



Topic 1: Return on Equity

Topic: Return on Equity

Request:

Return to City Council a more detailed rationale for the proposed return on equity (ROE).

Response:

The proposed ROE of 10.875% for the PBR 2012 – 2016 renewal was determined and is justified based on three principles:

1. The proposed ROE was determined by expert opinion from the “ground up”, taking into account various economic and market factors, other comparable utilities and the applicable risks involved.
2. The proposed ROE is not comparable to “generic” Alberta Utilities Commission (AUC) ROEs due to differences in the time horizon and the resulting economic and market factor inputs.
3. EPCOR Water faces unique risks in Edmonton as a water utility, due to structurally declining water usage and a fixed / variable cost structure that is the opposite of the rate structure.

1. Determination of Proposed ROE

- The proposed ROE of 10.875% was determined by expert review based on the following:

	Risk Free Rate	Utility Risk Premium	Financing Flexibility	ROE
Proposed Water PBR - Target (5 Year)	5.0%	4.875%	1.0%	10.875%
Proposed Water PBR - Effective (5 Year)				10.06%

- It should be noted that the overall (effective) ROE reflected in the PBR renewal is actually 10.06%. This is due to the fact that the Gold Bar Wastewater Treatment plant, which was included in the PBR for the first time, has an ROE which only reaches the target of 10.875% in 2016. This results in a weighted average ROE for Edmonton Water Operations as a whole below the recommended ROE of 10.875%.
- Underpinning the proposed ROE is the estimated 5.0% risk free rate over the five years of the next PBR period 2012 – 2016. This is based on a widely accepted Consensus Economics forecast.
- In determining the utility risk premium component of the proposed ROE, expert analysis of both historical data and forward looking market data was completed using multiple methods:
 - Risk-Adjusted Equity Market Premium
 - Discounted Cash Flow Analysis
 - Historical Utility Risk Premium
- The proposed ROE takes account of market data for investor-owned U.S. water utilities and includes an allowance for financing flexibility, which represents the utility’s ability to maintain financial integrity and attract capital on reasonable terms.
- As a result of this analysis and review, it was determined that the applicable ROE for EPCOR Water is 10.875%. The high and low end of the range of test results is 9.6% to 12.0% and the proposed ROE falls within this range. The table below provides the detailed analysis that supports this range. The graph below illustrates the relative position of the proposed ROE target and the effective ROE relative to the above range.



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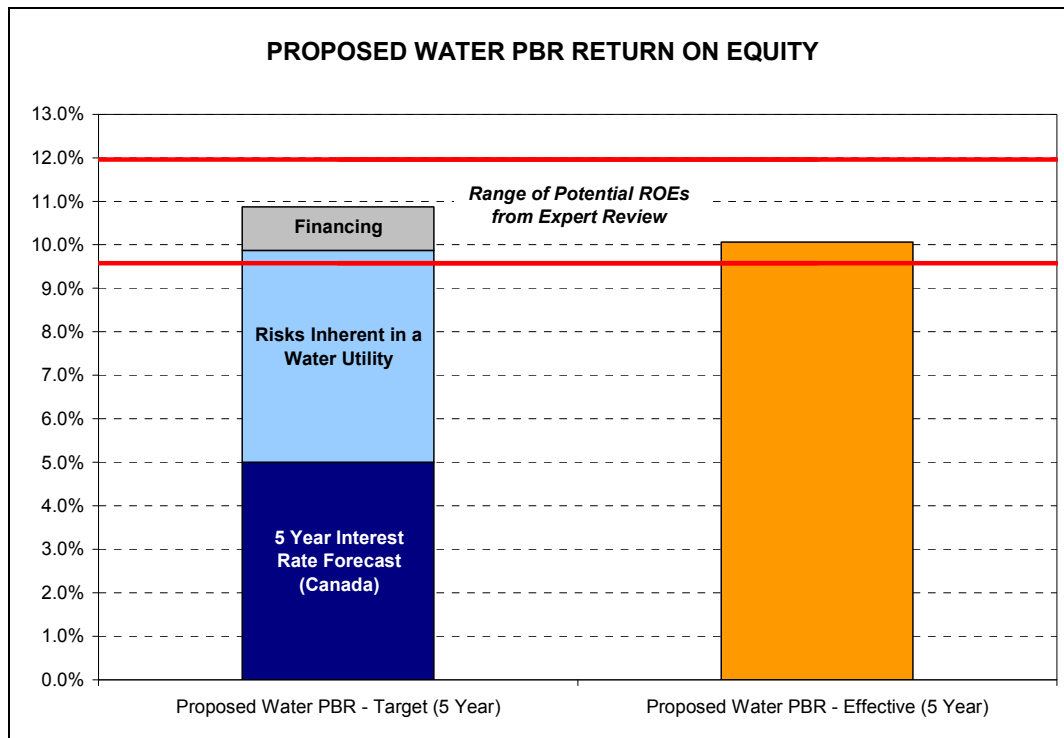
Risk Premium Tests		Low	High
Risk-Adjusted Equity Market Premium			
Risk-Free Rate	A	5.0%	5.0%
Equity Market Return	B	11.25%	12.25%
Equity Market Risk Premium	C = B - A	6.25%	7.25%
Relative Risk Adjustment	D	0.65	0.70
Utility Risk Premium	E = D x C	4.1%	5.1%
Bare Bones Cost of Equity	T1 = A + E	9.1%	10.1%
Discounted Cash Flow Analysis			
Risk-Free Rate	A	5.0%	5.0%
Utility Risk Premium	F	4.4%	4.7%
Bare Bones Cost of Equity	T2 = A + F	9.4%	9.7%
Historical Utility Risk Premium			
Risk-Free Rate	A	5.0%	5.0%
Utility Risk Premium	G	5.5%	6.5%
Bare Bones Cost of Equity	T3 = A + G	10.5%	11.5%
Average - Risk Premium Tests	T4 = (T1+T2+T3)/3	9.7%	10.4%
Discounted Cash Flow (DCF) Tests			
U.S. Water Utilities	T5	8.5%	10.5%
Average - Risk Premium, DCF Tests	T6 = (T4+T5)/2	9.1%	10.5%
Financing Flexibility	H	0.5%	1.5%
Return on Equity Range	T7 = T6 + H	9.6%	12.0%

- A Risk free rate is the rate for 30 year Government of Canada bonds
- B Equity return is the equity market return for an average risk Canadian company
- C Equity risk premium is the equity return premium for an average risk Canadian company
- D Relative risk adjustment is the relative risk for a utility versus an average risk Canadian company
- E Utility risk premium calculated from relative risk adjustment to market return
- F Utility risk premium directly calculated from discounted cash flow analysis
- G Utility risk premium directly calculated from a review of historical data
- H Financing flexibility

- The relationship between ROE and the water rate is that a 0.5% difference in ROE is approximately equivalent to only 35 cents per month to an average residential water bill but reduces EPCOR's income by almost \$2 million/year for water sales alone.



