC has issued other orders that dealt with the accounts listed above. In *Order UE20-06*, the balance of the WNR and RORA accounts, which represented amounts to be returned to customers, were used to eliminate the balance of the ECAM account.⁷³ IRAC also ordered the RORA balance to be offset by deferred Dorian operating expenses, which were approved as described above.⁷⁴ In the same order, IRAC allowed MECL to open a regulatory deferral account to recover depreciation and reserve variance amortization for the Charlottetown Thermal Generating Station ("CGTS") related to the implementation of, and calculations in, a

⁷³ Island Regulatory and Appeals Commission. *Order UE20-06*. December 21st, 2020. Page 17.

⁷⁴ Ibid. Page 19.

depreciation study. These costs are to be recovered in the next rate period (i.e., the rate period envisioned in the current GRA).⁷⁵

IRAC has also permitted other deferral accounts for MECL. For example, the Commission allowed MECL to open a revenue shortfall account to mitigate under-recovery of MECL's actual 2020 revenue requirement due to a delay in approving rates for the year.⁷⁶ Further, in an Order dated July 28th, 2021, IRAC approved some modifications to the ECAM proposed by MECL (i.e., removing 27 accounts from ECAM for expenses that are not highly variable), and allowed MECL to continue recovering capacity costs and variance in energy volume through ECAM.⁷⁷

Overall, these recent orders show that IRAC has approved MECL's requests for deferral and variance accounts when appropriate, based on the Commission's view of the evidence.

Summary of the risks associated with deferral and variance accounts

- IRAC has allowed MECL to recover certain expenses, including variations in energy supply costs and storm-related costs, through deferral and variance accounts, when such recovery has been supported by the Commission's assessment of the evidence.
- While Concentric has identified operating cost recovery mechanisms that MECL does not currently have, MECL has also not applied for these in the 2023 GRA, or the GRA immediately prior. As such, their absence is not likely to increase MECL's business risk.

4.5 Alternative fuel risk and decarbonization

Concentric's report indicates that *"Maritime Electric no longer faces competition from alternative fuel sources such as fuel oil for space heating needs."*⁷⁸ Thus, MECL's business risk has improved in this regard since the previous application period.

Furthermore, as Concentric points out, MECL *"has experienced higher than normal sales growth in recent years due to an increase in the use of electric-based space heating ... In addition, additional demand for electricity is being driven by funding and incentives for electric vehicles and school buses on PEI."*⁷⁹ For instance, PEI's 2022-2023 budget includes \$5.6 million for a Heat Pump Rebate Program, and an additional \$2.1 million for a clean transportation program first announced in the previous year's budget.⁸⁰ MECL forecasts the residential space heating load to increase by 29.7% in 2022,

⁷⁵ Ibid. Page 13.

⁷⁶ It is notable that IRAC did not allow MECL to recover interest on the balance of the account nor include the balance in its rate base and earn a rate of return, due in part to MECL's request to defer rate increases during the onset of the COVID-19 pandemic. (Island Regulatory and Appeals Commission. *Order UE20-06*. December 21st, 2020. Pages 10-11).

⁷⁷ Island Regulatory and Appeals Commission. *Order UE20-05*. Docket UE20603 July 28th, 2021.

⁷⁸ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Page 67.

⁷⁹ Ibid. Pages 67-68.

⁸⁰ Prince Edward Island. *Budget Highlights*. 2022. Page 6.

3.1% in 2023, 6.3% in 2024 and 5.9% in 2025.⁸¹ Of particular note to questions of business risk, MECL predicts that “with electrification, our system load is expected to grow significantly in the coming decades.”⁸² This electrification will likely be driven by the province’s decarbonization goals.

In its 2022 Sustainability Report, released in July 2022, MECL reported its goal to reduce total electricity greenhouse gas (“GHG”) emissions by 55% by 2030, compared to 2019 levels, and to reach 100% light-duty electric vehicles (“EVs”) in its fleet by 2032.⁸³ MECL’s decarbonization goal is in the context of PEI’s aim to reach net-zero GHG emissions by 2040.⁸⁴ PEI also aims to reach net-zero GHG emissions from energy use by 2030.⁸⁵ As MECL states, “to achieve [the goal of 55% fewer GHG emissions by 2030], we will need to integrate significantly more renewables, such as wind and solar energy into our system.”⁸⁶ Specifically, MECL estimates that it will need an additional 100 MW of wind energy and 120 MW of solar energy by 2030.⁸⁷ In 2021, MECL integrated over 4 MW of small renewable energy systems to the PEI grid through the net metering program.⁸⁸

These recent announcements indicate that MECL’s business risk, in terms of its potential electricity sales and importance to PEI’s energy needs, has improved since the 2018 rate case. Data from recent years also provides evidence MECL’s potential for load growth.

As shown in Figure 9 below, in 2021, MECL achieved 1,326 gigawatt-hours (“GWh”) of electricity delivery, representing a 33.3 GWh (~2.6%) increase over 2020.⁸⁹ Furthermore, MECL had 86,335 total customers in 2021, which is an increase of 3,940 customers (or ~2.4% per year) since 2019.⁹⁰ MECL forecasts having 89,600 customers (CAGR of ~1%) by 2025, and 1,431 GWh of annual energy sales (CAGR of ~2%) by 2025.⁹¹

⁸¹ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 4.0 – Customer Operations*. June 20th, 2022. Page 31.

⁸² *Ibid.*

⁸³ Maritime Electric Company Limited. *Sustainability 2022 Report*. Page 5.

⁸⁴ Prince Edward Island. *2040 Net Zero Framework*. February 2022. Page 3.; Maritime Electric Company Limited. *Sustainability 2022 Report*. Page 12.

⁸⁵ Prince Edward Island. *2040 Net Zero Framework*. February 2022. Page 3.

⁸⁶ Maritime Electric Company Limited. *Sustainability 2022 Report*. Page 12.

⁸⁷ *Ibid.* Page 6.

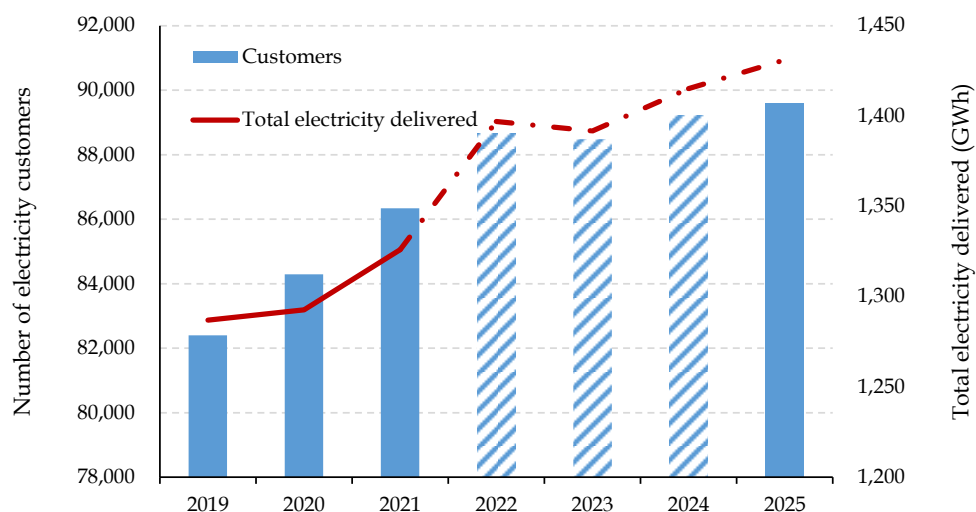
⁸⁸ *Ibid.* Page 12

⁸⁹ Maritime Electric Company Limited. *Sustainability 2022 Report*. Page 23.

⁹⁰ *Ibid.* Page 22.

⁹¹ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 4.0 – Customer Operations*. June 20th, 2022. Pages 30-31.

Figure 9. MECL customers and total electricity delivered, 2019 to 2021



Source: Maritime Electric Company Limited. *Sustainability 2022 Report*. Pages 22-23. Maritime Electric Rate Application for total electric sales (Table 4-4) and customers in 2025 (Section 4.3.1 on page 30).

Summary of risks associated with alternative fuel and electric demand

- MECL no longer faces significant competition from alternative fuels, such as fuel oil, for space heating. Thus, MECL’s business risk in this regard has fallen.
- Projections published by MECL related to its decarbonization targets, and evidence associated with recent years and near-term forecasts for customers and electricity deliveries indicate a growing trend. This represents a positive business development for MECL, and a sign of improving business risk.

4.6 Political and regulatory uncertainty

Concentric argues that *“The active role of government, as demonstrated by past changes in legislation as well as by the broad mandate of the PEI Energy Commission, contributes to a higher degree of political/regulatory risk for [MECL] and its investors.”*⁹² Concentric points to the history of PEI’s energy regulation in the last roughly three decades, including price cap regulation in the late 20th century, a return to rate of return-based rates in the 2004 Electric Power Act, and the PEI Energy Accord from 2011 to 2016.⁹³

On a related note, S&P’s June 2022 ratings report includes the author’s view that IRAC and the provincial government *“both have a history of playing an active role in establishing energy policy and setting rates for the island’s customers, which exposes the utility to potential political interference. We view this as generally less favorable than an independent regulator with a clear, consistent mandate and an*

⁹² Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Page 68.

⁹³ Ibid.

established track record of credit-supportive policies."⁹⁴ At the same time, S&P acknowledges MECL having maintained positive relationships to date, noting: "... we expect the company to maintain constructive relationships with its regulator in a manner that continues to support its credit quality."⁹⁵

A recent relevant example of a credit rating agency taking action in this regard can be observed in Nova Scotia. The provincial government of Nova Scotia recently intervened in Nova Scotia Power ("NSP") rate case proceeding by proposing amendments to the Public Utilities Act that would limit a proposed general rate increase for Nova Scotia Power Inc., a move the company said would result in a material reduction to the utility's \$1 billion capital investment plan over the 2023-2024 period.⁹⁶ In response, DBRS Morningstar dropped Nova Scotia Power Inc.'s credit rating from A (low) to BBB (high), citing "*deterioration in the regulatory environment*".⁹⁷

While LEI acknowledges PEI's long-standing history of government involvement in the energy sector, it is unclear from Concentric's report as to how business risks in this respect have increased. MECL has retained a long-term issuer rating of BBB+ from S&P since 2004,⁹⁸ despite the political changes that Concentric has identified, suggesting that risks related to government and/or regulatory intervention to date have not been sufficient to materially affect MECL's credit rating.

