Report to Utility Committee

June 24, 2024

EPCOR WATER SERVICES

2025-2027 Wastewater Services PBR Application

Return on Equity

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1.0 Introduction

1. On May 31, 2024 EPCOR Water Services (EWS) filed its 2025 – 2027 Wastewater Services Performance Based Regulation Application with the City of Edmonton. Included in the Application is EWS' applied for return on equity (ROE) and associated capital structure. The purpose of this report is to provide Utility Committee with additional background on why return on equity and the associated capital structure is a component of utility rates and also provide Utility Committee with insight on how a fair ROE is determined by regulators.

2. This report supplements EWS' Application and is intended to assist Utility Committee with its review of the Application, however, this report is not intended to replace the full details of EWS' applied for ROE and capital structure, as included in Section 4.3 and Appendix D of EWS' Application.

2.0 Background – Fair Return

3. Return on Equity (ROE) is a key component of utility rate applications and the approval of a fair return is required to maintain the long-term financial health and sustainability of the utility. A fair return ensures that there is sufficient investment in the utility for the provision of safe and reliable service and also provides a return to the shareholder in exchange for the investments made. The concept of a fair return is is a matter of law, established by the Supreme Court of Canada as well as by the United States Supreme Court and is the basis used by regulators to approve the returns that are reflected in utility rates.

4. In *Northwestern Utilities v. City of Edmonton*, a case related to utility rates for gas supply in Edmonton and how returns on investments made by the utility should be reflected in rates, the Supreme Court of Canada defined "fair return", stating:

> 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…
>
> The duty of the Board was to fix fair and reasonable rates; rates which, under the circumstances, would be fair to the consumer on the one hand, and which, on the other hand, would secure to the company a fair return for the capital invested.

Northwestern Utilities v. City of Edmonton [1929] S.C.R. 186 at 193; [1929] 2 D.L.R. 4 (NUL 1929), per Lamont J. at p. 8

5. The National Energy Board, in a decision related to related to TransCanada Pipelines Cost of Capital, stated that a fair or reasonable return on capital should:

- Be comparable to the return available from the application of invested capital to other enterprises of like risk (the comparable investment standard);
- Enable the financial integrity of the regulated enterprise to be maintained (the financial integrity standard); and
- Permit incremental capital to be attracted to the enterprise on reasonable terms and conditions (the capital attraction standard).

6. EWS' utility rates are approved through a regulatory process that aims to ensure that the rates approved by the regulator are both fair to customers and also reflect the actual cost of providing service. This includes both operating and capital costs.

7. Under the PBR framework for EWS, the rates approved by City Council are set to ensure EWS recovers the full cost of providing water and wastewater services to its customers. This includes both operating and capital costs. Under the PBR framework, operating costs are included in rates based on a forecasted amount for each year and the capital costs included in rates reflect a portion of the costs that are recovered over time (i.e. they are financed) by EWS. As utilities, such as EWS, are generally capital intensive, a mechanism is required to ensure rates reflect the costs of both acquiring and financing these assets.

8. As EWS finances its utility infrastructure using both debt and equity, EWS' regulator must approve rates that reflect the cost of this financing expense. This report focuses on the cost of financing for the equity component.

9. The return on equity included in rates can be expressed by following formula:

Regulated Return on Equity ($) = Rate Base ($) x Equity Thickness (%) x ROE (%)

10. As such, in making a determination of fair return, the regulator needs to consider the following:

- Rate Base – the cumulative investment in utility infrastructure (net book value).

- Equity Thickness – the proportion of the cumulative investment financed by equity.
- ROE % – the rate of return that is approved by the regulator.

11. Details of EWS' applied for Rate Base is included in Sections 9 and 17 of EWS' PBR Application and details of EWS' applied for Equity Thickness and ROE are included in Sections 10 and 18 of EWS' PBR Application.

3.0 Equity Thickness and ROE

12. As demonstrated by the formula above, the regulated return on equity reflected in rates is impacted by both the equity thickness and the rate of return, it is important to understand the relationship between the two components and what they represent.

13. On a combined basis, the equity thickness and the ROE, taken together, are intended to reflect the specific utility's risk profile.

14. Equity thickness, as explained above, reflects the proportion of utility investment that is made by the shareholder. This investment is made either through direct infusions of funds by the investor (i.e., the shareholder) or through the retention of earnings. Regardless of the source of the investment, the investor has an expectation of earning a return on the investment made and the expected return should correspond with the associated risk of the investment. Generally speaking, the higher the equity thickness (i.e., the amount of capital required to be invested by the shareholder and not debt holders), the higher the perceived risk of the entity.

15. Generally speaking, ROE, as explained above, reflects the rate of return that is approved by the regulator and is intended to reflect the expected return for an investment that carries a similar risk. This is consistent with the concepts included in the fair return standard.