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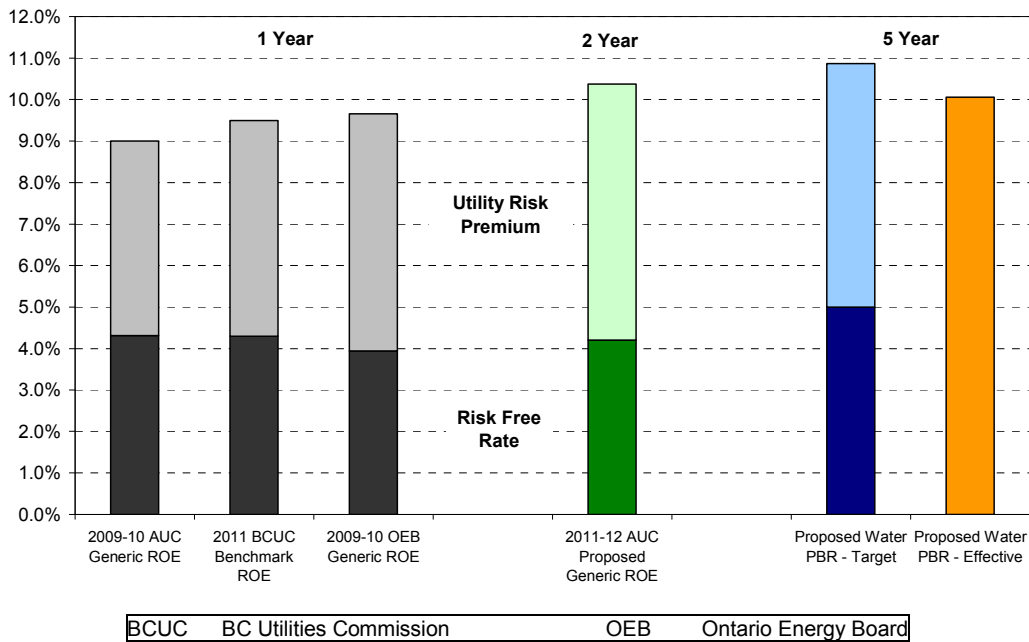
2. Proposed ROE and the AUC “Generic” ROE

- The proposed ROE for EPCOR Water is not comparable to the last approved AUC Generic Return of 9%. The 9% Generic ROE is for the years of 2009 and 2010 and covers a one year interest rate forecast time horizon. Furthermore, the AUC’s generic ROE generally applies to situations where cost of service rate setting with deferral accounts and “true-up” mechanisms are used.
- The generic ROE assumes all utilities have the same total risk (business plus financial risk). The AUC allows (“deems”) different common equity ratios for different levels of business risk. The utilities with the lowest business risk are allowed the lowest common equity ratios. The utilities with the highest business risk are allowed the highest common equity ratios giving them the lowest financial risk. By doing so, the same “generic” ROE can be applied to all utilities. EPCOR Water’s proposed ROE is based on the actual equity ratio, not a “deemed” level to adjust for business risk.
- During the five years of the PBR period, EPCOR Water assumes operational and financial risk, with limited ability to apply for a correction to its rates to counteract the impact of unforeseen events.
- Other regulators in Canada have approved “generic” or “benchmark” ROEs at higher than 9% for a comparable one year interest rate forecast horizon.
- Currently, the AUC is considering evidence submitted by utility companies to increase the generic return to 10.375%, based on a two year interest rate forecast time horizon.
- Recent allowed ROEs for U.S. water utilities of similar risk to EPCOR Water have averaged approximately 10.5%, corresponding to actual risk-free rates lower than the 5% forecast for the PBR period.



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**GENERIC RETURNS POOR COMPARATOR to
PROPOSED WATER PBR RETURN ON EQUITY**



