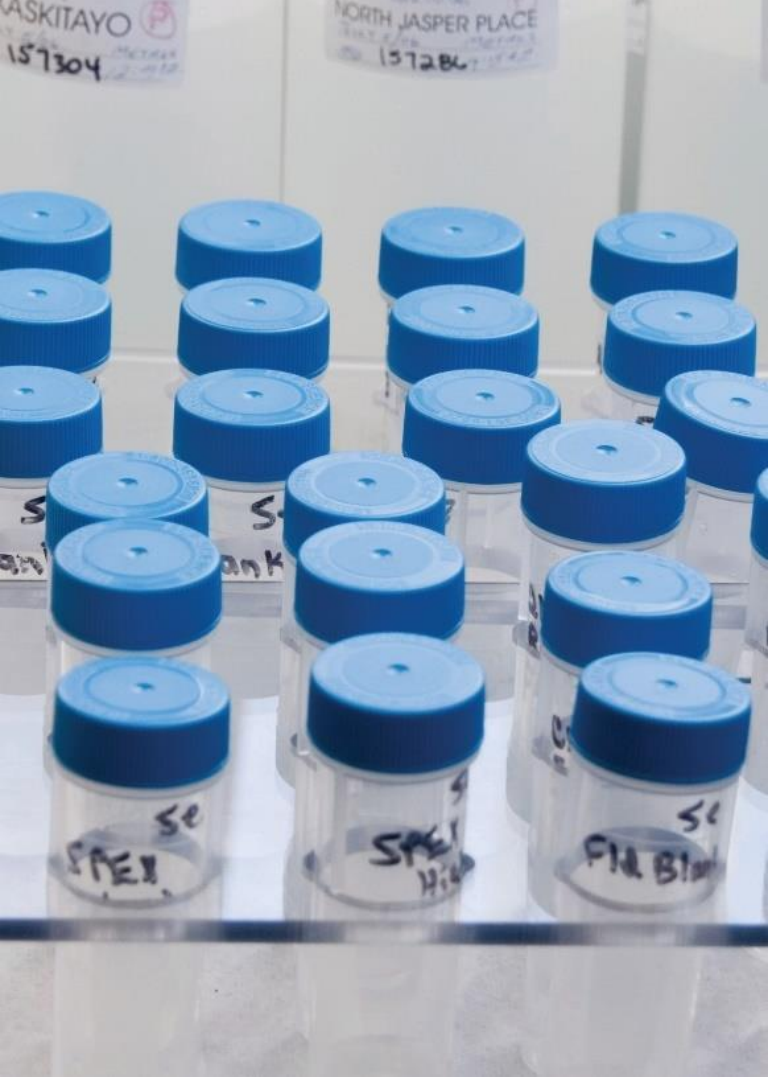
EPCOR WATER SERVICES

2025-2027 Wastewater Collection and Treatment Performance Based Regulation (PBR) Application



Today's Presenters

Frank Mannarino
Senior Vice President, EPCOR Water Services

Saqib Chaudhary
Director, Regulatory & Business Planning

Craig Bonneville
Director, Engineering & Technical Services

Susan Ancel
Director, One Water Planning

Martin Kennedy
Director, Communications & Public Engagement

Additional subject matter experts are available to support answers to detailed questions about capital, operating, regulatory, legal, and finance topics

Meeting Overview

1. **EPCOR presents the PBR Application**
2. EPCOR answers Utility Committee questions on the Application
3. City Administration presents reports of reasonableness
4. EPCOR responds to these reports
5. **Utility Committee Motion** (to advance the Application as filed, or to direct edits to the Application before it proceeds)
    - *Next:* Any changes directed by Utility Committee are submitted in a "Compliance Filing" that finalizes the Bylaw text for Council's consideration

Presentation of the PBR Application

- Overview of the PBR Application and Process
- Consumption and Customer Forecasts
- Forecasting of Costs and the Utility Revenue Requirement
- Returns on Capital (Debt and Equity)
- Customer Rates and Bill Forecasts
- Public Engagement and Performance Measures