16. The equity thickness, ROE and cumulative investment in the utility determine the overall income to the utility that is reflected in rates. This utility income is used for either future investment in the utility or for paying a return to the shareholder.

4.0 EWS Approach to Determining ROE

17. EWS engaged a consulting firm, ScottMadden, with specialization in cost of capital to develop a recommendation for a fair rate of return as part of EWS' Wastewater Services PBR

Application. The methodology, including the key assumptions made, are reflected in the consultant's report which is included as Appendix D in EWS' PBR Application. Also, as explained in EWS' PBR Application, it is common for regulators to rely on the recommendations of cost of capital experts when making determinations on ROE.

18. As a result of the analysis performed by ScottMadden, EWS' PBR Application reflects a return on equity of 10.8% with a capital structure comprised of 60% debt and 40% equity. The capital structure is reflective of EWS' actual and approved capital structure.

19. The return on equity is assessed as the return that investors require to make an equity investment in the utility and relies on the "fair return standard". Consistent with the concept of fair return established by courts and other regulators, a fair return is one that:

- is equal to the return available on an investment of comparable risk,
- enables the financial integrity of the utility to be maintained, and
- permits incremental capital investment to be attracted to the utility.

20. It is a well-established practice in the regulation of utilities to rely on multiple methods to assess the fair return as each method provides useful evidence and each also have limitations. However, each method relies on analysis of utilities with a similar risk profile to meet the comparable return standard.

21. The cost of capital expert engaged by EWS for this application assessed the return on equity by applying three commonly used methodologies: the capital asset pricing model, the risk premium model and the discounted cash flow model.

22. Each method relies on empirical financial data from relevant and observable utility company financial performance, focusing on benchmarks with comparable risk to EWS. The utility benchmarks selected form the proxy group from which EWS' return is determined.

23. The selection of an appropriate proxy group is an important part of the analysis and much care is taken to ensure proxy utility comparability. As no two companies are identical, it is common for cost of capital experts to use a wide range of similar companies with similar risks to develop an appropriate proxy group.

24. Since there are no other private water and wastewater utilities of comparable size in Canada from which to compare EWS' risk, the cost of capital expert determined that the closest peers to EWS are from two groups including:

- Canadian regulated electric and natural gas utilities, and
- U.S. water and wastewater utilities.

25. The full scope of the analysis, including a detailed description of the methodologies utilized by the cost of capital expert are included in Appendix D of EWS' Application.

5.0 EWS ROE vs Generic ROE for Alberta Gas and Electric Utilities

26. In previous EWS PBR Applications, EWS' applied for rate of return on equity has been compared to the rate of return that is approved by the Alberta Utilities Commission (AUC) for regulated gas and electric distribution and transmission utilities. The AUC approved ROE is commonly referred to as the Generic Cost of Capital Return on Equity (GCOC ROE).

27. The 10.8% recommended rate of return on equity reflected in EWS' PBR Application is higher than the AUC's 2024 Approved Generic Cost of Capital ROE of 9.28%. As explained below, the variance between the 10.8% ROE and the 9.28% ROE is consistent with the variance reflected in past City Council decisions regarding EWS' ROE.

28. It is important to note that when the AUC establishes its GCOC ROE, there is no specific consideration of water or wastewater utilities, and no water or wastewater utilities were included in the proxy groups that were used to establish the parameters for the establishment of the 2024 GCOC ROE. A key component in the difference between the 10.8% ROE reflected in EWS' Application and the GCOC ROE reflects the differences in business risks between the AUC regulated gas and electric distribution and transmission utilities and EWS.

29. Key unique risks that EWS has which are different from electric and gas distribution and transmission utilities include:

- Public health risk - water is a consumable product, wastewater is a sanitation risk and both require treatment
- Environmental regulations risk – wastewater is treated and released to the river (river stewardship)

- Revenue risk – consumption of water and wastewater treatment volumes are subject to forecast variation over the term of the PBR

- Capital recovery risk – water and wastewater infrastructure has longer lived assets than electrical or gas infrastructure which increases risk through a longer collection period associated with these assets and also exposes EWS to greater operational risk

- Level of Contributed Assets risk – water and wastewater infrastructure investments in Edmonton are supported by higher levels of contributions from customers and government grants for which the utility does not earn a return but needs to maintain

- Interest rate risk - interest rates are fixed for the duration of the PBR term and not adjusted with interest rate fluctuations, unlike the AUC's PBR framework

30. EWS' higher return on equity also aligns with conclusions of the City's own cost of capital expert, Grant Thornton, from previous PBR application proceedings. In the 2017-2021 PBR application, the City's rate of return expert, Grant Thornton (GT), proposed a return for EWS within a range of 1.54% to 2.12% (mid-point of 1.83%) higher than the AUC's GCOC at the time and stated the following:

> We have considered the elements of EWSI's PBR in contrast to the Alberta Utilities PBR's and concur with the findings of the Sussex Report regarding the EWSI PBR having greater inherent risk compared to other Alberta Utilities.

