C2016-0688
ATTACHMENT1

UTILITIES INDICATIVE RATES REVISED FOR 2017 AND 2018

2016 SEPTEMBER 19

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1.0 INTRODUCTION

This report presents Administration's analysis and recommendations regarding opportunities to reduce the Utilities approved rate increases for 2017 and 2018. Through the process leading up the presentation of the Action Plan 2015-2018 budget and business plan, Utilities received Council approval for indicative rate increases for the water and wastewater lines of service. These rate increases were approved by Council in support of the Utilities achieving compliance with their overall financial plan. The financial plan is comprised of financial policy areas, targets and timeline for achieving financial sustainability and is a long term plan to manage Utilities' financial risk.

In 2016 May through UCS2016-0413, progress towards compliance with policy targets and the timeline set out in the financial plan was reported to Council. The Utilities' progress on the financial plan was based on the approved Action Plan rate increases, specifically a blended rate increase for water and wastewater of 8.3 per cent per year for 2017 and 2018.

1.1 CONTEXT FOR REVIEW OF UTILITIES' ACTION PLAN APPROVED RATE INCREASES

In response to the financial impacts felt by the Calgary community related to the current economic conditions, Administration has undertaken a review of all opportunities to reduce the magnitude of annual rate increases. The important role that The City of Calgary has in providing stimulus through investment during the economic downturn has been considered. Managing Utilities' risk and delivering on action plan commitments is being balanced with the need to reduce the magnitude of water and wastewater bill increases for Calgarians.

2.0 UTILITIES' BUSINESS MODEL

Together, the Water Services and Water Resources business units provide water and wastewater services for customers in Calgary and for some municipal customers outside of Calgary. The business operates under a utility model, the key aspects of the Utilities model include:

- Self supporting - Utility revenues must cover all the costs to provide the Utilities' services. The Utilities' revenue consists primarily of rate revenue which is based on the Council-approved utility rates for Water and Wastewater. Additionally, the Utilities collect an off-site levy on development of new and existing areas. The off-site levy is used to fund the full cost of infrastructure investments required to support new growth.
- Rates are based on the cost of providing service - A cost of service study is carried out to ensure costs are being recovered appropriately by each customer class and that the right mix of fixed and volumetric charges are in place. The goal of cost of service is to balance fairness and equity to customers, financial sustainability of the utility, as well as water resource management.
- Capital intensive - The nature of the Utilities requires ongoing capital investment in infrastructure. Investment is required to develop and maintain assets to provide services to existing and future customers, while continuing to achieve regulatory and environmental requirements.

- Financial policies articulated in the Utilities Financial Plan are specific to their operations, and include policies related to debt, debt servicing and management of debt, franchise fee and return on equity payments made annually to The City, and the target balance and use of reserves.

Each of these elements of the utility business model can present an opportunity to manage or adjust the required utility rate increases.

These drivers and the financial performance of the Utilities to date do present opportunities for reduced rate increases in the short term. However, reducing rate increases in the short term will have an impact on utility rates in the next business cycle.

2.1 SELF SUPPORTING

2.1.1 Utility Rate Revenue

Utility rate revenue is generated through basic service charges and volumetric rates that are applied by customer class and are calculated to reflect the cost of providing services to customers.

The Utilities rate revenue is partially dependent on customer consumption. Part of the Utilities' integrated approach to Watershed Management includes a Water Efficiency Plan and related water conservation programs. Water conservation efforts aim to reduce water consumption and are important to ensure the long term water supply reliability and sustainability. As consumption decreases, rates need to be adjusted to compensate for the declining revenues since the Utilities' costs are largely fixed in nature. New accounts attributed to growth help to offset the impacts of conservation efforts on the revenues.

2.1.2 Off-Site Levies

In accordance with C2016-0023, Bylaw 2M2016, the full cost of growth-related infrastructure is recovered through the collection of off-site levies from developers. Off-site levy revenue is used to pay principal and interest charges for major water and wastewater infrastructure to service new growth. Examples of off-site infrastructure include leading infrastructure such as water and wastewater treatment plants, pump stations, reservoirs, water feeder mains, and sanitary sewer trunks.