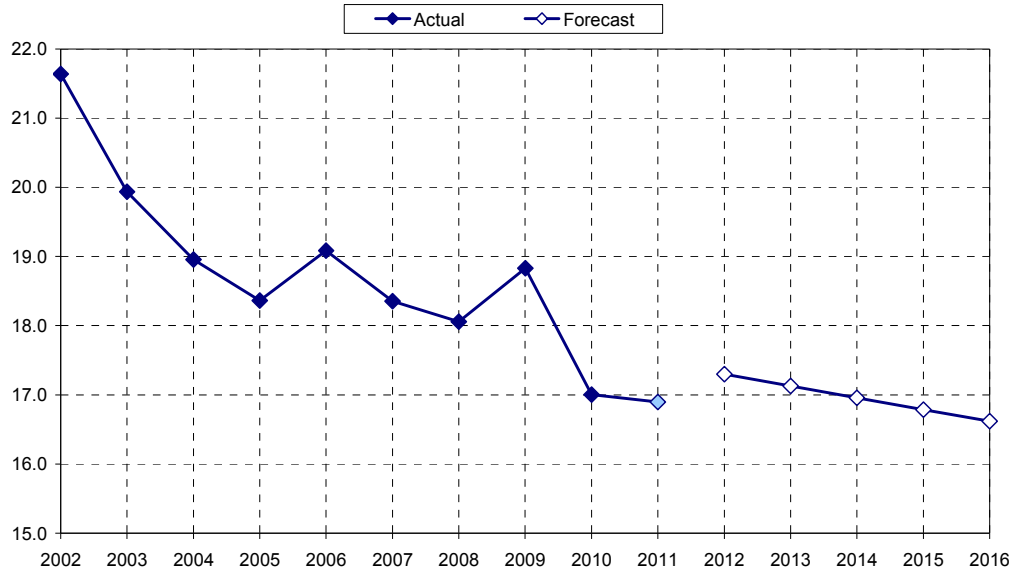
3. EPCOR Water Has Unique Risks

- Declining consumption patterns for water introduces greater risk within a PBR framework for which there is no “off-ramp” or deferral accounts for consumption. Water consumption in Edmonton is structurally declining. This means that independent of annual weather-related temperature swings, the underlying consumption trend is decreasing, as shown in the graph below. The driving force for this decrease is water efficiency fixtures and behavioural changes.
- As result, in order to determine water rates for the next PBR period, an *assumption* of future water demand needed to be made. Based on a review of the trends, this decline is assumed to be 1% per year, which aligns with the City of Edmonton’s *The Way We Green* document.
- The PBR forecasted water consumption is reasonable based on a review of recent data, but it is by no means conservative and actually requires water consumption to *increase* for 2012 and 2013 relative to 2010 and 2011.
- In the summer, weather plays a strong role in determining water consumption and therefore consumption could be either above or below the forecast in these months. In winter months, the adoption of water conserving fixtures and continued behavioural changes may result consumption decreasing to lower than planned levels.
- In 2010 and 2011 year to date, for example, water consumption was well below budget in both summer and winter months. The summer result was due to weather but the winter result was likely due to conservation. At this point, it is unknown whether the winter trend will continue and hence EPCOR Water has chosen to base the PBR on a “mid range” consumption forecast derived from a wider historical data set.
- It should also be noted that for the next PBR, in order to support further water conservation, a three tier residential rate structure has been proposed. This rate structure may drive more conservation than what has been assumed. Given this, there is greater risk that water consumption will be lower versus higher than planned.



Topic 1: Return on Equity

EDMONTON WATER CONSUMPTION - RESIDENTIAL (m³/Customer/Month)



- Consumption risk is further magnified by the water rate structure. EPCOR Water collects more than 80% of its revenue from consumption based charges (to encourage conservation) while only about 20% of its operating costs are variable, which introduces further revenue risk. This is the opposite of a typical gas and electric distribution utility. The AUC Generic return has mostly been applied to gas and electric distribution utilities.
- To illustrate the rate return risk impact of having a low versus high percentage of revenue recovered from consumption charges, a scenario was constructed assuming that EPCOR Water had low consumption charges and a high fixed charge. The impact of a water consumption decrease for both the base case and this scenario is as follows:

Projected 2012 - 2016 PBR	Revenue Based Mostly on Variable Rate		Revenue Based Mostly on Fixed Rate	
	Base Case Water Sales	Low Water Sales	Base Case Water Sales	Low Water Sales
Residential Water Consumption (m ³ /Month)	17.0	16.0	17.0	16.0
% Revenue from Consumption Charges	82%	82%	18%	18%
Consumption Charge (Average) (\$/m ³)	\$1.88	\$1.88	\$0.42	\$0.42
Fixed Charge (\$/Month)	\$7.10	\$7.10	\$31.93	\$31.93
Average Revenue (M\$/Year)	\$211	\$206	\$211	\$210
Return on Equity (%)	10.9%	9.5%	10.9%	10.6%

- As shown in the above table, with the current residential rate structure, a decrease in residential water sales of only 6% results in a decrease in revenue by \$5 million/year and a decrease in the ROE by 1.4%. If the rate structure was such that revenue was recovered mostly due to fixed charges (similar to a gas or electric distribution utility), that same decrease in water consumption would decrease revenue by only \$1 million/year, and decrease ROE by 0.3%.



Topic 2: Corporate Shared Service Costs

Topic: Corporate Shared Service Costs

Request:

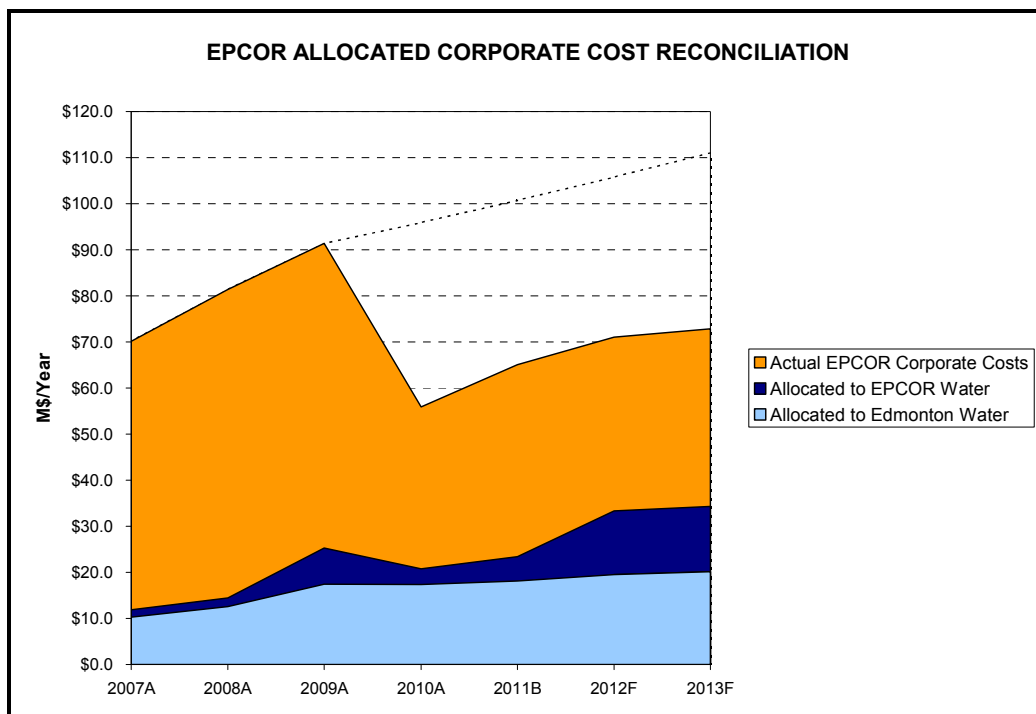
Return to City Council a more complete explanation of the allocation of corporate shared service costs, as referenced in the September 1, 2011, Financial Services report 2011CA1232.