MECL also has benefits related to government involvement that must be considered. As MECL notes in its application, it is responsible for around 90% of the energy supplied on the Island.⁹⁹ In MECL's previous rate case, Dr. Booth observed that MECL's "*activities are important not just for the regulator but also the provincial government. It is difficult to think of another utility that has the same level of support from both the government as well as the regulator.*"¹⁰⁰ MECL is clearly important to the province, and it is reasonable to expect that both the government and the regulator will carefully consider the financial health of MECL in their decision-making.

As part of the PEI Energy Accord, the PEI government worked with MECL to secure a new PPA with New Brunswick Power. The PPA had a "base line cost" of energy that was 14% lower than in 2010 and provided for annual increases in energy supply costs that were below the rate of inflation.¹⁰¹ MECL CEO at the time, Fred O'Brien, commented: "*In my estimation, we would not have*

⁹⁴ S&P Global Ratings. *Maritime Electric Co. Ltd.* June 17th, 2022. Page 2.

⁹⁵ Ibid.

⁹⁶ S&P Capital IQ. *Nova Scotia government proposes limits to Nova Scotia Power general rate case.* October 20th, 2022.

⁹⁷ DBRS Morningstar. Press Release. *DBRS Morningstar Downgrades Nova Scotia Power Inc. to BBB (high) and R-2 (high) with Stable Trends.* December 20th, 2022.

⁹⁸ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report.* June 2022. Page 81.

⁹⁹ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 4.1.3 - Customer Satisfaction.* June 20th, 2022.

¹⁰⁰ Booth, Laurence. *Fair Return for Maritime Electric Company (MEC) - Evidence of Laurence D. Booth before the Island Regulatory and Appeals Commission.* March 2019. Page 64.

¹⁰¹ Prince Edward Island. *PEI Energy Accord Background.* Undated. Page 3.

reached the 14 per cent had we not come to this arrangement.”¹⁰² The PEI government also committed to employing its “preferred financing ability to underwrite” deferred costs for Point Lepreau nuclear plant’s refurbishment, as opposed to using private financing, to be recovered later from ratepayers,¹⁰³ at a cost of ~\$35 million.¹⁰⁴ In 2016, the PEIEC was granted approval from the provincial Cabinet to borrow \$31 million to refinance the outstanding debts.¹⁰⁵

Furthermore, in 2021, MECL data shows that 19.4% of the utility’s supply of electricity came from on-Island contracted wind resources.¹⁰⁶ These wind resources are contracted with the PEIEC.¹⁰⁷ Under the *EPA* § 17.1, the PEI Government may direct MECL to lease any new generating equipment and additional capacity approved as part of a capital budget from the PEIEC, and PEIEC may purchase any such equipment or capacity from MECL upon direction of the government.

The measures and history above indicate that MECL has seen tangible benefits from the provincial government’s involvement in the energy sector. The PEI government has taken steps to support the financial health of the utility through debt refinancing and to own generation provincially, thus attenuating the generation aspect of business risk.

Summary of the risks associated with political and regulatory uncertainty

- LEI acknowledges business risks arising from political and regulatory uncertainty, including the history of PEI’s energy regulatory arrangements.
- However, recent history demonstrates that the PEI government has taken steps to support MECL’s finances, indicating that business risks associated with government involvement are not significant.

4.7 Have MECL’s business risks meaningfully increased since the previous decision?

Figure 10 below summarizes LEI’s findings associated with these risk factors.

¹⁰² CBC News. *P.E.I. Energy Accord details released*. November 16th, 2010.

¹⁰³ Prince Edward Island. *PEI Energy Accord Background*. Undated. Page 5.

¹⁰⁴ CBC News. *P.E.I. Energy Accord details released*. November 16th, 2010.

¹⁰⁵ Yarr, Kevin. “P.E.I. borrows \$31M in energy accord refinancing.” *CBC News*. May 9th, 2016.

¹⁰⁶ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Page 64.

¹⁰⁷ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.1.1 – Energy Supply Costs*. June 20th, 2022. Page 41.

Figure 10. Summary of business risk factors for MECL

Business risk	Summary	Change in risk compared to previous rate case proceeding
MECL's small size relative to other utilities	<ul style="list-style-type: none"> • MECL's smaller size relative to its peers has a notable impact on its operations • The smaller size represents various risks faced by MECL such as lower cash liquidity and lesser advantages from economies of scale 	No change*
Macroeconomic and demographic trends	<ul style="list-style-type: none"> • There is greater macroeconomic uncertainty compared to the outlook during MECL's previous rate case decision in 2019 • While the Island is aging, it is also seeing significant tailwinds from immigration 	Moderate increase
Supply and operating risks	<ul style="list-style-type: none"> • Loss of power from New Brunswick is exceedingly rare, and the interconnection with New Brunswick provides a reliable base of power • Use of PPAs for wind generation provides pricing stability for MECL, and can help partially hedge against risks related to off-Island power 	No change
Deferral and variance accounts	<ul style="list-style-type: none"> • IRAC has allowed MECL to recover costs through deferral and variance accounts where appropriate • While Concentric has identified operating cost recovery mechanisms that MECL does not currently have, MECL has not applied for the same in the present GRA, or the prior GRA 	No change
Alternative fuel risk and decarbonization	<ul style="list-style-type: none"> • MECL no longer faces competition from alternative fuels, such as fuel oil • Decarbonization targets suggest that electric load growth will grow in the coming years 	No change
Political and regulatory uncertainty	<ul style="list-style-type: none"> • Recent history indicates that the PEI government has taken steps to support MECL's finances • Government right of ownership for generation may help reduce MECL's business risk 	No change

* While there is no change in risk from MECL's small size, LEI believes it is reasonable to allow for a small size risk premium in estimating the ROE for MECL.

The credit rating agency, S&P, in their May 11th, 2021 ratings report for MECL stated that MECL "operates as a low-risk integrated electricity generation, transmission and distribution utility."¹⁰⁸ S&P updated this view in their most recent ratings report dated June 17th, 2022, which maintains its view on MECL's business as a low risk integrated utility with an acknowledgement that they can face risks to recovering costs should they have expenses to manage physical damage from severe weather events. Related to this issue, as mentioned earlier, it is notable that IRAC (in December 2022) approved deferral of Hurricane Fiona related costs, with actual recovery amount to be

¹⁰⁸ S&P Global Ratings. *Maritime Electric Co. Ltd.* May 11th, 2021. Page 2. (Included as Appendix G to MECL's GRA.)

determined after the complete costs (net of government funding) are ascertained.¹⁰⁹ As such, precedents for cost recovery associated with severe weather events (including Dorian and Fiona) mitigate this risk cited by S&P. Finally, as shown in Figure 11 below, S&P's June 2022 update did not impact S&P rating of MECL as a standalone company.¹¹⁰

Figure 11. Summary of business risks assessed by S&P

Parameter	S&P report (April 3, 2018)	S&P report (May 11, 2021)	S&P report (June 17, 2022)
Credit rating	BBB+	BBB+	BBB+
Business risk profile	Risk profile of 'excellent' which "reflects the company's operations in a low-risk country such as Canada, its monopolistic position, and location in a supportive regulatory regime such as PEI, allowing MECL to timely and fully recover prudently incurred operating and capital expenses"	Risk profile of 'excellent' which reflects MECL's "lower-risk, rate-regulated, and vertically integrated electric utility business as well as its management of regulatory risk, which we view as consistent with that of its peers"	Risk profile change to ' the higher end of the strong category from the lower end of the excellent category ' which "reflects climate change and our view of the island's increasing susceptibility to physical risks even though the company is planning on hardening many portions of its system incrementally over time"
Country risk	Very low	Very low	Very low
Industry risk	Very low	Very low	Very low
Competitive position	Strong	Strong	Satisfactory

Sources: S&P credit reports

¹⁰⁹ IRAC. Order UE22-08. December 19th, 2022.

¹¹⁰ S&P Global Ratings. Maritime Electric Co. Ltd. June 17th, 2022. Page 2.

5 Financial risk assessment

Financial risks are primarily linked to a company’s ability to continue to finance its capital needs while continuing to fulfill its debt obligations. It is important to note that all utilities – private or public – must raise financial capital to pay for their investments. As such, both fairness and practical considerations dictate that investors who provide these capital funds must be adequately compensated. Since the previous decision of the Commission, the financial climate for MECL has evolved, including the upward pressure on costs due to higher inflation.

5.1 Have MECL’s financial risks changed since the previous proceeding according to credit rating agencies?

As summarized below in Figure 12, according to S&P’s assessment, MECL’s financial risks have not meaningfully changed, and in fact their senior secured debt has been rated higher at “A” relative to their overall credit rating of “BBB+” (since 2004).

Figure 12. Summary of financial risks assessed by S&P

Parameter	S&P report (April 3, 2018)	S&P report (May 11, 2021)	S&P report (June 17, 2022)
Credit rating	BBB+	BBB+	BBB+
Senior secured debt rating	Not rated	A	A
Financial risk profile	Risk profile of ‘ significant ’ which “reflects the regulatory advantage and low-risk electricity distribution and transmission”	Risk profile of ‘ significant ’ which “reflects the company’s lower-risk regulated utility operations and effective management of regulatory risk”	Risk profile of ‘ significant ’ which “reflects the company’s lower-risk regulated utility operations and effective management of regulatory risk”
Liquidity	<ul style="list-style-type: none"> • FFO to debt ratio of 20.6% for 2017 • FFO to debt ratio outlook of 15%-18% for 2018 and 2019 	<ul style="list-style-type: none"> • FFO to debt ratio of 17.36% for 2020 • FFO to debt ratio outlook of 16%-17% for 2021 and 2022 	FFO to debt ratio outlook of 16%-19% for 2022 and 2023

Sources: S&P credit reports

With regards to S&P’s insights on the liquidity parameter, where S&P’s outlook for FFO to debt ratio is 16%-19% for 2022 and 2023, LEI has independently verified the FFO to debt ratio outlook for 2023-2025 (using data from MECL’s pro forma financial statements and LEI’s recommended ROE of 9.70%). This is discussed further in Section 5.4.