The current economic environment injects uncertainty and risk into actual revenue collection. Off-site levies are charged when developers enter into either a development agreement for greenfield areas or a development permit for existing areas. If development does not materialize as projected, the result would be an unfavorable revenue variance, which would require mitigation. The current year-end projection of off-site levy revenues for 2016 is $15.1 million unfavourable to budget.

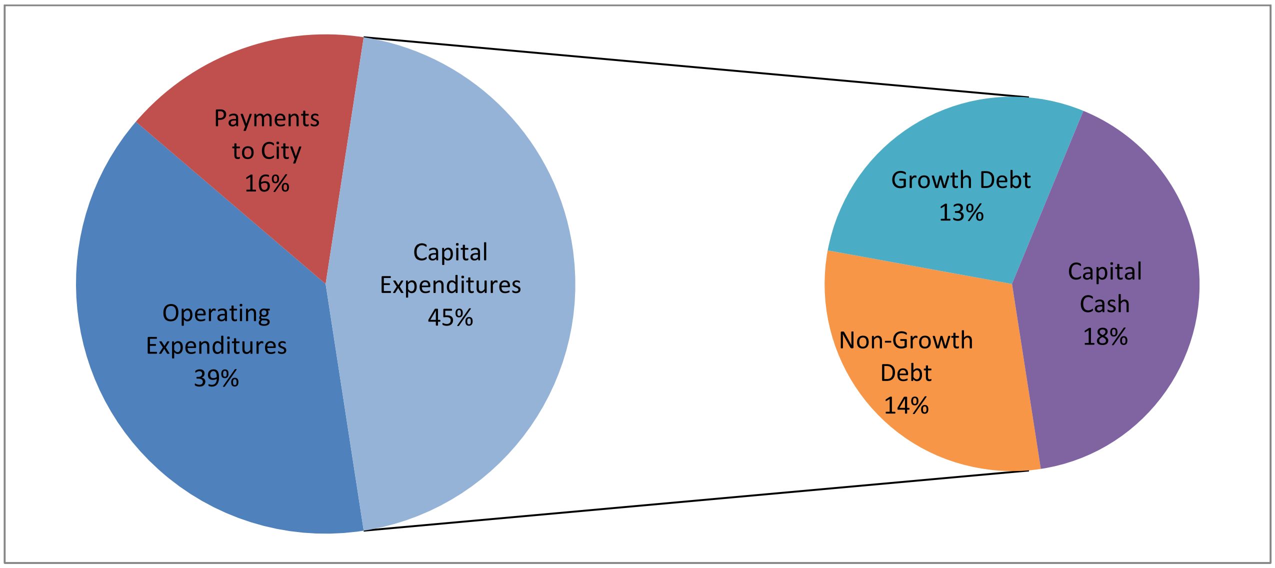
2.2 COST OF SERVICE BASIS

Cost of service is a methodical process by which the costs of providing a service are assigned to customer classes in proportion to the benefit derived by that customer class. In addition to ensuring the equitable allocation of costs, these studies are an analytical tool to support financial management, and provide validation and documentation for ratemaking decisions.

2.3 CAPITAL INTENSIVE

As the city continues to grow, so too does the requirement for infrastructure necessary to provide reliable service to Calgarians. The nature of the Utilities requires significant ongoing capital investment in infrastructure. The capital is required to build and upgrade facilities and pipe networks to treat and distribute potable water, and to collect and treat wastewater. Of the current Utilities operating budget, approximately 45 per cent is capital related, as shown in Figure 1.

Figure 1: Utilities - Expenditure Breakdown 2015 Actual



The Utilities' capital requirements continue to experience increased pressure due to factors such as:

- Aging infrastructure, which impacts the ability to operate efficiently and effectively without service interruptions;
- Changes to regulatory and environmental requirements, which necessitate infrastructure upgrades or the construction of additional infrastructure;
- Introduction of new services or service levels, which require new or upgraded infrastructure; and
- Continued population growth, which triggers capacity upgrades and expansions.