Response:

Corporate Shared Service Costs allocated to EPCOR Water's Edmonton operations are a product of EPCOR's total corporate shared service costs and the allocation method, and is therefore explained in the following 3 sections:

1. Total EPCOR corporate shared service costs

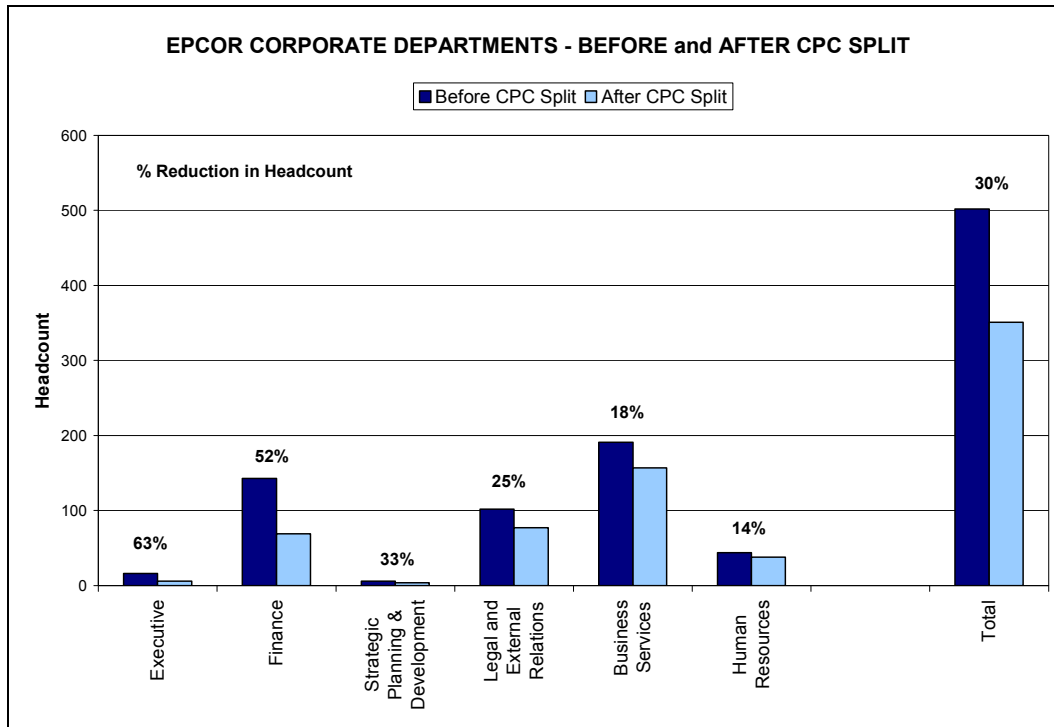
- Over the last PBR period (2007 – 2011), EPCOR's total corporate shared service costs increased above inflation for several reasons. In 2009, EPCOR completed a major re-organization in which its generation business, which represented about half of the company, was divested into a separate company Capital Power Corporation.
- Prior to the Capital Power sale, corporate costs increased above inflation primarily due to investments in IT infrastructure, strategic planning/organization design, increased corporate governance costs (including legal) and head office / rent costs.
- The Capital Power split resulted in further corporate cost increases due to diseconomies of scale, the result of having to allocate fixed shared service costs across a smaller business. The impact of this is difficult to calculate precisely due to revisions to the corporate cost allocation methodology and restructuring of corporate service departments which occurred at the same time.





Topic 2: Corporate Shared Service Costs

- In the process of separating the company into EPCOR and Capital Power, efforts were made to minimize the impact of this diseconomy of scale. Staff count reductions were made in all EPCOR corporate departments, with the percent reduction varying by function, depending on the nature of that function. Overall, EPCOR corporate staff count was reduced by 30%.