5.2 How does the near-term inflation outlook affect MECL’s financial risks?

The central banks of Canada and the US project that inflation will fall closer to the target rate of 2% over the next three years, however it will likely remain above the target rate in 2023 and possibly 2024 (see Figure 13). While 2023 forecasts are slightly higher than 3% in Canada, the 2024-2025 forecasts are in line with MECL’s assumptions per their application: “*With respect to*

inflation, the Company has historically assumed inflation in the range of 2 to 3 per cent per year, and this assumption was maintained in the forecast of the cost of service for the rate-setting period.”¹¹¹

Figure 13. Summary of inflation outlook for the 2023-2025 period

Year	Bank of Canada (Canada)	United States Federal Reserve (US)	Consensus Forecasts (Canada)	Consensus Forecasts (US)
2023	3.2%	3.1%	3.5%	3.9%
2024	2.0%	2.5%	2.3%	2.4%
2025	-	2.1%	2.1%	2.3%

Note: The Fed uses the Personal Consumption Expenditures (“PCE”) Price Index as a primary inflation measure when making monetary policy decisions (compared to CPI measure forecasted by Bank of Canada and Consensus Forecasts). PCE tracks “the change in prices of goods and services purchased by consumers throughout the economy”. Forecasts provided above are median forecasts made by the Federal Reserve Board members and Federal Reserve Bank presidents.

Sources: Bank of Canada. Monetary Policy Report. October 26th, 2022; US Federal Reserve System. Summary of Economic Projections. December 14th, 2022; Consensus Forecasts. Surveys of International Economic Forecasts. October 10th, 2022.

If the actual cost of service exceeds MECL’s forecasts during the 2023-2025 period, there are regulatory mechanisms in place (such as the ECAM) to potentially address such issues. MECL has also previously applied for a revenue shortfall account to mitigate under-recovery of MECL’s 2020 revenue requirement due to a delay in approving rates for the year. Further, it is notable that the Commission in Order UE20-06 (in December 2020) stated: “*Maritime Electric’s level of over-earnings (approximately \$28.5 million between 2011 and 2019) is evidence that the Company has historically over-estimated its revenue requirement for rate setting purposes.*”¹¹²

5.3 Has MECL’s long-term debt accessibility changed since the previous proceeding?

MECL issues long term debt, called first mortgage bonds (“FMBs”) for capital investment. These bonds can only be issued upon regulatory approval.¹¹³ MECL maintains an “A” rating from S&P on its senior secured bonds/first mortgage bonds. MECL issues debt through private placement and not in the public debt market, using its assets as collateral. Expected future issuances of bonds (i.e., \$40 million in 2024 and \$30 million in 2025) are in line with recent issuances (of \$40 million each in 2016, 2018 and 2021). As such, LEI finds that MECL’s financial risk as it relates to debt accessibility has not changed since its last rate application.

5.4 Do MECL's key projected financial ratios demonstrate an increase in financial risk?

LEI performed an independent analysis of key financial ratios for the upcoming rate-setting period using data from MECL’s pro forma financial statements. Specifically, LEI considered the

¹¹¹ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.1 – Cost of Service.* June 20th, 2022. Page 38.


¹¹² IRAC. Docket UE20944. Order UE20-06. December 21st, 2020. Page 8.

¹¹³ Maritime Electric Company Limited. *General Rate Application and Evidence of Maritime Electric Company, Limited. Section 5.1.6 – Finance Charges.* June 20th, 2022. Pages 59.

following three key metrics used by ratings agencies: (i) Debt/EBITDA, (ii) Funds from Operations (“FFO”)/Debt, and (iii) FFO/Interest. Figure 14 provides a description of these metrics and the benchmarks or expectations for supporting an investment-grade rating by the rating agencies.

Figure 14. Description of key credit metrics

Credit metric	Description
Debt/EBITDA	<ul style="list-style-type: none"> Evaluates a company’s ability to pay its debts A higher value suggests a longer time may be needed to pay debt, and thus is correlated with lower credit rating
FFO/Debt	<ul style="list-style-type: none"> Assesses extent to which company is leveraged A lower value suggests higher leverage levels, and is correlated with lower credit rating
FFO/Interest	<ul style="list-style-type: none"> Assesses the ability of a company to service its interest expenses A higher value suggests sufficient cashflows to service interest payments, and may support higher credit rating



	Debt/ EBITDA (x)	FFO/ Debt (%)	FFO/ Interest (x)
Minimal	Less than 2	Over 35	Over 8
Modest	2-3	23-35	5-8
Intermediate	3-4	13-23	3-5
Significant	4-5	9-13	2-3
Aggressive	5-6	6-9	1.5-2
Highly Leveraged	Greater than 6	Less than 6	Less than 1.5

Notes: Key terms defined as follows: (i) “Debt” defined as total debt, including long-term and short-term borrowing; (ii) Earnings before Interest, Taxes, Depreciation and Amortization (“EBITDA”) defined as revenues minus operating expenses (excluding depreciation, amortization, and non-current asset impairment and impairment reversals); (iii) Funds from operations (“FFO”) represents a company’s ability to generate recurring cash flows from operations (estimated as EBITDA minus interest); and (iv) “Interest” defined as total interest expense.

S&P benchmarks used for this analysis are aligned with the ‘low volatility’ criteria, consistent with the categorization of regulated utilities.

Sources: S&P Global Ratings. *Key Credit Factors for The Regulated Utilities Industry*. November 2013; S&P Global Ratings. *Corporate Methodology*. November 2013.

LEI has summarized the forward-looking estimates of MECL’s financial ratios for the upcoming rate setting period in Figure 15.¹¹⁴

¹¹⁴ In LEI’s calculations, while all other inputs are directly from the proforma financial statements, LEI has revised the ROE assumption to be LEI’s recommended ROE of 9.70%.

Figure 15. Assessment of MECL’s key financial ratios

Credit Metric		Actual	Forecast			
		2021	2022	2023	2024	2025
Debt/ EBITDA (x)	Ratio	4.77x	4.95x	4.60x	4.64x	4.65x
	Risk	Significant	Significant	Significant	Significant	Significant
FFO/ Debt (%)	Ratio	16.7%	15.8%	17.4%	17.4%	17.4%
	Risk	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate
FFO/ Interest (x)	Ratio	3.9x	3.6x	4.0x	4.1x	4.3x
	Risk	Intermediate	Intermediate	Intermediate	Intermediate	Intermediate

Sources: MECL. Pro Forma Financial Statements (included as Appendix I to MECL’s 2023-2025 GRA); LEI’s calculations.

A key takeaway from this analysis is that each of the three financial ratios are projected to improve for the upcoming three-year period (2023-2025) relative to the last two years (2021-2022), and allow for maintaining the same risk categories associated with each financial ratio. As such, there is no increase in risks associated with MECL’s key financial ratios.

5.5 Have MECL’s financial risks increased since the previous application?

LEI believes MECL’s financial risks have not changed materially since the last application. This is also backed by S&P’s financial risk assessments in their credit rating reports. Further, MECL’s cost of service forecasts for the upcoming rate-setting period are largely in line with the near-term inflation outlook. In addition, regulatory mechanisms, such as the ECAM are in place that allow MECL to recover capacity costs and fluctuations in energy volumes. Finally, LEI analysis of key financial ratios for the upcoming rate-setting period demonstrates that change in risks associated with key financial ratios is limited.

6 Assessment of ROE and evaluation of estimation methods

The cost of equity represents the minimum return on equity expected by investors for undertaking commensurate risk. ROE is typically higher than cost of debt because debt investors receive a priority in repayment of liabilities. Various quantitative models exist to estimate ROE, and each of them have pros and cons. The following subsections discuss the trend in ROE and equity thickness observed in North America and globally and then discuss LEI’s approach to ROE estimation. LEI’s recommendation on ROE is also provided at the end of this section.

Concentric has used a mix of following four methodologies to estimate the ROE, stating the need to corroborate results from other approaches:¹¹⁵

- Discounted cash flow (“DCF”) model (constant growth);
- Multi- stage DCF model;
- Capital asset pricing model (“CAPM”); and
- Risk premium model.

A summary of the methodologies utilized by Concentric and the ROE calculated based on the each of the methods is shown in Figure 16.

Figure 16. Summary of ROE estimated according to various methods and Concentric recommendation

ROE Estimation Model	Canadian Regulated Utilities	US Electric	North American Electric	Average
Constant Growth DCF	12.08%	9.77%	10.12%	10.70%
Multi-Stage DCF	10.48%	8.96%	9.21%	9.60%
CAPM	10.35%	10.79%	10.48%	10.50%
Risk Premium		10.01%	10.01%	10.00%
Average	11.00%	10.00%	10.10%	10.40%

Source: Appendix F of MECL General Rate Application 2022-23

Based on its calculations, Concentric states: “average of all methods for the U.S. Electric proxy group is 10.0 percent, within the range of 8.96 percent to 10.79 percent. From within this range, the Company’s proposed ROE of 9.95 percent is reasonable, if not conservative.”¹¹⁶

¹¹⁵ Concentric Energy Advisors, Inc. Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report. June 2022. Section V. Page 39.

¹¹⁶ Concentric Energy Advisors, Inc. Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report. June 2022. Section VIII. Page 84.

6.1 Which method has LEI used to estimate ROE?

LEI has utilized the CAPM method to estimate the ROE, through the following formula:

$$\text{Return on equity} = \text{risk free rate} + (\text{beta} \times \text{equity risk premium}) + \text{additional risk premium}$$

where:

- the *risk-free rate* measures a return available on an investment that is guaranteed and is uncorrelated with risky investments in a market;
- *beta* is the measure of asset risk (with the assumption that higher volatility in asset returns implies higher risk), i.e., a beta greater than 1 means the asset is more volatile than the market, and a beta less than 1 means it is less volatile;
- the *equity risk premium* measures what investors on average, demand as extra return for investing in a portfolio relative to the risk-free asset for undertaking additional risk; and
- the *additional risk premium* measures additional risks beyond what is captured by standard CAPM.