These factors are summarized in Figure 2.

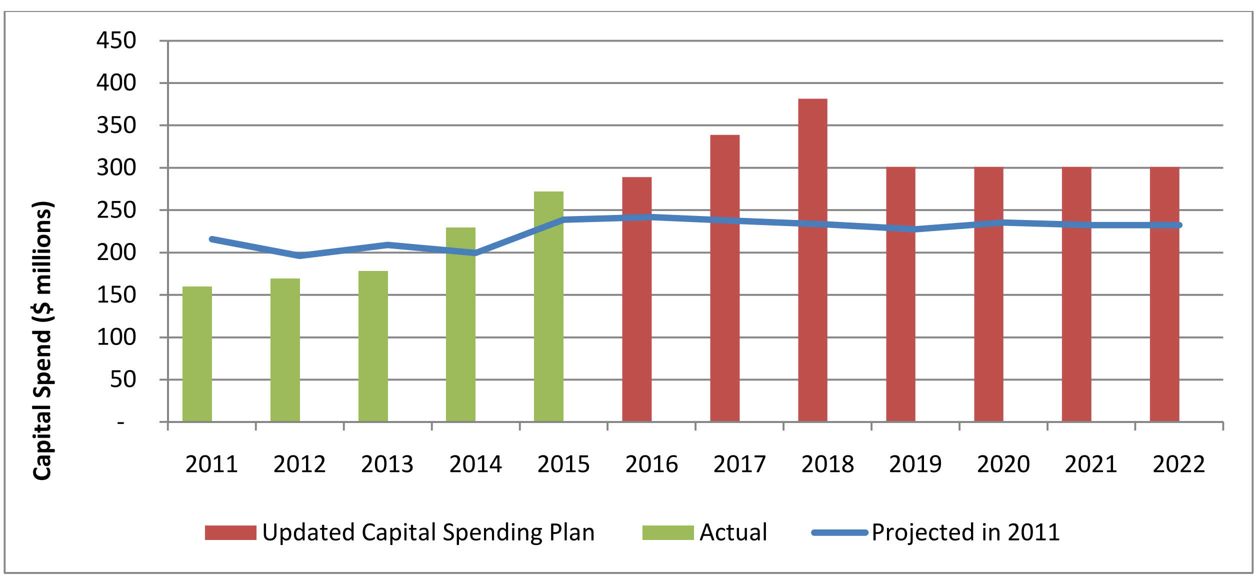
Figure 2: Investment Drivers

Investment Driver	Objective	Percentage of Water Infrastructure Investment Plan (WIIP)
Maintain assets	Maintaining, protecting and extending the life of infrastructure investments.	15% - 20%
Regulatory & Environmental Protection	Continuing to meet increasingly stringent regulatory and environmental protection requirements.	15% - 20%
Service	Continuing to provide reliable and high quality services to meet the needs of citizens.	25% - 30%
Growth	Providing infrastructure to meet the needs of a growing city.	35% - 40%

Each investment driver provides a different perspective on when and where infrastructure investments are needed. The process to prioritize investments considers the need and timing of investments in light of the four drivers. The desired outcome is to meet customer and environmental priorities while staying within the financial capacity of the Utilities.

To accomplish investments per these capital program drivers for the remainder of the 2015-2018 business cycle, the Utilities will deliver annual capital spending plans of, on average, $325 million (Figure 3).

Figure 3: Utilities – Capital Spending Plan with 2016-2018 Proposed Recast Capital Budget



2.3.1 Operating Cost of Capital Program

Over the remainder of this business cycle the Utilities' capital spending plan is on average $325 million annually and, on average, 40 per cent of the investments support growth. The operating cost of these investments and an increased focus on risk based maintenance planning and asset life cycle planning will continue to be a key focus in the Utilities.