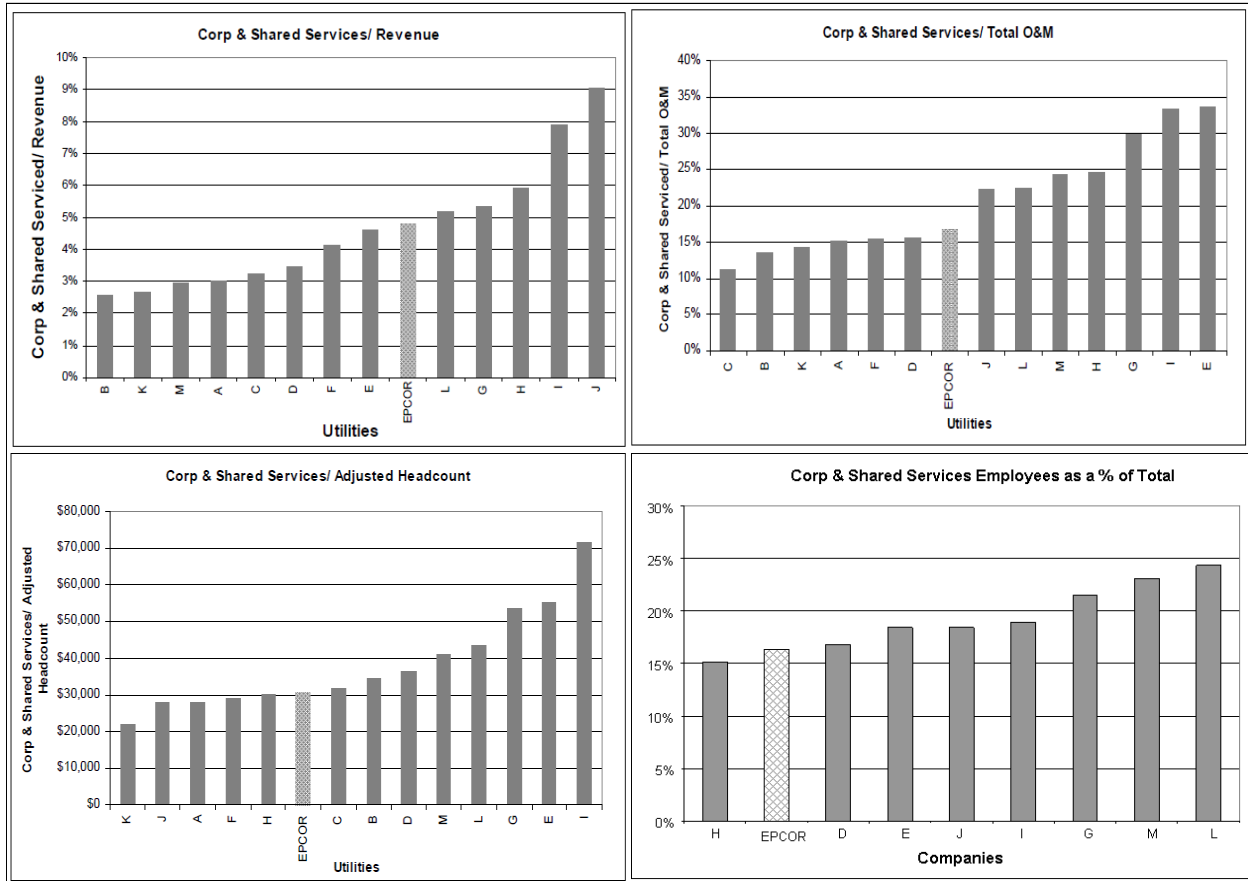


- It is expected that as EPCOR eventually sells down its holdings in Capital Power and EPCOR reinvests in new growth, the new operations will take on an increasing share of EPCOR corporate costs. Over time, scale efficiencies are expected to return.
- Having noted the above future return to scale efficiencies, it is also very important to note that from a regulatory point of view, the question as to whether corporate costs are reasonable or not is independent of the prior state of the company. In EPCOR's case, customers in prior periods benefitted from scale efficiencies as a result of EPCOR owning a large generation business.
- One test of reasonableness is to compare corporate costs with other utilities. It is generally difficult to compare corporate costs from one company to another on a common basis due to organizational differences among companies. That is, different companies make different choices about how shared services are charged or allocated to operating units.
- Following the Capital Power split, EPCOR engaged PA Consulting to provide an independent assessment of the reasonableness of its corporate service costs relative to a panel of North American utilities. The study was completed in 2009 and looked at the following relative measures of corporate costs:

- Corporate costs as % of revenue
- Corporate costs as % of operating and maintenance costs
- Corporate costs per headcount
- Corporate staff count as a % of total staff count



Topic 2: Corporate Shared Service Costs



- As the above graphs from the PA Consulting report clearly show, EPCOR's total corporate costs are low to mid range relative to the panel of North American utilities.
- PA Consulting concluded that EPCOR's corporate services costs, both on an overall basis and department-by-department, are consistent with industry norms and are reasonable.

2. Corporate Allocation Methodology

- The amounts allocated to EPCOR Water utilize an allocation methodology which is applied commonly across all EPCOR business units. Within EPCOR Water, amounts are allocated on a similar allocation basis between its regulated and non-regulated business. Any amounts which are not recoverable by an individual business unit are not borne by another business unit's customers. They become non-recoverable costs, effectively reducing net income of EPCOR Utilities Inc.
- In its 2009 report, PA Consulting found that EPCOR's method of allocating the corporate services costs to the business units is reasonable and consistent with good industry practice.
- A review of the allocation basis was also completed by Grant Thornton in 2011 as part of the due diligence review of the Water PBR application. This review concluded that the cost allocators were found to be reasonable and relevant.



Topic 2: Corporate Shared Service Costs

- Starting in 2010, the allocation approach has been refined with the objective of greater simplicity, transparency and predictability. The costs associated with a corporate services department will be allocated on one of two bases: (1) using a single “functional cost causation allocator” or (2) a common “composite cost causation allocator”.
- A functional cost causation allocator has been used where the costs can be logically allocated using an identified cost causation driver (such as headcount). The composite cost causation allocator has been used where the costs cannot be allocated using a functional cost causation allocator. Composite cost causation is used for corporate services that are of a governance nature as it is appropriate that these types of costs be allocated based on a combination of the business unit’s share of revenues, assets, capital expenditures and headcount.
- Based on the above, the table below shows the corporate cost allocators used for the 2012 – 2016 Water PBR.

CORPORATE COST ALLOCATORS	
Governance	
Executive & Executive Assistant costs	Composite – EUI Revenue, Assets, CapEx, Headcount
Board Costs	Composite – EUI Revenue, Assets, CapEx, Headcount
Corporate Finance	
Payroll Processing	Functional Cost Causation - Headcount
Accounts Payable	Functional Cost Causation - Invoice Lines by Business Unit
All Other Finance Functions	Composite – EUI Revenue, Assets, CapEx, Headcount
Treasury Physical Risk Management	PPE, Customer Rights
Treasurer – Corporate Finance	40% PPE, 30% CapEx, 30% Acquisitions
Treasury Operations	50% of (NI + Depreciation), 50% Debt
Risk Assurance and Advisory	Composite – EUI Revenue, Assets, CapEx, Headcount
Human Resources	Functional Cost Causation - Headcount
Business Services	
Planning & Governance	Functional Cost Causation - Headcount
Major Capital Projects	Functional Cost Causation - Headcount
Application Services	Functional Cost Causation - Headcount
Infrastructure Operations	Functional Cost Causation - Direct IS Costs
Purchasing	Functional Cost Causation – PO Lines
Mailroom	Functional Cost Causation – Headcount
Fleet Services	Functional Cost Causation – # of Vehicles
Disaster Recovery Planning	Functional Cost Causation - Direct IS Costs (exclude Corporate)
Inventory & Warehousing Management	Functional Cost Causation – Headcount for Stores
Contract Management	Functional Cost Causation – PO Lines
All Other SCM Functions	Composite – EUI Revenue, Assets, CapEx, Headcount
Legal and External Relations	
All Legal and Compliance Functions	Composite – EUI Revenue, Assets, CapEx, Headcount
Corporate Communications	Functional Cost Causation - Net Income
Corporate Marketing Administration	Functional Cost Causation - Net Income
Internal Communications	Functional Cost Causation - Headcount
Community Relations & Public Consultation	Composite – EUI Revenue, Assets CapEx, Headcount
Government Relations	Composite – EUI Revenue, Assets, CapEx, Headcount
Regulatory Affairs	Composite – EUI Revenue, Assets, CapEx, Headcount
Health, Safety & Environment & Technical Training	Functional Cost Causation - Headcount
Strategic Planning	Composite – EUI Revenue, Assets, CapEx, Headcount
Incentive and Other Compensation – Corporate	Composite – EUI Revenue, Assets, CapEx, Headcount
Asset Usage Fees	
Backup/Emergency Generator	Square Footage and Average of Corporate Costs
Disaster Recovery Information System	Functional Cost Causation – Number of IS Applications
Disaster Recovery Leasehold	Square Footage and Average of Corporate Costs
Fibre Optic Line	Functional Cost Causation – Number of PC Devices
Furniture and Fixtures	Average of Corporate costs per BU
HR System	Functional Cost Causation – Headcount
Corporate Information System	Functional Cost Causation – Direct IS Costs
Leasehold Improvements	Square Footage and Average of Corporate Costs
Oracle	Weighted Average Costs of Corporate Finance and PO Lines per BU
Telephone System Upgrades	Square Footage and Average of Corporate Costs
Vehicles	Average of Corporate Costs per BU