LEI believes that using the CAPM to estimate ROE is the most reasonable method owing to it being among the most commonly used valuation method with widespread understanding of the assumptions/ inputs involved in the model, and the ability to adjust results to account for unsystematic or company specific risks.¹¹⁷

CAPM takes systematic risk, i.e., the risk that is inherent in the market, into account through empirical analysis of historical data. While it is true that CAPM is reliant on the quality of input data and assumptions, reliance on a well-defined range from a historical dataset is a sensible approach, relative to other alternatives, such as estimation of risk premium based on assumptions of future earnings growth. For example, a large historical dataset would include a mix of high, low, and neutral interest rate environments, which would capture the uncertainties in predicting equity risk premium reasonably well. This is even more relevant today considering the level of market uncertainties.

A key issue with the DCF (constant growth and multi-growth) approaches to estimate ROE is that it is primarily reliant on earnings growth estimates in the future. Furthermore, DCF and risk premium methodologies are rarely used for estimating ROE by actual investors, outside of regulatory proceedings. In an IR response,¹¹⁸ MECL provided two examples of equity analysts utilizing DCF models to value stocks, however there was no evidence provided for actual investors utilizing these approaches to estimate ROE or value physical assets.

While LEI acknowledges that the DCF method is sometimes used for determining ROE, its reliance upon estimates of future growth of cash flows is a key weakness. Estimates of future

¹¹⁷ Bruner, Robert & Eades, Kenneth & Harris, Robert & Higgins, Robert. (1998). Best Practices in Estimating the Cost of Capital: Survey and Synthesis. Financial Practice and Education. 8.

¹¹⁸ MECL. Docket: UE20946. Response to Interrogatories from London Economics International Inc. September 9th, 2022.

growth of cash flows can be unreliable: studies have shown that a naïve random walk (in which a given year's projected earnings are simply equal to the previous year's earnings plus random white noise) provides as accurate a forecast of long term future earnings as analysts' forecasts.¹¹⁹ Earnings forecasts not only lack accuracy, they tend to over-value the cost of equity, and are consistently overly optimistic.¹²⁰

The sub-sections below discuss LEI's recommendations associated with the following key variables utilized in the CAPM method: (i) risk free rate, (ii) beta, (iii) equity risk premium; and (iv) additional risk premium.

6.2 What is the risk-free rate recommended by LEI?

A risk-free rate implies a return available on an investment that is guaranteed and is uncorrelated with risky investments in a market.¹²¹ For an investment to be considered risk-free, there needs to be near-zero default risk and reinvestment risk.¹²¹

It is relatively straightforward to select a proxy for an investment that is virtually default-free by reviewing historical performance of investments. Sovereign government bonds issued by the US are widely considered to be the best proxies for default-free investments, notwithstanding current concerns about approving an increase in the US debt limit. This is reinforced by the credit ratings from major credit rating agencies (Moody's: Aaa, S&P ratings: AA+, and Fitch ratings: AAA).

With regards to reinvestment risk, this is harder to eliminate as the expected yield changes regularly. This is more pertinent now with implementation of aggressive benchmark rate hikes by the US Federal Reserve to combat rising inflation.

The current monetary policy environment has markedly increased the reinvestment risk, as it is harder to predict the reinvestment rate of a 3-month and a 6-month treasury yield. A more practical compromise is to match up the cash flows from the investment asset with an equivalent liability issued by the subject entity.¹²²

The First Mortgage Bonds ("FMBs") issued by MECL typically have a maturity term of 40 years. As such, the closest proxy to these bonds can be the 30-year bonds issued by the US government.

¹¹⁹ Michael Lacina, B. Brian Lee and Zhao Xu, *Advances in Business and Management Forecasting*, at 77-101 (Kenneth D. Lawrence, Ronald K. Klimberg eds., Emerald Grp. Publ'g Ltd. 2011).

¹²⁰ R.D. Harris, "The Accuracy, Bias, and Efficiency of Analysts' Long Run Earnings Growth Forecasts." *Journal of Business Fin. & Accounting*, 725-55 (June/July 1999); P. DeChow, A. Hutton, and R. Sloan. "The Relation Between Analysts' Forecasts of Long-Term Earnings Growth and Stock Price Performance Following Equity Offerings." *Contemporary Accounting Research* (2000); K. Chan, L., Karceski, J., & Lakonishok, J., "The Level and Persistence of Growth Rates." *Journal of Finance*. 643-84 (2003).

¹²¹ Aswath Damodaran. Stern School of Business, New York University. [What is the risk free rate? A Search for the Basic Building Block](#). December 2008.

¹²² *Ibid.*

LEI utilized the US 10-year government bond yield forecasts, and the average spread between 10-year and 30-year bond yields to arrive at the 30-year bond yields.^{123,124} The risk-free rate estimated by LEI is shown below in Figure 17.

Figure 17. Estimation of forward-looking US 30-year government bond yield i.e., risk-free rate

Year	US 10-Year Government Bond Yield (Consensus Forecasts)
2023	3.50%
2024	3.30%
2025	3.30%
Average	3.37%

Average Spread between 10-year and 30-year government bond yield (1977-2022) = 0.39%

Forward-looking US 30-year government bond yield/risk-free rate = 3.37% + 0.39% = 3.75%

Source: Federal Reserve Bank of St. Louis. Consensus Forecasts, October 10th, 2022. The October 2022 survey is the most recent survey (as of January 27th, 2023) with long-term forecasts

6.3 What level of beta does LEI recommend?

Beta is a measure of systematic risk faced by a firm. Although there are various ways to estimate beta, for a publicly traded firm, this is typically estimated by regressing the stock returns for the firm against the market returns. Since MECL is not publicly traded, we must look at a set of comparable peer companies to estimate the beta for MECL, as discussed in sub-sections below.

6.3.1 Methodology/screening criteria used by LEI to choose the peer companies

While Concentric has provided three different peer groups (see summary in Section 2.5.2), LEI has chosen to use one North American peer group with a different set of selection criteria, as discussed below.¹²⁵

LEI believes the peer group needs to be representative of the business and financial risks faced by MECL. The peer group must also have an adequate sample size to minimize the unsystematic, firm-specific risks. The screening criteria used must therefore be carefully chosen so that they are

¹²³ While Concentric used a similar approach to estimate the risk-free rate, there were two key differences: (i) they used forecasts from October 2021, while LEI forecasts are from October 2022; and (ii) for the average spread between 10-year and 30-year government bond yields, LEI used the entire available data set (i.e., from 1977-2022), while Concentric used the average spread for one month (February 2022) only.

¹²⁴ The Government of Canada also issues bonds with 30-year maturity term. If we consider the same methodology, the forward-looking risk-free rate based on 30-year Canadian government bond works out to 3.65%.

¹²⁵ LEI does not think a “Canadian” utility exists, given high percentage of US assets in the holding companies (with the exception of Hydro One).

not so narrow in scope that they significantly reduce the sample size, and not so broad in scope that they lead to selection of highly unrepresentative companies in the group.¹²⁶

Considering the limited number of relevant public companies, it is difficult to find firms that perfectly match MECL's size and risk profile. However, some possibilities exist to deal with this issue. Choosing a peer group from similar industry classification is the most important criterion as companies in one industry face the same set of value-added processes, the same position in and length of the product life cycle, identical degree of competition, identical competitors etc.¹²⁷ We can use limited other criteria to tailor the sample of peer companies to match MECL's operating activities, but industry as a selection criterion simplifies the composition of the peer group.

Further, considering a screening criterion to account for the small size of MECL would significantly limit the sample size, as there are very few such companies that are publicly traded. It is therefore sensible to consider a risk premium to account for the smaller size of MECL at a later stage and not when choosing the peer companies.

Accordingly, LEI's screening criteria considered for choosing the peer companies were as follows:

1. Publicly traded in a designated North American stock exchange consistently since at least 2017;
2. At least 70% of average revenue for the last three years (i.e., from 2019 to 2021) is from regulated businesses of electricity generation/transmission/distribution in North America; and
3. Investment grade credit rating of "Adequate/BBB-" or higher based on S&P Global Ratings.

Although the criteria listed above provide a fairly representative sample, there are some shortcomings to this approach. The primary issue is that not all companies report a breakdown of their revenue streams from various operations such as electricity and natural gas. Many utilities also do not report a breakdown of their revenue streams based on regulated and unregulated activities. The initial sample shortlisted from S&P data therefore excludes comparable Canadian utilities such as Hydro One Ltd., Emera, Inc., and Fortis Inc. However, we can conclude from the available data that a significant share of activities for these companies is related to electricity supply. A look at the share of the gross property, plant, and equipment ("PP&E") related to electricity supply compared to the total gross PP&E for these companies is shown in Figure 18.

¹²⁶ For instance, the selection criteria chosen by Concentric for their US proxy group is narrowly tailored to only include utilities that regularly pay quarterly dividends, leading to a smaller sample size of peer companies.

¹²⁷ Meitner, Matthias. "The Market Approach to Comparable Company Valuation". Page 53.

Figure 18. Share of average gross PP&E related to electricity supply (FY 2019 to FY 2021)

Sl. No.	Company	Share of Electric PPE (%)
1	Emera, Inc.	70.5%
2	Fortis Inc.	70.9%
3	Hydro One Ltd.	85.5%

Source: S&P Global Market Intelligence

LEI is of the view that including these utilities improves the quality of the peer group. The chosen peer group based on the discussed principles and criteria are listed below in Figure 19.