2.4 FINANCIAL POLICIES

In addition to complying with relevant Council and Administrative policies, the Utilities maintain financial policies specific to their operations. Utility specific financial policies are approved by Council, and the requirement to achieve or maintain compliance is a driver for utility rates.

2.4.1 Financing and Use of Debt

An appropriate mix of debt and cash financing derived from maximum debt limits and minimum cash requirements is necessary to deliver water and wastewater services. A good mix of financing strengthens the financial position of the line of service while providing greater flexibility when planning for future capital requirements.

Cash financing is used for capital projects that are part of an ongoing improvement program, or will reduce operating and maintenance costs. The Utilities Financial Plan outlined a policy that the Utilities will have a target of cash financing 100 per cent of the capital maintenance projects identified in the capital budget.

Debt financing is used for capital projects that are substantial in cost and size, and where the benefits will extend over a relatively long period; this spreads the costs of the infrastructure over an appreciable portion of the useful life of the assets.

The total debt limit target of $2 billion, and debt to equity target ratio of 60 per cent, were set for the Utilities in the 2011 Utilities Financial Plan. These targets exclude Drainage related debt.

A target of 40 per cent of revenues was set for the Utilities debt servicing. As with the debt limit, this target excludes Drainage.

2.4.2 Amortization and Depreciation

The Utilities employ amortization accounting practices, and maintains depreciation rates that are aligned with generally accepted accounting principles.

2.4.3 Reserves

In 2011, the Utilities Sustainment Reserve was created to provide a measure of financial flexibility to mitigate the financial impact of significant unexpected events. The Utilities aim to maintain sufficient reserves to mitigate risk. The size of the reserve is set at 10 per cent of total revenues. The purpose of this reserve is to provide cash flow to fund minor fluctuations in both operating and capital budget expenditures, and to mitigate the risk of period shortfalls in projected revenue.

2.4.4 Return on Equity

The Utilities pay a return on equity (ROE) annually to The City. It is fixed at $42.5 million annually (Water $28.75 million; Wastewater $13.75 million).

2.4.5 Franchise Fees

Water Resources and Water Services are granted the exclusive right to provide utility services within the City of Calgary. The Utilities pay an annual franchise fee for the use of municipal rights of way. The franchise fee is calculated as 10 per cent of revenue from inside city sales of goods and services. In 2015, the Utilities franchise fees totaled $53.1 million (Water $28.6 million; Wastewater $24.5 million).

3.0 ACTION PLAN APPROVED RATES

3.1 APPROVED RATES

In 2014 May (C2014-0103), Council directed Administration to develop 2015-2018 Action Plan based on a blended utility rate increase of 8.3 per cent per year, which would enable meeting the targets set out in the Utilities Financial Plan by the end of the business cycle.

Figure 4 shows the separate water and wastewater rate increases which are used to calculate the blended rate. The blended rate is based on a weighted average of the water and wastewater rates and represents the combined impact of the two rates. The weighted average takes into consideration the impact of the separate water and wastewater increases on the average monthly household bill.

Figure 4: Action Plan Approved Water and Wastewater Rate Increases:

	2015	2016	2017	2018
Blended	8.3%	8.3%	8.3%	8.3%
Water	2.0%	2.0%	2.0%	2.0%
Wastewater	16.9%	15.8%	14.9%	14.2%

As detailed in Figure 5, the rate increase proposed for Council's approval was broken down into an increase based on operating expenditure, an increase based on a higher per year capital spend, an increase resulting from higher franchise fee payments to the corporation, and an increase required for the achievement of compliance to financial targets by 2018.