Topic 2: Corporate Shared Service Costs

3. EPCOR Water Edmonton Operations for Water Services

- Over PBR 2, Edmonton Water corporate costs increased by about \$8 million in total, of which about \$5 million was due to the CPC split (taking into consideration inflationary effects), with the balance IT infrastructure, organization and corporate governance costs. Allocations to non-Edmonton business lines reduced corporate costs allocated to the Edmonton water system by \$3 million over this time period.
- For PBR 3, the forecast is for corporate costs allocated to Edmonton water operations to increase by another \$4 million in total from 2011 to 2016, of which IT system investment will be \$1.2 million, costs associated with the new EPCOR Tower and Treasury cost increases about \$1.2 million and the remaining balance being inflation (about 3% per year). Further allocation of costs to non-Edmonton operations will reduce corporate costs by \$1 million. Overall, this represents an increase in corporate costs allocated to Edmonton water operations (excluding Gold Bar) by 4.5% per year. Gold Bar's corporate allocations are forecast to increase from 2010 Actual of \$5 million to \$6 million by 2016 or an average of about 3% per year.

PBR 2 RECONCILIATION	M\$
2007 Allocated Corporate Costs	\$10.3
IT Related (Infrastructure & System Upgrades) and EPCOR Tower assets	\$1.8
Strategic Planning, Organizational Redesign & Labour Negotiations	\$1.0
Legal, Environment & Corporate Responsibility Reporting	\$0.4
Higher Allocations to Non-Edmonton Water Operations	(\$3.0)
Inflation & Other	\$1.5
Capital Power Loss of Economy of Scale	\$5.2
Head Office Rent and Supply Chain Costs	\$1.0
	\$7.9
2011 Forecast	\$18.2
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PBR 3 RECONCILIATION	
2011 Forecast Allocated Corporate Costs	\$18.2
IT Related (Infrastructure & System Upgrades) and EPCOR Tower assets	\$1.2
Higher Allocations to Non-Edmonton Water Operations	(\$1.0)
Inflation & Other	\$2.6
Treasury Cost increases	\$0.5
Head Office Rent and Supply Chain Costs	\$0.7
	\$4.0
2016 Forecast	\$22.2



Topic 3: Rebasing

Topic: Rebasing

Request:

Return to City Council a more detailed rationale for the proposed re-basing.

Response:

The City's Review of Reasonableness report Financial Services 2011CA1232 in respect of Bylaw 15816 included two comments regarding the rebasing included in the PBR renewal.

1. **“Although the financial risks would seem to be balanced within the five year PBR period, the rebasing mechanism utilized between PBR arrangements allows cost levels above previous PBR forecasts to be built into the base for the subsequent PBR, resulting in increased rates.”**
 - Rebasing of the utility's revenue requirement is a required component of Performance Based Regulation (PBR) and it represents the process to calculate the revenue requirement for the next PBR renewal term.
 - Rebasing allows a utility to recover its prudently incurred operating costs and capital project expenditures.
 - Rebasing does not seek to recover past operating cost increases. The cost increases used in rebasing only reflect the current cost of services.
 - Costs increase for a variety of reasons. These include increases beyond inflation, increases resulting from new safety and environmental regulation, increases in the cost of labour to remain competitive, and increases resulting from customer and infrastructure growth beyond that forecasted for the current period.
 - During the 5 year term of the PBR plan, customers are protected from cost increases through the automatic inflation adjustment increases. However, some costs increase at a rate higher than inflation and these costs and the costs to provide additional capital investment beyond that forecasted during the term of the PBR plan, will only be recovered when rebasing is performed.
 - Alternatively, if EPCOR's investment in anticipated capital projects did not reach the level anticipated in the prior PBR plan, the lower level of investment would be factored into the rebased revenue requirement.
 - During PBR 2, EPCOR's level of capital investment was \$94 million higher than anticipated in the PBR Plan for 2007-2011 for the following reasons:

• City Directed	\$35 M	Accelerate renewals (\$23 M), Water line relocates (\$12 M)
• EL Smith Upgrade	\$24 M	Carry in from PBR 1
• Water Treatment Plants	\$15 M	Unplanned electrical upgrades and mechanical reliability
• Inflation above PBR Plan	\$ 8 M	Higher than planned inflation
• City Growth	\$ 7 M	Greater than expected in PBR 2
• Standards / Other	\$ 5 M	Change in road restoration standards



Topic 3: Rebasing

2. "In some cases, the rebased costs in PBR 3 would seem to reflect higher inflation-adjusted PBR 2 amounts as opposed to actual results, providing additional flexibility in the costing. Examples would be interest and depreciation expenses. Council may wish to consider the extent to which the proposed PBR 3 rebased costs reflect the best estimates."
- EPCOR Water's PBR 3 (2012-2016) forecast for operating costs is based on the best available information in respect of expected work activity and cost levels for the 2012-2016 forecast period.
 - Operating costs were forecast with reference to EPCOR Water's 2011 Forecast as submitted in the PBR 3 application, adjusted on a cost category by cost category basis to reflect impacts of anticipated changes in operating or maintenance costs arising from forecast capital projects or from operational process changes expected during the 2012-2016 PBR period. EPCOR Water prepared its forecast operating and capital costs in 2011 dollars and then adjusted for inflation to arrive at the forecast costs for 2012 and later years.
 - Depreciation and financing costs for PBR 3 were forecast starting with the 2010 Actual capital asset and debt balances and forecast 2011 capital expenditures and financing costs to arrive at 2011 Forecast ending balances for capital assets and debt. These balances become the starting point for calculating 2012 – 2016 depreciation and financing costs. In other words, as with operating costs, depreciation and financing costs forecasted for 2012-2016 reflect actual experience during 2007-2011, reflecting the investments made in capital infrastructure and related financing costs, along with planned 2012-2016 capital expenditures and related financing activities.
 - While depreciation and interest expense was lower in 2010 actual and 2011 forecast compared to what had been anticipated in the PBR II forecast for those years prepared in 2006, the 2012 forecast and thereafter is reflective of the actual pattern of those costs experienced during PBR II and not inflated PBR II forecast amounts. It should be noted the reason these costs were lower in the 2007-2011 period compared to forecast was primarily due to the delay of the EL Smith plant expansion.