Figure 19. Peer companies chosen based on LEI's screening criteria

Sl. No.	Company	S&P Credit Rating	Share of Avg. Revenue from Regulated Electricity Activities for the Last Three FY (%)
1	ALLETE, Inc.	BBB	87.1%
2	Alliant Energy Corporation	A-	85.5%
3	Ameren Corporation	BBB+	89.3%
4	American Electric Power Company, Inc.	A-	98.7%
5	Avista Corporation	BBB	71.8%
6	Dominion Energy, Inc.	BBB+	71.3%
7	Duke Energy Corporation	BBB+	91.8%
8	Edison International	BBB	96.4%
9	Emera Incorporated	BBB	75.0%
10	Entergy Corporation	BBB+	98.5%
11	Evergy, Inc.	A-	99.2%
12	Eversource Energy	A-	85.6%
13	FirstEnergy Corp.	BBB-	101.0%
14	Fortis Inc.	A-	82.0%
15	Hawaiian Electric Industries, Inc.	BBB-	88.9%
16	Hydro One Limited	A-	99.0%
17	IDACORP, Inc.	BBB	99.8%
18	NextEra Energy, Inc.	A-	73.9%
19	NorthWestern Corporation	BBB	79.3%
20	OGE Energy Corp.	BBB+	95.3%
21	PG&E Corporation	BB-	85.2%
22	Pinnacle West Capital Corporation	BBB+	100.3%
23	PNM Resources, Inc.	BBB	100.1%
24	Portland General Electric Company	BBB+	100.8%
25	PPL Corporation	A-	98.0%
26	The Southern Company	BBB+	73.7%
27	Xcel Energy Inc.	A-	88.9%

Note: Due to data gaps, the share of regulated electricity revenue for: (i) Hawaiian Electric Industries, Inc. is based on accounts for FY 2018; (ii) Public Service Enterprise Group Incorporated and FirstEnergy Corp. is based on average of FY 2019 and FY 2020; (iii) Evergy, Inc. is based on average of FY 2020 and FY 2021; (iv) Emera and Hydro One based on FY 2021; (v) Fortis is based on regulated electricity assets as a percentage of its total assets in 2021.

Note: Some companies have a share of regulated electricity revenue which is slightly higher than 100%. This is due to losses reported from non-regulated activities.

Source: S&P Global Market Intelligence; company annual reports.

6.3.2 Beta estimation

To estimate the beta, LEI utilized a three-step process:

- (i) first, LEI used the 3-year raw beta for peer companies;
- (ii) second, the raw betas were unlevered using the operating leverage of each of the peer companies (to diversify away the firm-specific unsystematic risk); and
- (iii) finally, the average unlevered beta of the peer group was re-levered using the MECL operating leverage.

LEI finds that un-levering the raw betas with the operating leverage of peer companies and re-levering the average un-levered beta with MECL's operating leverage provides for a prudent estimate of MECL's beta. The beta estimated by LEI is shown below in Figure 20.

Figure 20. Estimation of Beta

Company Name	Levered/Raw Beta (3 yr.)	Debt/Equity	Tax Rate	Unlevered Beta (3 yr.)
Dominion Energy, Inc. (NYSE:D)	0.73	1.30	21.0%	0.36
Avista Corporation (NYSE:AVA)	0.74	1.21	21.0%	0.38
The Southern Company (NYSE:SO)	0.77	1.60	21.0%	0.34
NextEra Energy, Inc. (NYSE:NEE)	0.84	1.10	21.0%	0.45
NorthWestern Corporation (NASDAQS:NWE)	0.88	1.12	21.0%	0.46
PG&E Corporation (NYSE:PCG)	1.08	3.06	21.0%	0.32
Alliant Energy Corporation (NASDAQS:LNT)	0.66	1.25	21.0%	0.33
Eversource Energy (NYSE:ES)	0.72	1.29	21.0%	0.36
ALLETE, Inc. (NYSE:ALE)	0.88	0.68	21.0%	0.57
Xcel Energy Inc. (NASDAQS:XEL)	0.68	1.55	21.0%	0.30
Hawaiian Electric Industries, Inc. (NYSE:HE)	0.65	1.06	21.0%	0.36
Ameren Corporation (NYSE:AEE)	0.72	1.29	21.0%	0.36
Duke Energy Corporation (NYSE:DUK)	0.71	1.32	21.0%	0.35
OGE Energy Corp. (NYSE:OGE)	0.77	1.01	21.0%	0.43
Edison International (NYSE:EIX)	0.82	1.48	21.0%	0.38
PPL Corporation (NYSE:PPL)	0.85	1.27	21.0%	0.43
Entergy Corporation (NYSE:ETR)	0.83	2.13	21.0%	0.31
American Electric Power Company, Inc. (NASDAQS:AEP)	0.60	1.62	21.0%	0.26
IDACORP, Inc. (NYSE:IDA)	0.72	0.76	21.0%	0.45
Evergy, Inc. (NYSE:EVRG)	0.84	1.19	21.0%	0.43
PNM Resources, Inc. (NYSE:PNM)	0.79	1.75	21.0%	0.33
Pinnacle West Capital Corporation (NYSE:PNW)	0.77	1.20	21.0%	0.40
FirstEnergy Corp. (NYSE:FE)	0.81	3.09	21.0%	0.23
Portland General Electric Company (NYSE:POR)	0.80	1.24	21.0%	0.41
Emera Incorporated (TSX:EMA)	0.70	1.71	29.0%	0.32
Hydro One Limited (TSX:H)	0.54	1.33	26.5%	0.27
Fortis Inc. (TSX:FTS)	0.72	1.21	30.0%	0.39
Average	0.76	1.44	21.8%	0.37
Average 3-year un-levered Beta = 0.37				
MECL D/E Ratio = 1.55				
MECL Tax Rate = 31%				
Average 3-year re-levered Beta = 0.76				

Source: S&P Global Capital IQ, EY Canada, LEI's calculations

It is notable that Concentric adjusted the raw betas for companies in their peer group to be closer towards one stating: “*numerous empirical studies have demonstrated that an individual company Beta is more likely than not to move toward the market average of 1.0 over time.*” LEI notes that adjusting the raw beta towards 1.0 defeats the purpose of estimating the systematic risk faced by a firm. Furthermore, we are measuring MECL’s beta in the current risk environment, not its long-term average. Regulated utilities typically have a beta that is significantly less than 1.0 as the operating revenues for a regulated firm are relatively more stable and are less prone to market volatility. Dr. Booth, in the testimony provided on behalf of the Commission, also concluded that there is “*simply no justification for mechanically adjusting utility betas toward the market mean of 1.0*”.¹²⁸

6.4 What equity risk premium does LEI recommend?

The Equity Risk Premium (“ERP”) measures what investors demand as extra return for investing in a portfolio relative to the risk-free asset for undertaking additional risk.¹²⁹ Analyzing the historical spread between the risk-free rate and the market returns is a commonly used methodology to estimate the ERP.

For advanced economies like Canada and the US, analyzing the historical data provide the best indicators for future returns. As such, Concentric has rightly taken the historical risk premiums into consideration when calculating ERP for US and Canada.¹³⁰

However, Concentric has also estimated a forward-looking ERP stating that “*there is an inverse relationship between interest rates and the MRP, meaning that as interest rates increase (decrease), the MRP decreases (increases), historical MRPs would underestimate the forward looking MRP in the current low bond yield environment*”.¹³¹ Concentric calculated the forward-looking ERP by using a modified version of dividend growth model wherein it has considered the long-term dividend growth estimate for all companies in S&P 500 index for US and S&P/TSX composite index for Canada. Using this method, their forward-looking ERP estimate worked out to 8.40% for Canada (compared to 5.54% historical ERP) and 10.26% for US (compared to 7.25% historical ERP). Concentric later considered the average of historical and forward-looking ERPs to arrive at the final ERP estimate of 7.86%.

LEI finds the reasoning and methodology used by Concentric to estimate the forward-looking ERP as flawed due to the following reasons:

- A well-defined range of historical ERP dataset would include a mix of high, low and neutral interest rate environments, which would capture the uncertainties in predicting

¹²⁸ Booth, Laurence. Fair Return for Maritime Electric Company (MEC) - Evidence of Laurence D. Booth before the Island Regulatory and Appeals Commission. March 2019. Pages 40-41.

¹²⁹ Aswath Damodaran. Stern School of Business, New York University. [Estimating Equity Risk Premiums](#).

¹³⁰ Concentric has considered the historical data from 1919-2020 for Canada and 1926-2020 for US based on data sourced from Duff & Phelps Cost of Capital Navigator

¹³¹ Concentric has referred to Equity Risk Premium (ERP) as Market Risk Premium (MRP) in its General Rate Application

future ERPs reasonably well. This is even more relevant today considering the level of market uncertainties.

- It is neither easy nor prudent to predict future market returns for such an estimation, further emphasizing the importance of reliance on historical data. The statement made by Concentric: *“historical MRPs would underestimate the forward looking MRP in the current low bond yield environment”*¹³² is already outdated.
- A dividend growth model is typically used at a firm level and not to estimate market returns. Further, the required returns estimated by Concentric are unrealistic. For instance, Concentric has estimated secondary market investment required for S&P 500 at 13.44% annually for US.¹³³ This is not only higher than what is observed historically, but also significantly higher than investors’ current market expectations. Investor expectations (based on S&P 500 futures) indicate an annual average market return of 4% from 2023-2025 (the three-year period of the rate case).¹³⁴

LEI has considered ERP for the US based on long-term historical average of 7.25% i.e., using the same historical data as used by Concentric from 1926-2020. However, for reasons explained above, LEI has solely relied on the long-term historical average, and have not considered estimating a forward-looking ERP.

6.5 Has LEI recommended any additional risk premium?

Concentric has proposed an additional risk premium of 0.5% to compensate for flotation costs of common equity shares in the primary market stating that *“these costs include out-of-pocket expenditures for the preparation, filing, underwriting and other costs of issuance of common equity including the costs of financial flexibility such that there is adequate cushion to raise equity in a variety of capital market conditions”*.¹³⁵

LEI is of the opinion that a risk premium of 0.5% is too high for floatation costs as it amounts to an additional cumulative revenue of ~\$3 million during the 2023 to 2025 period for MECL.¹³⁶ The total cumulative increase in value of common shares forecasted by MECL amounts to an increase of ~\$4 million over the next three years.¹³⁷ As such, the flotation cost sought by MECL represents ~74% of the total increase in value of common shares. Recovering flotation costs by earning an additional return is likely to lead to significant over-collection of flotation costs. If and when

¹³² Concentric Energy Advisors, Inc. Application and Evidence of Maritime Electric Company, Limited. Appendix F - Cost of Capital Report. June 2022. Page 50.