Key Outcomes that EPCOR will deliver

Under the 2025-2027 PBR, EPCOR's wastewater treatment and collection utilities will:

Invest

$887M

in the reliability and performance of the wastewater collection and treatment system

Deliver stable and predictable rates

2.9%

Average bill change per year for Residential customers ($2.20/month) and 1.1% per year for Commercial customers

Make Edmonton a greener, more flood resilient community, while meeting stringent performance standards for reliability, safety, quality and environmental protection

Overview of the
PBR Application and Process

Saqib Chaudhary
Director, Regulatory & Business Planning

Guiding Objectives of PBR

Edmonton's Performance Based Regulation process is grounded in long-standing principles

Safe and reliable utility service	Customer charges based on cost of service	Opportunity to earn a reasonable profit
Environmental objectives aligned to City goals	Service levels set based on benchmarks and past performance	Rate approval timing matches financial needs

Established principles guide rate setting

Rates in the PBR are set in accordance with these principles…

- Rates are based on the forecast cost of service
- No cross-subsidization of rates between customer types
- Intergenerational equity
- Equal rates within each customer class
- Rates are stable and predictable

Fair Return Standard

When setting the Return on Equity for a utility, Regulators follow the Fair Return Standard

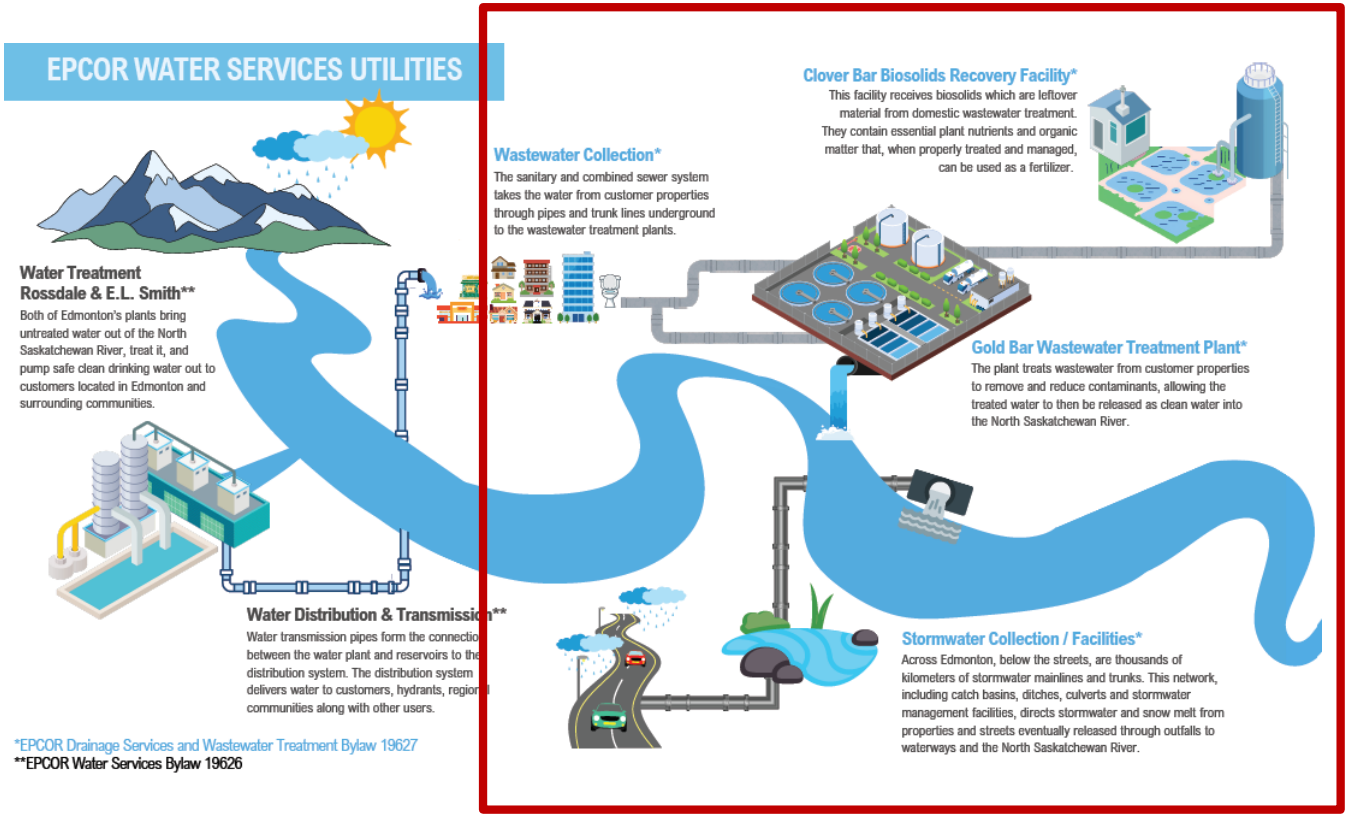
Benefits of Performance Based Regulation

