Question: **COE-EWSI-21**

Topic: **Return on Equity – Risk Premium**

Reference: *In Appendix D of the rates applications, EWSI discusses the major risk factors that contribute to EWSI bearing more risk than an electricity or gas utility regulated by the AUC (and therefore warrants a higher return on equity of 9.95% in comparison to the AUC approved generic return on equity of 8.50%).*

For each of the risk factors identified in Appendix D, please explain (in EWSI's view) what would need to be done in order to eliminate or mitigate the risk, resulting in the AUC generic return on equity being appropriate for EWSI (e.g. deferral accounts). Also, please elaborate on the practicality of implementing these measures to eliminate or mitigate each risk.

EPCOR RESPONSE:

There are a number of risk factors identified in Appendix D to the PBR Applications, where EWSI is exposed to materially greater business risks than the average electric and gas utility regulated by the Alberta Utilities Commission. In this response, EWSI provides high level comments on how these risks could be mitigated and the practicality of implementing such measures to eliminate risk. This response is prepared in the spirit of the Utilities Advisor's remark that the generic rate of return might be used by "…(seeking) out those risks that are specific to each utility and (putting in place) mechanisms to protect the utility from such risks."[1]

The potential role of deferral accounts as a tool to reduce risk or transfer risk to customers has been discussed in a variety of contexts. Deferral accounts may be appropriately used to address short-term forecasting risks (e.g., forecasting the cost of new long-term debt to be issued next year or forecasting consumption with weather-related uncertainties). However, deferral accounts are neither appropriate nor effective in addressing long-term risks such as water product/health regulation risks, contributed asset risks and capital recovery risks. These risks are long-term in nature; and because no regulator can bind the actions and policies of a future regulator, a deferral account instituted today is not effective in reducing or eliminating, say, contributed asset risks or capital recovery risks that often span decades. For this reason, none of

[1] EPCOR 2022 PBR Applications · Review by the Utilities Advisor, page 2.

the risk mitigation mechanisms discussed here involve deferral accounts. Instead, they contemplate changes to rate design, asset contribution policies and depreciation rates.

i) **Water is a Consumable Product Risk and Public Health Regulation Risks**

While all utility products are seen as essential to life, only water is actually ingested by the end user. It is incumbent upon the water utility to ensure that appropriate processes and procedures are maintained to provide proper treatment and that the product remains safe and within strict regulatory guidelines. This challenge is compounded by high variability in the source water, depending on weather, demands which vary dramatically during various times of year and other non-controllable factors. Irrespective of these changes and the impact of weather events and other potential events impacting EWSI's operations or source water quality, EWSI is required to maintain the quality and safety of the final product. EWSI not only absorbs costs resulting from these events (which often do not qualify for NRA), but it must also ensure that operational processes are continually improved to maintain water quality and meet more stringent regulatory requirements in the future.

The three EWSI utilities are faced with increasingly stringent public health standards as determined by regulatory agencies. In most cases, these changes necessitate additional capital investment to meet the new requirements in addition to process and reporting changes to ensure adherence to the standards. These changes compel EWSI to build and/or operate new systems to meet the changing standards which result in increased capital and operating costs.

Finally, the EWSI utilities are required to responsibly dispose of or recycle their product after use. In contrast, the responsibilities of electric and gas utilities end when the customer uses the electron or the gas molecule.

These risks are an unavoidable part of being in the water business; and it is therefore neither practical nor possible to eliminate them. Thus, even if all of the other risk differences between water utilities and electric and gas utilities could be "equalized," water utilities would still be exposed to higher risks and would therefore require higher compensation than electric and gas utilities.

ii) **Revenue Forecast Risk**

Water consumption is subject to considerable short-term unpredictable variation, particularly in the summer months when weather patterns impact outdoor use. Additionally, water consumption over the long-term over the last 10-20 years has continued to decline on a per capita basis. The decline can be associated with a number of things including highly efficient appliances and effective conservation measures. Electricity and gas consumption is also subject to variation, driven primarily by broader economic factors as well as weather. Gas utilities also face declining consumption trends similar to water utilities.