¹³³ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Exhibit JMC-7. Page 1 of 10.* June 20th, 2022.

¹³⁴ CME Group. *E-mini S&P 500 Futures – Settlements.* Accessed on January 17th, 2023.

¹³⁵ Concentric Energy Advisors, Inc. Application and Evidence of Maritime Electric Company, Limited. Appendix F - Cost of Capital Report. June 2022. Page 51.

¹³⁶ LEI has considered the average rate base (from MECL data) and equity ratio of 40% considered by MECL for 2023, 2024 and 2025 to estimate the additional revenue.

¹³⁷ This is estimated using the difference in value of ‘common shares’ between 2022 and 2025 in MECL forecasts.

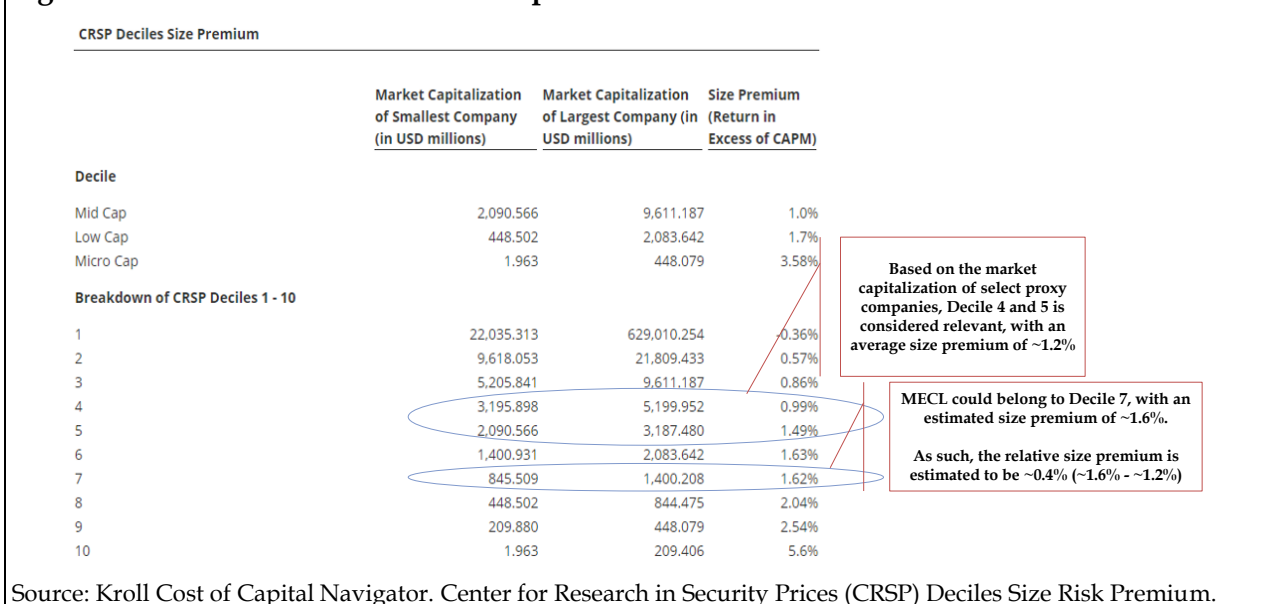
MECL issues equity, it can request cost recovery as an expense. LEI does not recommend adding flotation costs to the ROE.

Having noted the above, LEI is of the opinion that MECL's risk profile justifies an additional risk premium over the ROE estimated by standard CAPM, particularly due to the risks arising from the smaller size of MECL.

The standard CAPM used by LEI to estimate MECL's ROE assumes that risk premium for MECL is similar to the risk premium estimated for publicly traded proxy companies. However, the drawback of this approach is that average market capitalization of proxy companies is significantly higher than that of MECL. In terms of annual revenue, MECL is the smallest utility by far in the peer group determined by LEI. LEI further notes that MECL's advantages from being a regulated utility with lower volatility in its revenues are also common to other regulated utilities in LEI's peer group, as one of the criterion used by LEI to shortlist the peer companies is that at least 70% of revenue must be from regulated electricity businesses (see Section 6.3.1).^{138,139}

As discussed earlier, small (and medium-sized) enterprises typically tend to take on more risk and face more uncertainty compared to larger firms.¹⁴⁰ This is also reflected in the historical secondary market performance of small and large firms (see Figure 21), which indicate that investors typically expect a higher risk premium for smaller firms.

Figure 21. Estimation of additional risk premium



¹³⁸ It is also notable that the companies in the peer group operate a monopoly wires business.

¹³⁹ LEI has estimated the ROE for MECL as a standalone entity and believes that MECL being a subsidiary of Fortis Inc. is not materially relevant to its estimation of ROE. It is also notable that MECL uses its own assets as collateral for its long-term debt (FMBs).

¹⁴⁰ Statistics Canada. Economic Analysis (EA) Research Paper Series. *"Firm Size and the Risk/Return Trade-off"* by Amélie Lafrance. December 2013.

Utilizing market capitalization/size premium data as shown in Figure 21, LEI identified relevant market cap/size premium deciles where a selection of MECL’s peer group companies could belong.¹⁴¹ Similarly, LEI identified the market cap/size premium decile associated with MECL’s market capitalization. Comparing the two (as shown in figure below), LEI has estimated an additional size premium of ~0.4% (40 basis points) for MECL. The illustration of estimated additional size premium is provided in Figure 21.

LEI accordingly recommends an additional risk premium of 40 basis points over and above the ROE estimated via standard CAPM. It is notable that this is also in line with the additional size premium allowed by British Columbia Utilities Commission (“BCUC”) for FortisBC Electric (“FBC”),¹⁴² and by Yukon Utilities Board for Yukon Energy Corporation.¹⁴³

6.6 LEI’s recommended ROE

Having discussed the variables underlying CAPM methodology in detail above, LEI believes that a ROE of 9.70% is reasonable for the upcoming rate-setting period. The figure below provides a summary of the underlying components and recommended ROE.¹⁴⁴

Figure 22. Estimation of LEI’s recommended ROE

Parameter	Value
Risk-free rate (R_f)	3.75%
Beta (β)	0.76
Equity Risk Premium (ERP)	7.25%
Additional Risk Premium (ARP)	0.40%
ROE = $R_f + \beta$ (ERP) + ARP	
ROE = 9.70%	

Source: LEI’s calculations

¹⁴¹ LEI has conservatively relied on peer companies in the lowest quartile of the peer group (in terms of market capitalization) to choose the reference deciles for comparison with MECL in Figure 21.

¹⁴² The BCUC determined a risk premium of 40 basis points for FBC over the benchmark ROE determined for FortisBC Energy Inc. stating the following: *“Taking all of these factors into consideration, the Commission Panel finds that FBC does face more risk than the Benchmark with respect to size related issues such as concentrated assets, and the lack of diversity in both its customer and economic base and the Panel places some weight on this difference.”* BCUC. *Generic Cost of Capital Proceeding (Stage 2). Decision.* March 25th, 2014. Page 68.

¹⁴³ Yukon Utilities Board. *Board Order 2018-10. Appendix A: Reasons for Decision.* December 27th, 2018. Page 49.

¹⁴⁴ It is notable that LEI’s recommended ROE is within the range of 8.96% and 10.79% estimated by Concentric (see Figure 16).

6.7 If the Weather Normalization Mechanism and Reserve Account (“WNR”) is not approved for the upcoming rate-setting period, what (if any) impact will this have on the appropriate ROE for MECL?

As indicated earlier in Section 4.4 (see Figure 8), during the 2019 GRA proceeding, the Commission approved the WNR on an interim basis (until February 28th, 2022).¹⁴⁵ The Commission has expressed concerns about the appropriateness of continuing the WNR on a permanent basis, particularly whether the cost of tracking and administering the deferral account is justified by its benefits.¹⁴⁶

The purpose of the WNR is to stabilize electricity rates charged to customers by removing the volatility in sales and energy supply costs, which are caused by temperature changes relative to historical averages.¹⁴⁷ MECL claims that its sales revenues and energy supply costs have become subject to greater volatility due to variations in the number of heating degree days (“HDDs”) and increases in the use of electricity for space heating.^{148,149}

As shown below (in Figure 23), LEI observes that the WNR balance has been in surplus since November 2018. The surplus implies an amount owed by MECL to consumers.

It is also notable that since 2016, the largest cumulative deficit in WNR was observed in March 2018 at ~\$429,000. Based on LEI’s estimates, this equals to ~2.25% of MECL’s projected net income for 2023-2025, and less than 1% of MECL’s estimated FFO for 2023-2025.¹⁵⁰ This demonstrates that even when considering the largest deficit to date, WNR does not have a material impact on MECL’s returns. As such, LEI concludes that MECL’s allowed ROE should not be impacted by the decision to approve or disallow WNR going forward.

¹⁴⁵ Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019. Page 28.