Topic 4: Inflation Factor

Topic: Inflation Factor

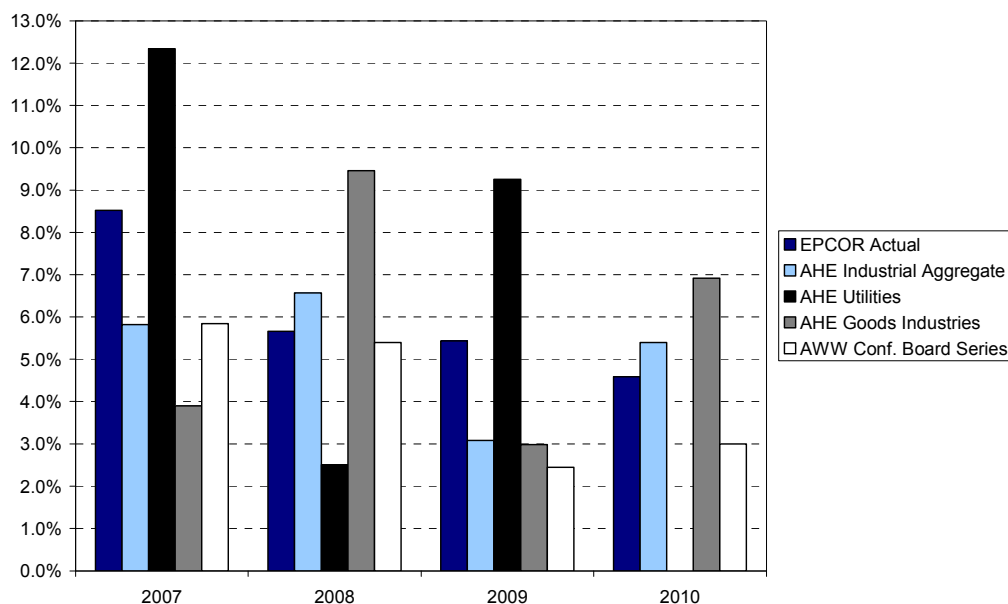
Request:

Return to City Council a more detailed rationale for the proposed inflation factor.

Response:

- In 2006, concern was raised that EPCOR Water was utilizing its negotiated collective bargaining agreement rates to determine the labour inflation rate used to set yearly water rate increases within the PBR framework. This suggested that EPCOR Water was not incented to manage labour costs effectively as the negotiated labour cost increases were simply passed on to the customer through the water rates.
- EPCOR Water is proposing to replace the current internal labour inflation factor an external indicator of labour rate increases. Specifically, the proposal is to utilize an inflation factor weighted 65% on Alberta CPI and 35% on Average Hourly Earnings – Industrial Aggregate (AHE). The 65% CPI weighting represents a decrease from the current 79% CPI weighting as this better represents EPCOR Water’s actual labour cost impact.
- Alberta CPI has been used in the prior PBR terms and provides a readily available and verifiable measure of general inflation. The AHE is also readily available and verifiable and reflective of multiple industries, including the public sector, and so is broadly based and not overly influenced by any single industry.
- Of the alternative verifiable labour inflation options, the AHE tracked closely to EPCOR’s actual labour rate increases negotiated in collective bargaining agreements:

COMPARISON OF INFLATION RATES for WATER PBR PURPOSES





Topic 4: Inflation Factor

- It is important to note that the proposal is to have the AHE index, rather than the negotiated labour rates, to adjust the rate increases once the actual AHE rate is known at the end of the year. It will still be necessary to forecast the labour inflation rate for the following year. There are relatively few forecasts of Alberta wage and salary series and no forecast of the AHE is available. However, the Conference Board of Canada provides a forecast of wages and salary increases for Alberta which is readily available. Therefore, the AWW Conference Board series is proposed to be used for forecasting purposes.
- It is also important to note that regardless of labour inflation index chosen, as a result of the adjustment mechanism described above, actual water rate increases will reflect the actual labour inflation rate increases over the PBR period.



Topic: Efficiency Factor

Request:

Return to City Council a more detailed rationale for the proposed efficiency factor.

Response:

- The efficiency factor (or productivity factor) is deducted from the inflation factor when establishing the annual increase in water rates from the prior year rates under a PBR.
- EPCOR Water has proposed to maintain the 0.25% efficiency factor used during 2007-2011 PBR, despite a recommendation from Dr. David L. Ryan, an economist at the University of Alberta, who suggests that “the most reasonable forecast of productivity growth in the utility industry in Alberta for the next several years is that it will be zero.”
- Dr. Ryan came to this conclusion by analyzing productivity data from Alberta utilities over the last five years. Specifically, he analyzed the Real Domestic Product (RDP) per utility worker in Alberta and determined that the average productivity growth during the period 2006 to 2011 was -0.2%. During this time period, water rates were based on a productivity factor of +0.25%. Assuming that EPCOR Water workers had the same productivity as the average Alberta utility worker, this means that EPCOR Water needed to actually deliver productivity increases of $0.2\% + 0.25\% = 0.45\%$ per year during the last PBR period.
- Dr. Ryan presented further evidence in support of the lack of productivity gains in the form of data from Statistics Canada and the Centre for the Study of Living Standards (CSLS). This data clearly indicates that over the last ten years, productivity has decreased in both the Canadian and Alberta utilities sectors.