Figure 5: Action Plan Proposed Blended Indicative Rate

	Increased Operating Costs	Increased Capital Spend	Franchise Fee	Financial Policy			Estimated Total
				100%Cash Financing & 10% Reserves	Debt Limit Debt Servicing Limit	60/40 Debt/ Equity	
Budget Requirement	$29M	$100M	10% of revenues	By 2018	$2B max 40% max	By 2018	
Estimated Rate Impact	2.0%	1.6%	0.8%	1.5%	2.4%	0%	8.3%

The rate increases detailed above for the Action Plan timeframe apply to customers within Calgary, who are segmented into customer groups based on their collective demand placed on the utility systems, as determined by the cost of service methodology. The most recent cost of service study was completed in 2014 with results presented to Council in 2014 September (UCS2014-0611). This cost of service study identified considerable changes in the system use by various customer classes, resulting in the need to make adjustments to the proportion of water and wastewater revenue that is collected from the classes. These adjustments mean that customers in distinct classes will see annual rate changes that differ from the approved utility rate increase. Due to the magnitude of these adjustments, the approved phase-in plan closes 50 per cent of the cost allocation gap by 2018.

The outside city customer class is made up of Calgary's regional customers or municipalities that Calgary provides wholesale utility services to. This class is also subject to rate increases throughout the Action Plan timeframe, but these increases are based on the amount and type of service that the customer has contracted with The City for and agreed upon capital required for their specific services. The service required by regional customers, and the costs associated with the services have not been revised, and as such there will be no change to the outside city customers' rate increases.

3.2 PROGRESS ON FINANCIAL TARGETS

In 2016 May, through report UCS2016-0413, progress towards compliance with policy targets and the timeline was reported to Council. The Utilities current status relative to policy targets is presented in Figure 6.

Figure 6: Utilities financial targets

Policy Area	Financial Plan Target	2015 Actual
Debt limit	Maximum $2.0 billion	$1.64 billion
Debt service	Maximum 40% of revenues	26.5%
Cash financing of capital maintenance	100%	100%
Sustainment reserve	10% of revenues	1.2%
Debt to equity ratio	60/40	66/34

3.3 INDICATIVE RATES FOR 2019-2022

Assuming that the level of capital investment and levels of service remain relatively consistent year over year, it is forecast that, with the 8.3 per cent increases in 2017 and 2018, the utility rate increases in the 2019-2022 business cycle will be nominal.

Three factors are currently contributing to anticipated, lower than inflation utility rate increases in 2019-2022. These are:

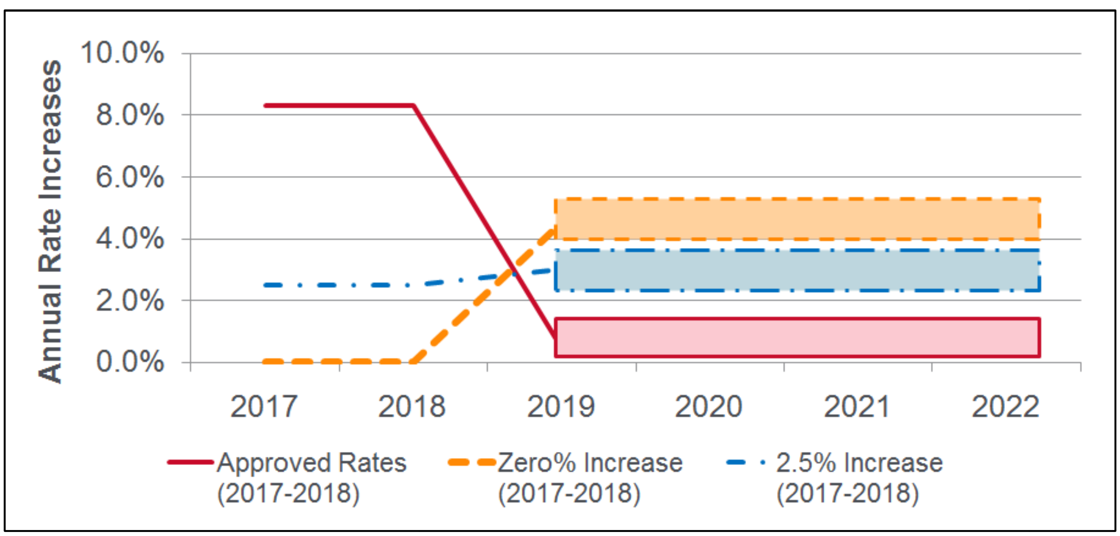
- Larger than inflationary rate increases during the action plan timeframe;
- Approval of a new standard development agreement and off-site levy bylaw in 2016 January; and
- The Utilities' performance relative to financial targets.