While all utilities bear some revenue variability due to variation in consumption, the extent to which that variability impacts the profitability and risk profiles of the businesses are markedly different depending on the regulatory framework and rate structures. For the electric and gas distribution utilities, consumption risk is significantly mitigated by a rate structure in which approximately 72% of total revenues are recovered through fixed charges compared to EWSI which recovers only about 31% of its revenues using fixed charges (assuming the proposed changes are approved for water, wastewater, sanitary and stormwater combined).[2]

Moreover, Alberta gas distribution utilities also operate under a revenue-per-customer cap PBR (as opposed to a price cap), which ensures that they are largely protected from volumetric forecast risk. Under a revenue-per-customer cap plan, the approved revenue-per-customer from the previous year is adjusted by the i-x index to arrive at the upcoming year's revenue-per-customer cap. Rates are calculated each year based on the revenue-per-customer cap divided by the forecast consumption per customer[3]. This reduces the risk of declining consumption and limits the consumption forecast risk to one-year forecast risk.

ATCO Gas also has a weather deferral account in place which addresses differences between forecast and actual short-term weather-related consumption volumes. In contrast, EWSI's PBR structure establishes rates based on a five-year consumption forecast. Variations from this five-year forecast are to the account of the utility so that customers benefit from stable and predictable rates. The consumption risk for EWSI is further amplified by relatively high portion of revenues recovered from

[2] Application, Appendix D, Table 3.1.3-1, page 9.

[3] AUC Decision 2012-237, paragraphs 124-125.

consumption-based (variable) rates. This means that consumption changes result in considerable risk of variability in EWSI's earnings.

Revenue forecast risk differences between EWSI and the electric and gas utilities can be "equalized" by changing EWSI's rate structures to collect an estimated 72% of total revenues through fixed charges. While a consumption deferral account could mitigate the short-term risk of consumption variations, a change to the rate structure would address the longer-term risk. Revising the rate structure would also allow rate stability and predictability to be maintained; whereas a consumption deferral account would remove the stability and predictability which is particularly important to commercial customers. EWSI has discussed the many disadvantages of applying a consumption deferral account in its June 18, 2021 Reply Comments.

There are also several disadvantages to changing the rate structure. Most water utility rate structures have higher variable and lower fixed rates to encourage water conservation. Revising EWSI's rate structure to recover 72% of revenues with fixed rates would dramatically reduce incentives for water conservation and would impose the highest burden on low-volume residential customers, creating affordability issues for many while providing large savings to high volume residential customers. These significant impacts on the water bills for low volume, average and high volume residential customers are shown in Table COE-EWSI-21-1 below.

Table COE-EWSI-21-1
Residential Water Bill Impacts of Increasing Fixed Rate Revenues to 72%
($/customer/month)*

		A **2022F**	B **2023F**	C **2024F**	D **2025F**	E **2026F**	F **Average**
1	Low Volume Customer (10m3)	6.30	6.79	7.32	7.89	8.50	7.36
2	Average Customer (13m3)	(0.42)	0.05	0.59	1.21	1.90	0.67
3	High Volume Customer (40m3)	(55.51)	(59.78)	(64.38)	(69.34)	(74.67)	(64.74)

*Based on current rate design.

iii) **Contributed Assets Risk**

The proportion of contributed (developer funded) assets for EWSI is materially higher than the proportion of contributed assets for the electric and gas utilities.[4] The utility has the responsibility to operate and maintain these contributed assets but is not permitted to earn a return on these assets because the contributed assets are deducted from utility rate base. As a result, the operating risks associated with contributed assets become concentrated on a smaller rate base, thereby increasing the risk per dollar of rate base. Moreover, the regulatory treatment of excluding contributed assets from rate base reduces the margin between forecast revenues and operating costs, thereby increasing operating leverage risks (i.e., the risk of failing to earn sufficient revenues to cover operating costs).

As indicated in Appendix D, EWSI's assets are approximately 53% contributed, driven largely by the addition of Drainage which has 69% contributed assets. In contrast, the AUC regulated utilities average 15% % contributed assets.[5] As a result, EWSI bears far greater risk contributed asset risk relative to electric and gas utilities. The AUC has provided its view that increased levels of contributions increases the financial risk and the operating leverage risk of the utility; and the AUC adjusts for differences in these risks among the utilities by adjusting their individual equity ratios[6].