¹⁴⁶ *Ibid.*

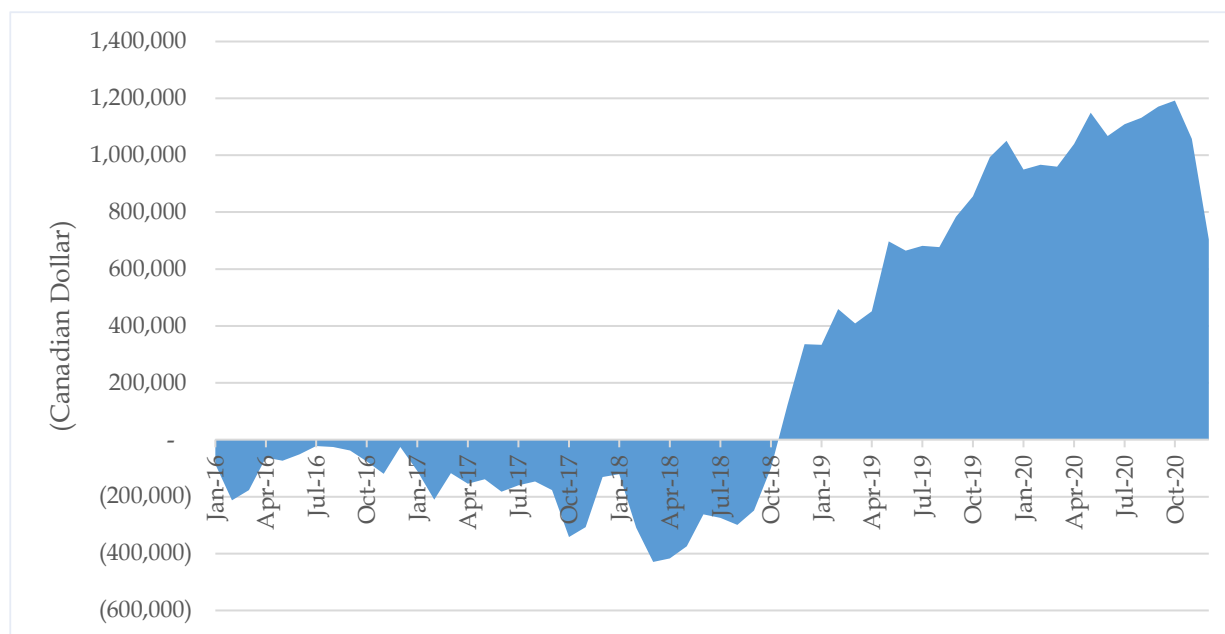
¹⁴⁷ MECL. Docket UE21226. Application for approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1st, 2020 and January 1st, 2021. Page 6.

¹⁴⁸ *Ibid.*

¹⁴⁹ Heating degree-days for a given day are the number of degrees Celsius that the mean temperature is below 18°C.

¹⁵⁰ FFO represents a company's ability to generate recurring cash flows from operations.

Figure 23. WNR balance (January 2016 – December 2020)



Note: The Commission, in Order UE20-06 dated December 21st, 2020, ordered that the balance of the WNR account as of December 31st, 2019 (\$1,057,328), and the balance of the RORA account (with accrued interest to December 31st, 2020 calculated at the Company’s short term borrowing rate) shall be applied to offset the balance of the ECAM account.

Source: MECL. Docket UE21226. Application for approving revisions to the components of the interim Weather Normalization Mechanism and Reserve effective January 1st, 2020 and January 1st, 2021. Appendix B. Schedule 2.

6.8 How does LEI’s recommended ROE affect MECL’s credit rating during the 2023-2025 period?

An issuer is deemed “investment grade” based on the evaluation of both business and financial metrics. S&P deems an overall rating of “BBB-” as the lowest investment grade by market participants.¹⁵¹ An entity may achieve a BBB- rating with a financial risk profile of “highly leveraged”, i.e., the worst score, but would require an “excellent” business risk profile rating. Conversely, it is not possible to achieve a BBB- rating under the worst business risk profile, i.e., “vulnerable”, regardless of the financial risk profile (see Figure 24).¹⁵²

¹⁵¹ S&P Global Ratings. *Guide to Credit Rating Essentials. What are credit ratings and how do they work?* 2019. Page 14.

¹⁵² S&P Global Ratings. *Corporate Methodology: Ratios And Adjustments.* November 19th, 2013

Figure 24. Matrix of business and financial risks and associated ratings

Business risk profile	Financial risk profile					
	1 (Minimal)	2 (Modest)	3 (Intermediate)	4 (Significant)	5 (Aggressive)	6 (Highly leveraged)
1 (Excellent)	AAA/AA+	AA	A+/A	A-	BBB	BBB-/BB+
2 (Strong)	AA/AA-	A+/A	A-/BBB+	BBB	BB+	BB
3 (Satisfactory)	A/A-	BBB+	BBB/BBB-	BBB-/BB+	BB	B+
4 (Fair)	BBB/BBB-	BBB-	BB+	BB	BB-	B
5 (Weak)	BB+	BB+	BB	BB-	B+	B/B-
6 (Vulnerable)	BB-	BB-	BB-/B+	B+	B	B-

Investment grade
 Below investment grade

Source: S&P Global Ratings. *Corporate Methodology: Ratios And Adjustments*. November 19th, 2013

As discussed earlier, S&P has consistently rated MECL as “BBB+” since 2004. A meaningful change in MECL’s perceived riskiness by credit rating agencies may result in a ratings downgrade and increase the cost of borrowing as well as access to capital markets for borrowing needs.

In the most recent ratings report for MECL (as of June 2022), S&P has indicated the following:¹⁵³

- MECL’s credit rating could be downgraded over the next 12 months if MECL experiences adverse regulatory rulings, severe storms, volatile profit measures, or operational setbacks that results in a higher business risk *or* if its financial measures weaken, including FFO to debt of consistently below 16%.
- MECL’s credit rating could be increased over a similar period if its financial measures improve, including FFO to debt consistently above 25%, without a weakening of business risk.

As shown earlier in Section 5.4, utilizing MECL’s pro forma statements and LEI’s recommended ROE of 9.70%, LEI estimates MECL’s FFO to debt ratio at above 17% for each of the years in the 2023-2025 period, which is consistent with S&P’s near-term outlook for FFO to debt ratio of 16-19%.¹⁵⁴ Further, as discussed earlier, LEI does not expect a meaningful increase in MECL’s business and financial risks. As such, LEI expects MECL to maintain its investment grade credit rating for the 2023-2025 period.

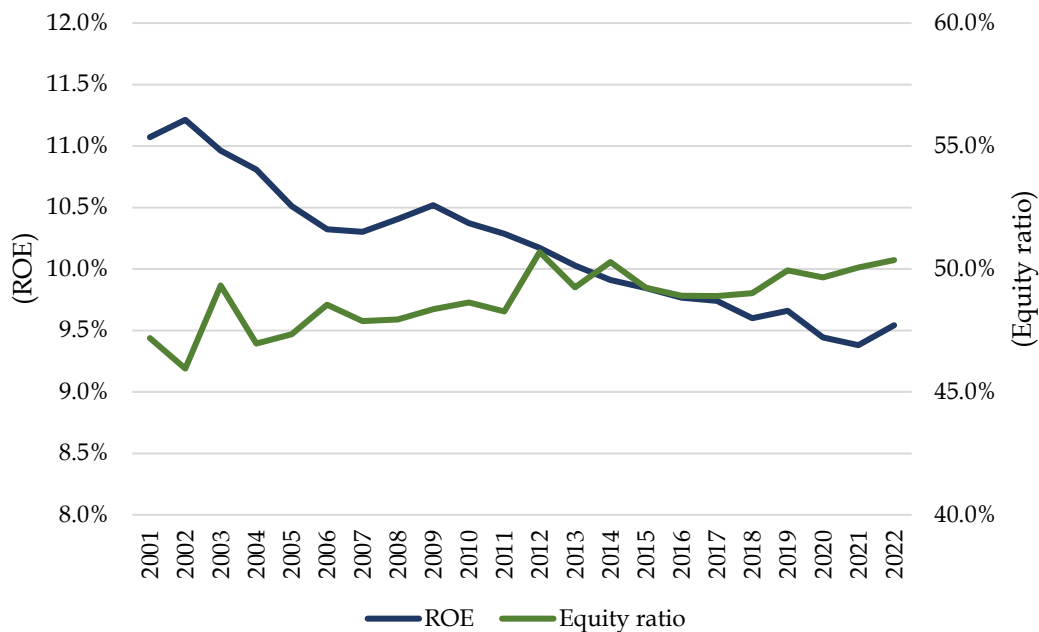
¹⁵³ S&P Global Ratings. Maritime Electric Co. Ltd. June 17th, 2022. Page 3.

¹⁵⁴ Ibid. Page 1.

6.9 What is LEI's opinion regarding the proposed capital structure vis-à-vis its recommended ROE?

Regulation of MECL is governed by the Electric Power Act and its subsequent amendments.¹⁵⁵ Section 12.1 of the EPA mandates a common equity range of not less than 35% and not more than 40% in MECL's capital structure. This is lower than that observed in the US (49.3%) and slightly higher than the Canadian average (39.9%).¹⁵⁶ It is also notable that in the US, allowed ROEs in electric rate cases have gradually declined from 2001 through to 2021 (with a slight uptick in 2022), from an average of 11.1% to 9.5% (see Figure 25).¹⁵⁷ At the same time, equity portions have remained relatively steady, averaging 49% over the same period.

Figure 25. Allowed ROE and equity portion trends to regulated electric utilities in the US



Source: S&P Global Market Intelligence

LEI also compared MECL's ROE and capital structure with other Atlantic utilities in Canada. Figure 26 presents key statistics for MECL and three other Atlantic utilities – Nova Scotia Power, New Brunswick Power, and Newfoundland Power. While MECL is smallest among these utilities with respect to number of customers, length of transmission and distribution lines, and electricity generation capacity, the Commission has considered reviewing approved metrics for these utilities in their previous decisions as relevant. Further, these Atlantic utilities (including

¹⁵⁵ Legislative Counsel Office, Prince Edward Island. Electric Power Act. Updated as of December 20th, 2017.

¹⁵⁶ Concentric Energy Advisors, Inc. Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report. June 2022. Figure 41, Page 80.

¹⁵⁷ It is notable that while the average ROE for US regulated utilities in 2022 (9.54%) is slightly lower than the ROE of 9.70% recommended by LEI for MECL, the average equity ratio allowed to US regulated electric utilities in 2022 (50.4%) is significantly higher than the equity ratio of 40% proposed by MECL.

MECL) face similar weather-related risks, and are all generally smaller than other North American utilities.