4.0 REVISED RATES SCENARIOS

The elements of the utility business model can all present opportunities to manage or adjust the required utility rate increases. Based on these utility rate levers, and the progress towards financial sustainability that has been achieved over the last four years, Administration has examined multiple scenarios to achieve a reduction in rate increases in 2017 and 2018.

These drivers and the financial performance of the Utilities to date do present opportunities in the short term. However, reducing rate increases in the short term will have an impact on utility rates in the next business cycle, as shown in Figure 7 below depicting options for Utilities rate increases.

Figure 7: Scenarios for Rate Increases in 2017 and 2018, and Impact on Future Rates



4.1 POSSIBLE MITIGATIONS

4.1.1 Efficiencies and Service Reductions

The Utilities have targeted finding the equivalent of a 2 per cent reduction in operating expenditures in order to ease the impact of reduced rate increases for 2017 and 2018. The reductions in operating requirements that have been identified, totaling $5.4 million annually, are predominantly efficiencies and have limited impact to services delivered to customers. The efficiencies found have leveraged the recommendations of the Water Services zero-based review, reflect the impact of lower than anticipated growth, result from a strengthened approach to energy management in the business and a focus on cost containment in the use of vehicles and equipment in operations.

4.1.2 Capital Related

Per the recommendation approved by Council on 2015 November 25 in the Proposed Adjustments to the 2016 Budget (C2015-0855), Water Resources is undertaking a recast of the capital budget for the Utilities. This will result in a Utilities capital budget more closely aligned with anticipated capital spend, still targeting an annual spend of about $325 million, and ensuring that the investment commitments made in Action Plan are fulfilled. The recast capital budget will also ensure that service levels are maintained as committed to in Action Plan.

With a corporate focus on The City's role in economic stimulus and job creation through increasing investment in the economic downturn, and because of the ability to take advantage of the favourable market for construction project pricing, it is not recommended to reduce capital investment at this time, even to mitigate the impact of reduced rate increases in 2017 and 2018.

The Utilities will deliver capital projects through a process with additional controls that ensure that budget is allocated to highest priority projects when they are ready to proceed and with the most accurate cost estimates available.

4.1.3 Financial Policy

Within the Utilities' financial policy areas, there is opportunity to mitigate the impact of reduced rate increases for 2017 and 2018 by leveraging the funds in the sustainment reserve and delaying building the 10 per cent sustainment reserve balance from 2018 to 2022.

4.2 SCENARIO ANALYSIS

Based on the factors considered above, Administration presents two options for reducing the currently approved 8.3 per cent per year utility rate increases.

Scenario A – Zero% Increases: Reduces the currently approved 8.3 per cent per year increase in 2017 and 2018 to zero per cent in 2017 and 2018, with a higher rate increase forecast for 2019-2022.

Scenario B – 2.5% Increases: Reduces the currently approved 8.3 per cent per year increase in 2017 and 2018 to 2.5 per cent in 2017 and 2018, with a similar rate increase forecast for 2019-2022.

Each of these can be accomplished through the two per cent operating efficiencies and service reductions, while maintaining the Action Plan approved capital budget priorities, but requires leveraging the funds in the utilities sustainment reserve, and delaying building the 10 per cent sustainment reserve balance from 2018 to 2022.

Consistent with the rates that were approved as part of Action Plan, revised rates for 2017 and 2018 will also incorporate Cost of Service adjustments, to continue closing 50 per cent of the cost allocation gap by 2018.

The key difference between these scenarios is in their impact to the rate increases predicted for the 2019-2022 timeframe.