31. GT also agreed with use of the 60% debt and 40% equity capital structure. GT noted that if the common equity ratio were lowered, credit metrics could weaken.

6.0 Industry Standard Approach vs Risk Premium over AUC ROE

32. For all the prior terms of EWS' Water PBRs (going back to the first PBR in 2002, well before the wastewater utilities were transferred to EPCOR), except the 2022-2024 Wastewater Collection and Treatment PBR and the 2022-2026 Water PBR, EWS has relied on a cost of capital expert to determine the fair return on equity using a "bottom-up" methodology. All of these experts relied on applying the three models noted above for determining a fair return.

33. During the hearing to approve EWS' 2017-2021 Water and Wastewater Treatment PBR applications, the Utility Committee observed that prior PBR decisions had not specifically quantified the appropriate risk premium above the AUC's Generic Cost of Capital and suggested

that EWS work with City Administration to quantify the risk premium in advance of the next PBR application.

34. EWS and City Administration sought the advice of cost of capital experts to determine the feasibility of determining a risk premium relative to the AUC's GCOC ROE through a Request for Information (RFI). The RFI was circulated in 2019 and was ultimately unsuccessful.

35. The consultants revealed that the quantified risk premium approach, while theoretically sound, is difficult to enact as there is no basis to adequately quantify and justify the risk factors. At best, the assessment could be completed with business risks being identified and aggregated into larger "buckets" and then the associated risk premium subjectively determined. The consultants indicated that this approach is not an established industry practice.

36. Based on these discussions, EWS concluded that continuing to rely on established industry approaches (i.e., the Capital Asset Pricing Model, Discounted Cash Flows and Risk Premium Model) for the determination of a proposed ROE was the preferred approach.

37. For the most recent EWS PBR applications (the 2022-2024 Wastewater Collection and Treatment PBR and the 2022-2026 Water PBR Applications), EWS engaged a cost of capital expert to recommend an ROE based on the industry standard approach. However, the cost of capital expert recommended that given the onset of the global COVID-19 pandemic and the associated impact on financial markets, the standard industry approach would likely be problematic in setting a fair for ROE for EWS' for these applications as the most recent financial data would be skewed as a result of the pandemic and therefore neither representative nor reliable.

38. As a result, for the 2022-2024 Wastewater and 2022-2026 Water PBRs, the cost of capital expert proposed an update of Grant Thornton's 2016 analysis be used to establish the ROE. GT's risk premium over AUC's GCOC in 2016 was recommended to be 1.83%. The cost of capital expert then applied a formulaic extension to estimate the AUC's GCOC in 2022 which was then added to the GT risk premium to derive the applicable ROE for EWS.

39. Given the return to more normal market conditions in the last few years, EWS has returned to the application of a standard, rigorous and bottom-up approach to establishing an appropriate ROE for the current Wastewater PBR application.

40. EWS did not attempt to calculate the risk premium above the AUC's Generic Cost of Capital for two reasons.

- First, calculating a risk premium above the AUC GCOC is not a method that cost of capital experts have adopted to determine fair returns. EWS has learned this from its previous attempts at this methodology as described above.

- Second, even if it was possible to calculate a risk premium, the AUC's GCOC is not necessarily an appropriate starting point from which to determine EWS' return. The AUC GCOC provides only a single data point representing allowed returns of Canadian electric and gas distribution and transmission companies. More importantly, no water and wastewater utilities were included in the AUC's determination of the GCOC because the GCOC is the fair return determined for Alberta electric and gas utilities. As noted above, an appropriate analysis for a fair return should account for a wide range of peer utilities with similar risks – including water and wastewater utilities.

41. For these same two reasons, and the fact EWS was not successful in finding a cost of capital expert to quantify this risk premium in the recent past, EWS has not attempted to engage a cost of capital expert to determine the appropriate adjustment to its capital structure to reflect the required adjustment in risk relative to the AUC's electric and gas distribution and transmission utilities.

42. Furthermore, if EWS were to accept the current GCOC of 9.28% for the 2025-2027 PBR term and adjust the equity thickness to reflect the risks inherent EWS' water and wastewater utilities, it would require a sizeable equity injection from EWS' parent company EUI to align its actual capital structure with its approved capital structure.

7.0 EPCOR's Recommendations

43. As financial market conditions have returned to more normal conditions, Utility Committee rely on industry standard methods to determine EWS' fair return.

44. Maintain EWS' capital structure as currently approved and reflect determinations of EWS' business risk in the approved ROE.