Figure 26. Key statistics of MECL and other Atlantic utilities

<i>Operating statistic</i>	Maritime Electric	Nova Scotia Power	New Brunswick Power	Newfoundland Power
<i>Number of customers</i>	86,335	536,000	420,129	>273,000
<i>Length of transmission and distribution lines (km)</i>	6,541	31,800	28,432	12,850
<i>Electricity generation capacity (MW)</i>	129	>2,400	3,790	143
<i>ROE (currently approved)</i>	9.35%	9.0% (ESM range of 8.75% to 9.25%)	N/A	8.50%
<i>Capital equity thickness (currently approved)</i>	40%	40%	20% target	45%

Notes: Customers, length of lines, and generation capacity are from 2021 data for MECL, from website sources for NS Power, from 2021/22 for NB Power, and from Newfoundland Power’s Third Quarter 2022 report. Newfoundland Power’s very low installed capacity is explained by the fact that it purchases 93% of its energy needs from Newfoundland and Labrador Hydro.

Sources: Maritime Electric Company Limited. *Sustainability 2022 Report*. p. 22.; Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.0 – Cost of Service and Projections*. June 20th, 2022. Page 71.; Nova Scotia Power. *Electricity*.; Nova Scotia Power. *Who We Are*.; NS Power. *2022-2024 General Rate Application*. NSURAB M10431. January 27th, 2022. pp. 72, 74.; Emera. *Nova Scotia Power*.; New Brunswick Power. *Annual Report 2021/22*. June 2022. pp. 4, 119.; New Brunswick. *Electricity Act, SNB 2013, c 7*. CanLII.; New Brunswick Power. *NB Power’s 10-Year Plan. Fiscal Years 2021 to 2030*. September 2019. p. 5.; Newfoundland Power. *Third Quarter 2022*. October 28th, 2022. pp. 2-3, 15.; Newfoundland Power. *Who We Are*; NSURAB. Matter No. M10431. Nova Scotia Power Inc. - 2022 General Rate Application (GRA). *Decision*. February 2nd, 2023.

As shown in Figure 26, both Nova Scotia Power and Newfoundland Power have lower ROEs than MECL. Nova Scotia Power has an ROE of 9.0% (ESM range of 8.75% to 9.25%), with an equity ratio of 40%, while Newfoundland Power has an ROE of 8.5%, with an equity ratio of 45.0%.¹⁵⁸ However, MECL is a significantly smaller utility compared to its Atlantic peers (other Atlantic utilities are approximately three to six times larger in terms of customers served), as well as the peer group discussed in Section 6.3.1.¹⁵⁹

Furthermore, it is notable that the ROE approved for Nova Scotia Power was constrained by Bill 212 passed in November 2022 by the Nova Scotia Legislature, which mandated that “*Nova Scotia Power Incorporated’s return on equity must be set at a rate not greater than nine and one-quarter per*

¹⁵⁸ Concentric Energy Advisors, Inc. *Application and Evidence of Maritime Electric Company, Limited. Appendix F – Cost of Capital Report*. June 2022. Page 55.

¹⁵⁹ As such, as discussed earlier in Section 6.5, LEI believes that MECL’s significantly smaller size justifies an additional size risk premium.

cent".¹⁶⁰ As a result, LEI believes that economic analysis was given less importance in the decision associated with ROE for Nova Scotia Power.¹⁶¹

The experience of international regulators with incentive-based ratemaking offers useful comparators to augment the North American analysis. In the UK, transmission, and distribution utilities, referred to as network utilities, are regulated by the Office for Gas and Electricity Markets ("Ofgem"). Ofgem employs an incentive ratemaking framework known as the RIIO model, which is an acronym for Revenues = Incentives + Innovations + Outputs. Under this price control framework, utility returns are based on "total expenditures" or "totex" approach, meaning the returns consider both capital and operating expenses.¹⁶² There is an emphasis on the utility outputs, and for transmission networks, the regulatory period was established for 8 years in the first iteration (RIIO-T1 was established from 2013-2021).

Outcomes for networks under this model have been positive, and Ofgem reports that for example, the transmission owners have all "met or exceeded the annual targets or are on schedule to deliver equivalent outputs to those agreed at the outset of RIIO-T1."¹⁶² This strong performance has driven Ofgem to move to reduce allowed returns over the past decade in each subsequent determination (see Figure 27). For its transmission networks, Ofgem moved to lower allowed returns to below 5% (in real terms) for the RIIO-2 period. In its determination for the RIIO-2 price controls, Ofgem established a "cost of equity reduced from approximately 7.8% RIIO-1 (CPIH) to 4.55% in RIIO-2 (at 60% gearing)."¹⁶³ Most recently, for its distribution network price control for RIIO-ED2 (2023-2028), Ofgem has proposed a lower real ROE of 5.23% (at 60% notional gearing) compared to the real ROE of 6% (at 65% notional gearing) during RIIO-ED1 (2015-2023).¹⁶⁴

In Australia, the allowed returns for network utilities are set by the Australian Energy Regulator ("AER"). The AER approaches this using the "Rate of Return Instrument" which is established every four years, using the CAPM approach. The return establishes parameters for a benchmark efficient utility - the most recent instrument was set in 2022 and set a nominal ROE (post-tax) of 6.16%, down from 6.36% set in 2018.^{165,166}

¹⁶⁰ Nova Scotia Legislature. *Bill No. 212 (as passed, with amendments)*. Royal Assent: November 9, 2022.

¹⁶¹ The NSUARB also noted the following in its decision: "An immediate impact of Bill 212 was that credit rating agencies revised their outlooks for NS Power and Emera. S&P Global and DBRS Morningstar lowered NS Power's credit rating on November 21, 2022, and December 20, 2022, respectively, directly impacting NS Power's financing abilities in the debt markets, putting pressure on its cash flow-to-debt metrics, and potentially discouraging equity investment." NSUARB. Matter No. M10431. Nova Scotia Power Inc. - 2022 General Rate Application (GRA). *Decision*. February 2nd, 2023. Page 24.

¹⁶² Ofgem. *RIIO-ET1 Performance Summary 2019-20*. March 2021

¹⁶³ Ofgem. *RIIO-2 Final Determinations - Core Document*. December 8th, 2020. Page 6.

¹⁶⁴ Ofgem. *RIIO-ED2 Final Determinations - Finance Annex*. November 30th, 2022.

¹⁶⁵ Australian Energy Regulator. *Final Decision. Powerlink Queensland Transmission Determination. 2022 to 2027*. April 2022.

¹⁶⁶ Note that post-tax ROE is lower than pre-tax ROE. For instance, assuming a 30% tax rate, a nominal post-tax ROE of 6.16% equals a nominal pre-tax ROE of 8.80%

The figure below summarizes allowed ROE and capital structure for recent periods in the UK and Australia.

Figure 27. Allowed ROE and equity portion trends in Great Britain and Australia

Jurisdiction	Utility	Period	ROE	Equity thickness
Great Britain	Distribution utilities	2011-2015	6.7% (real)	35.0%
		2015-2023	6.0% (real)	35.0%
		2023-2028	5.23% (real)	40.0%
	Transmission utilities	2013-2020	7.0% (real)	41.2%
		2021-2026	4.55% (real)	40.0%
Australia	Network utilities	2013-2017	7.25% (nominal post-tax)	40.0%
		2018-2021	6.36% (nominal post-tax)	40.0%
		2022-2027	6.16% (nominal post-tax)	40.0%

Note: Equity thickness calculated as 1 - “notional gearing”, which refers to the debt ratio.
Sources: Ofgem; AER

For the 2023-2025 period, MECL has proposed a capital structure consisting of 40% common equity. Although the proposed equity portion of 40% is on the higher end of the allowed range as per the EPA, it meets the requirements of the Act. In conjunction with LEI’s recommended ROE of 9.70%, LEI finds MECL’s proposal of 40% common equity in the capital structure for the 2023-2025 period to be reasonable.

7 Key Conclusions

MECL is seeking approval for a ROE of 9.95% with a capital structure consisting of 40% common equity. MECL proposes to use this common equity thickness and ROE for the rate-setting period beginning March 1st, 2023 ending February 28th, 2026.¹⁶⁷ The current approved cost of capital is based on 40% average common equity and a maximum return on average common equity of 9.35%, which IRAC approved in MECL's previous rate case pursuant to *Order UE19-08*.¹⁶⁸

LEI independently assessed MECL's business and financial risks. MECL's business risks relate to six broad categories: (i) MECL's small size relative to other utilities; (ii) macroeconomic and demographic trends; (iii) supply and operating risks; (iv) deferral and variance accounts; (v) alternative fuel risk and decarbonization; and (vi) political and regulatory uncertainty.

Based on LEI's assessment, there has been a notable shift in the macroeconomic outlook as central banks in Canada and the US have aggressively hiked their policy rates to control rising inflation. Supply chain bottlenecks induced by the COVID-19 pandemic have also contributed to higher inflation. While the impacts from these bottlenecks have reduced in 2023, the risks still remain.

LEI has accounted for this risk by considering a forward-looking risk-free rate of 3.75% for the rate setting period. With respect to risks from MECL's smaller size, while there is no change in risk since 2019, LEI is of the opinion that MECL's small size cannot be ignored in assessing its risk premium. As such, LEI has quantified an additional risk premium of 40 basis points on this account. Further, based on LEI's assessment, there has been no meaningful change in other risks specified above when compared to MECL's risk profile during the 2019 rate case proceeding.

LEI assessed MECL's change in financial risks based on four factors: (i) financial risks assessed by S&P in its credit reports since the 2019 rate case decision; (ii) impact of near-term inflation outlook on MECL's financial risks; (iii) MECL's long-term debt accessibility in the bond market; and (iv) projected key financial ratios for MECL. On all four aspects, LEI believes that MECL's financial risks have not changed significantly since the 2019 rate case decision.

LEI also independently estimated the ROE for MECL's upcoming rate-setting period using the CAPM methodology, and has recommended an ROE of 9.70%. In conjunction with this recommended ROE, LEI believes the MECL proposed capital structure of 40% equity portion is reasonable, and will allow for MECL to maintain its investment grade credit rating for the upcoming rate-setting period.

¹⁶⁷ Maritime Electric Company Limited. *Application and Evidence of Maritime Electric Company, Limited. Section 5.0 – Cost of Service and Projections*. June 20th, 2022. Page 64.

¹⁶⁸ Island Regulatory and Appeals Commission. *Order UE19-08*. September 27th, 2019. Page 53.

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