4.2.1 Scenario A – Zero per cent increases in 2017 and 2018

This scenario reduces the currently approved 8.3 per cent per year increase in 2017 and 2018 to zero per cent in 2017 and 2018, resulting in higher annual rate increases in 2019-2022. The financial implications of a zero per cent annual rate increase in 2017 and 2018 are as follows:

- Compliance with financial policies is maintained with the exception of 10 per cent of revenues sustainment reserve balance by 2018, as shown in Figure 8.

Figure 8: Zero% Increases Scenario - Financial Policy Compliance

2017 and 2018 increases	Operating Budget	Capital Priorities	Cash for Capital Maintenance	Maximum Debt $B (Year)	Max Debt Service % (Year)	10% of Revenue Reserve Balance
Zero %	98% of Action Plan	100%	100%	$1.975 (2021)	26.3% (2022)	2022

- Utilities revenue is reduced by $49 million in 2017 and $102 million in 2018 from currently approved rates. This will need to be offset by reducing operating costs and delaying the building of the 10 per cent of revenues balance in the sustainment reserve.
- Reduced revenue requirement translates into savings for the typical residential metered customer summarized in Figure 9.

Figure 9: Zero% Increases Scenario - Typical Residential Metered Customer Impacts

Typical Monthly Bill – Residential metered	2017	2018
8.3% Action Plan Approved	$105.80	$113.02
Zero % Scenario	$97.56	$95.86
Monthly savings from approved	$8.24	$17.16
Annual savings from approved	$100	$209

- Overall outstanding debt required to support capital investment, and debt service ratio, are forecast to be modestly higher than with approved rate increases. These can be accommodated within the overall debt and debt servicing limits of the corporation.
- Franchise fees paid to the corporation are still 10 per cent of utility revenue however are lower than franchise fees based on the approved rate increases, by $4.9 million in 2017 and $10.2 million in 2018, for a total of $15.1 million less in corporate revenue over the 2017 and 2018 timeframe.
- Assuming that the level of capital investment and levels of service remain relatively consistent year over year, an indicative annual rate increase in the range of 4 to 5 per cent in 2019-2022.

4.2.2 Scenario B – 2.5 per cent increases in 2017 and 2018

This scenario reduces the currently approved 8.3 per cent per year increase in 2017 and 2018 to 2.5 per cent in 2017 and 2018 and similar annual rate increases in 2019-2022. The financial implications of a 2.5 per cent annual rate increase in 2017 and 2018 are as follows:

- Compliance with financial policies is maintained with the exception 10 per cent of revenues sustainment reserve balance by 2018, as shown in Figure 10.

Figure 10: 2.5% Increases Scenario - Financial Policy Compliance

2017 and 2018 increases	Operating Budget	Capital Priorities	Cash for Capital Maintenance	Maximum Debt $B (Year)	Max Debt Service % (Year)	10% of Revenue Reserve Balance
2.5 %	98% of Action Plan	100%	100%	$1.919 (2020)	26.1% (2022)	2022

- Utilities revenue is reduced by $34 million in 2017 and $72 million in 2018 from currently approved rates. This will need to be offset by reducing operating and deferring the building of the 10 per cent of revenues balance in the sustainment reserve.
- Reduced revenue requirement translates into savings for the typical residential metered customer summarized in Figure 11.

Figure 11: 2.5% Increases Scenario - Typical Residential Metered Customer Impacts

Typical Monthly Bill – Residential metered	2017	2018
8.3% Action Plan Approved	$105.80	$113.02
2.5 % Scenario	$100.03	$100.88
Monthly savings from approved	$5.77	$12.14
Annual savings from approved	$70	$148

- Overall outstanding debt required to support capital investment, and debt service ratio, are forecast to be minimally higher than with approved rate increases. These can be accommodated within the overall debt and debt servicing limits of the corporation.
- Franchise fees paid to the corporation are still 10 per cent of utility revenue however, are lower than franchise fees based on the approved rate increases, by $3.4 million in 2017 and $7.2 million in 2018 for a total of $10.6 million less in corporate revenue over the 2017 and 2018 timeframe.
- Assuming that the level of capital investment and levels of service remain relatively consistent year over year an indicative annual rate increase in the range of 2.5 to 3.5 per cent in 2019-2022.