To "equalize" this risk difference between EWSI and the electric and gas utilities, EWSI's current contribution policy could be changed to allow a return on the incremental level of contributed assets above the 15% average for the electric/gas utilities (i.e., limit the contributed assets exclusion from rate base to no more than 15%). The estimated impact of this contribution policy change is shown Row 2 of Table COE-EWSI-21-2 below.

iv) Capital Recovery Risk

Water and wastewater utility assets typically have longer lives than electric and gas utility assets. The resulting lower depreciation rates mean that the original capital investment is exposed to capital recovery risks over a longer period, which, in turn, requires a higher rate of return. Even

[4] PBR Application, Appendix D, pages 10-12.

[5] PBR Application, Appendix D, Table 3.1.5-1, page 11.

[6] Alberta Utilities Commission, *Decision 2011-474*, December 8, 2011, Paragraph 495, page 92.

Government of Canada bonds are subject to such risks, which is why yields on long-term Government of Canada bonds are greater than yields on short-term Government bonds.

As shown in Appendix D, asset lives for EWSI averaged 57 years following the Drainage transfer. Drainage assets are predominately pipes which have a longer life than water or wastewater plant assets. In contrast, the assets of Alberta gas and electric utilities had average lives of 33 years. As a result of the longer asset lives, EWSI bears greater capital recovery risk than the electric and gas utilities regulated by the AUC.

The capital recovery risks of the EWSI utilities and the electric and gas utilities can be "equalized" by increasing the depreciation rates for the EWSI utilities so that the capital investment is recovered over 33 years on average rather than 57 years. This results in significantly higher levels of current depreciation expense particularly for the Drainage utility.

v) **Summary and Conclusions**

In Table COE-EWSI-21-2, EWSI has estimated the net impact of a hypothetical scenario where: (i) EWSI's depreciation rates are adjusted to reflect an average 33-year asset life, thereby equalizing the capital recovery risks of EWSI and the electric and gas utilities; (ii) EWSI is allowed a return on any contributed assets above 15% of the total to equalize its contributed asset risk with that of the electric and gas utilities; (iii) EWSI's revenue forecast risk is aligned with the revenue forecast risks of the electric and gas utilities by changing the rate structure as proposed above (no impact on forecast revenue requirement); (iv) EWSI's risk premium above the AUC's generic cost of capital is reduced to 0%.

EWSI notes that even if EWSI's higher business risks associated with capital recovery, contributed assets and revenue forecasts are equalized with those of the electric and gas utilities through the above measures, EWSI still bears the greater risks associated with water being a consumable product and the associated public health risks. As such, a risk premium greater than 0% or an equity ratio higher than the 37% for the electric and gas utilities would still be required.

Table COE-EWSI-21-2
Evaluation of Risk Mitigation and Equalization Plan
Impact on Total Water, Wastewater Treatment and Drainage Revenue Requirement
($millions)

		A **2022F**	B **2023F**	C **2024F**	D **2025F***	E **2026F***	F **Total**
1	Increased Depreciation from reducing Asset Lives to 33 Years	40.1	40.3	40.4	12.2	11.4	144.5
2	Return on Contributed Assets above 15%	60.9	68.3	75.8	13.1	12.9	230.9
3	Increase in Franchise Fee due to (1) and (2)	1.5	3.2	5.8	2.1	2.8	15.4
4	Reduction in ROE to 8.5%	(28.9)	(36.0)	(43.8)	(8.2)	(8.2)	(125.0)
5	Net Impact	73.6	75.8	78.2	19.2	19.0	265.7

*Water Revenue Requirement Only

The results from evaluating this hypothetical plan to mitigate and equalize risk indicate that, even with elimination of the equity risk premium (i.e., use of the generic cost of capital) and ignoring the consumable product/health regulation risks, EWSI's customers would be worse off due to the increase in revenue requirements by approximately $266 million over the 2022-2024/2026 PBR terms (row 5).

In fairness, however, this difference is likely to shrink at some point because contributed assets will eventually be retired and replaced by rate base assets; and, on average, there will be no further depreciation to be charged on the current pool of assets after 33 years. In short, the changes required to "(put) mechanisms in place to protect the utility from such (incremental) risks" so that the generic cost of capital may be used will disadvantage today's customers but may benefit customers in, say, 30-35 years. EWSI submits that any such proposal – which has serious inter-generational equity implications – should be studied carefully with thoughtful public input before being implemented.