Reference	Sector	Year	Productivity
Statistics Canada	Canadian Utilities	2000 - 2009	-0.6%
		2005 - 2009	-2.6%
CSLS	Alberta Utilities	1997 - 2007	-2.3%
		2003 - 2007	-1.1%

- It appears that other Alberta utilities have reached the same conclusion with respect to productivity factors, as shown by a review of recent AUC filings. All five Alberta electric/gas utilities applying for the PBR structure in July 2011 have applied for a negative productivity factor:

Company	Years Applicable	Productivity Factor	Status
NERA Consultant	-	0.85%	Recommendation to AUC ¹
ENMAX	2007 - 2013	1.2%	Approved in 2009 ²
EPCOR D&T	2013 - 2017	-0.8%	Applied ³
AltaGas	2013 - 2017	-1.3%	Applied
ATCO Electric	2013 - 2017	-2.0%	Applied
ATCO Gas	2013 - 2017	-2.0%	Applied
FortisAlberta	2013 - 2017	-1.0%	Applied
Average of Applied		-1.4%	

¹ Concerns with NERA Study were noted, including a sample period that went back too far (1972-2009)

² ENMAX approval 0.8% productivity factor, 0.4% stretch factor

³ Expert recommended -1.0% productivity factor with a stretch factor of 0.2% because EDTI does not have earnings sharing



Topic 5: Efficiency Factor

- EPCOR Water has chosen to maintain the 0.25% efficiency factor to demonstrate it is committed to continuous improvement. EPCOR Water considers the proposed 0.25% efficiency factor as competitive, providing an incentive to find operational efficiencies, and share these benefits with customers through rate increases which are lower than inflation over the PBR period.
- Due to ever increasing safety and training requirements in order to ensure that EPCOR Water's operations meet the highest safety and competency standards, it will be a challenge to maintain and indeed improve worker productivity over the next PBR period.
- In addition to this, it should be noted that certain significant operating costs (power and chemicals) generally can and have increased at rates above CPI:

Summary of Water Treatment Input Price Increases

	Power	Alumnum Sulphate	Activated Carbon	Caustic Soda
PBR 1	-0.5%	-0.3%	-2.1%	1.5%
PBR 2	-1.7%	8.3%	11.7%	12.8%

- EPCOR Water has been successful at contracting favourable power prices in the past. For PBR 3, contracted power prices will be higher than estimated inflation. Power represents about 7% of operating costs.
- For chemicals, prices have increased at rates far higher than inflation in the last PBR and this trend is expected to continue in the next PBR. Chemicals represent about 6% of operating costs.
- In order to achieve the target income and return within a PBR framework, EPCOR Water needs to find even more efficiencies to offset these additional impacts.



Topic: Wastewater treatment performance measure for Customer Service Index

Request:

Return to City Council option(s) for wastewater treatment performance measures on customer relations, to replace the meeting frequency performance measure.

Response:

- The 2012 – 2016 PBR will be the first PBR period that includes Gold Bar Wastewater Treatment plant. As such, it will be the first time that formal PBR performance measures will be instituted at Gold Bar, even though the plant operates currently with a number of important performance measures.
- In the development of the Gold Bar PBR measures, significant attention was placed on ensuring that an appropriate effluent quality measure was included. However, it was also recognized that it was important for Gold Bar to continue to engage the surrounding the community and a performance measure related to tracking the number of meetings with the community was included in the Gold Bar PBR submission.
- As a result of feedback from the Utility Committee, a revised Gold Bar customer service measure was developed. This revised measure is more measurable. The revised measure is the percentage of area resident concerns responded to within 24 hours and the benchmark has been set at 90% for this first PBR.
- The rationale for this performance measure is as follows:
 - The scope is well defined and measurable
 - Addresses the full range of potential public concerns – odour, noise, flaring, traffic etc.
- The rationale for the 90% performance benchmark is due to the fact that Gold Bar is part of a larger industrial area, which includes the Clover Bar site and several other large industrial facilities. As a result, it is often the case that there is lack of clarity as to which facility is responsible for the issue and therefore where the response and follow up needs to be. The 24 hour commitment also applies to weekends.
- Other potential performance measures were considered and not selected. A summary of them is as follows.

Ranking	Customer Service Measure	Specific	Measurable (Auditable)	Attainable	Relevant	Timely
1	Percentage of Response to Customer Issues – Gold Bar Operations	Well defined Scope	311 / EPCOR Database	Customer Focus required	Measures overall customer response – entire social licence of the Gold Bar plant	24 hour response
2	Tour Satisfaction Index	Well defined Scope	Tour database	Customer Focus required	Not directly tied to operation	No timeliness included
3	Events held at EWMCE	Well defined Scope	Event database	Customer Focus	Not directly tied to operation	No timeliness included
4	Odour Complaints – Gold Bar	Odour Complaints well defined scope	Odour Complaint database	New operating regime (EPT and Fermenter) may impact performance	Directly related to operation and social licence of the Gold Bar Plant	Annual performance appropriate time span

- The proposed Bylaw 15816 amendment if the revised measure proposed is accepted is provided in Attachment 1.



Attachment 1: Proposed Bylaw 15816 Amendment

Schedule 3 Performance-Based Water Rates and Wastewater Treatment Rates

Current:

4.3 Customer Service Index

The customer service index is calculated based on the Public Engagement Index at the Gold Bar wastewater treatment plant. The maximum value of this system index is 5 base points, as calculated under the formula:

$$5 \times \frac{Mclc}{2}$$

Where,

Mclc means the number of Community Liaison Committee meetings held each year

There are no bonus points available for the customer service index.

Proposed:

4.3 Customer Service Index

The customer service index is calculated based on the response to customer inquiries at the Gold Bar Wastewater Treatment Plant. The maximum value of this system index is 5 base points, as calculated by the formula:

$$5 \times \frac{AP_{Cl}}{TP_{Cl}}$$

Where:

AP_{Cl} = Annual percentage (%) of customer issues responded to within 24 hours of receipt by EPCOR.

TP_{Cl} = Target percentage (%) of customer issues responded to within 24 hours of receipt.
(Target = 90% for 2012 – 2016)

A separate database will be developed to log the customer inquiries and capture the associated response actions.

There are no bonus points available for the customer service index.