5.0 RECOMMENDATIONS

Administration recommends that the Action plan approved 2017 and 2018 utility rate increases be revised to reflect a 2.5 per cent per year increase in 2017 and 2018, as per Scenario B.

This proposed rates scenario leverages efficiencies and service reductions, while maintaining capital investment required to build, upgrade, and maintain infrastructure to provide high quality services to customers. It results in a moderate impact on the indicative rates for the 2019-2022 timeframe and does offsets some risk of off-site levy revenue not materializing due to the uncertainty of growth and development.

Compliance with financial policies is maintained with the exception of the requirement to build the 10 per cent of revenues sustainment reserve balance by 2018, which will be delayed until 2022. Delaying building the sustainment reserve balance from 2018 to 2022 does extend the period of time in which the utilities do not have reserve funds to provide cash flow for minor fluctuations in operating and capital budget expenditures, or to mitigate the risk of periodic shortfalls in projected revenue.

In the recommended rates scenario, the overall outstanding debt levels, and debt service ratio, are forecast to be only minimally higher than with approved rate increases. These levels of debt and debt servicing can be accommodated within the overall debt and debt servicing limits of the corporation

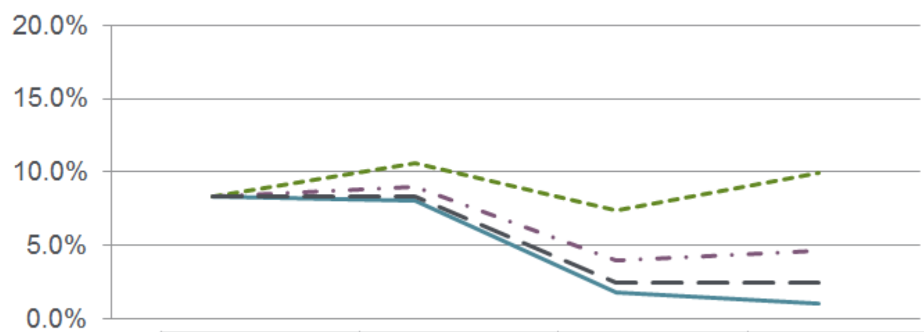
Figure 12 shows the specific water and wastewater rate increases used to calculate the blended rate. The blended rate is based on a weighted average of the water and wastewater rates and represents the combined impact of the two rates.

Figure 12: Recommended Water and Wastewater Rate Increases

	2017	2018
Blended	2.5%	2.5%
Water	0%	0%
Wastewater	5.1%	4.9%

Consistent with the rates that were approved as part of Action Plan, the revised rates for 2017 and 2018 will also incorporate Cost of Service adjustments, to continue closing 50 per cent of the cost allocation gap by 2018. These adjustments mean that customers in distinct classes will see annual rate changes that differ from the approved utility rate increase, as highlighted in Figure 13.

Figure 13: Blended Water and Wastewater Rate Increases by Customer Class



	2015	2016	2017	2018
Residential Metered	8.3%	8.1%	1.8%	1.1%
General Service Regular	8.3%	9.0%	4.0%	4.7%
General Service Large	8.3%	10.6%	7.4%	9.9%
Indicative Rate	8.3%	8.3%	2.5%	2.5%

Administration will report back to Council at Mid Cycle adjustments with the required Operating budget adjustment and bylaw amendments to reflect the revised rate increase for 2017 and 2018.

Administration will also report back in Q1 2017 with revisions to the Utilities Financial Plan that integrate Utility industry best practice and the change to timeframe of building the sustainment reserve balance.

For the 2019-2022 business cycle, Utilities will maintain a focus on managing increasing cost pressures and market uncertainty while providing high quality water and wastewater services to Calgarians. Progress on financial plans and the indicative rates for future years will be presented to Council during the development of the 2019-2022 budget and business plan.