Multi-year Performance Based Regulation is used because it delivers benefits over annual cost-of-service filings

- ✓ Customers receive stable and predictable rates
- ✓ Risks from cost and consumption variances are borne by utilities, not customers
- ✓ Utilities have an incentive to seek efficiencies and cost savings
- ✓ Utilities are accountable for meeting performance standards set by the regulator
- ✓ Administrative burden is reduced by multi-year filings rather than annual filings

Performance Based Regulation shifts risks from customers to the utility, providing greater stability in customer bills

This PBR Application is for EPCOR's Edmonton Wastewater Utilities



Today's application is for three utility functions, each with its own costs and rates:

- Wastewater Treatment
- Wastewater Collection – sanitary
- Wastewater Collection – stormwater

Key dates in the PBR Process

2025-2027 Wastewater PBR Renewal

• EPCOR submitted PBR application	May 31, 2024
• City reviewed and submitted written questions	June to August 2024
• EPCOR filed Information Responses	August 2, 2024
• City filed reports of reasonableness	September 4, 2024
• **Utility Committee meeting (public hearing)**	**October 11, 2024**
• Compliance filing	November 2024
• City Council approval of application & bylaw (3 readings)	Nov 2024 to Jan 2025
• New wastewater collection and treatment rates in effect	April 1, 2025

The PBR Application addresses…

What is the revenue required to operate the Wastewater utilities from 2025 to 2027?

- Forecasts of customer counts, water consumption, and inflation
- Operating expenses
- Depreciation and amortization (return of capital)
- Capital investment, and the returns on capital (debt and equity investment in the utility) required to fund the utility
- *Minus* any revenues received from sources outside of rates

What are the costs to serve different types of customers?

- Cost of Service Study to determine allocation of costs between customer types
- Forecast changes in customer counts by customer type
- Other changes in rate class design (e.g. changes to City zoning categories)

What are the utility rates for the 2025-2027 term? What are the required performance standards?

- Rates are designed to recover the revenue requirement, based on the cost of service to each customer class, and the forecasts of customer counts and consumption
- The utility bears the risk of forecast differences during the PBR term – rates are fixed by formula at the start of the term
- Performance standards create accountability for service quality

Key Considerations in the review…

EPCOR's goals for the Application are that:

- The utility's operating and capital programs are prudent
- All elements of the revenue requirement are fair and reasonable
- Rate design follows rate-setting principles
- The return on equity follows the Fair Return Standard
- The Application aligns with the principles of the PBR
- The performance standards set a penalty regime that meets regulator and customer expectations

Utility revenue requirement

Cost of service allocation

Utility rates and performance standards

Customer and Consumption Forecasts

Susan Ancel
Director, One Water Planning

Key Forecasting Inputs

Estimates of utility costs and rates are built from common assumptions

- **Water consumption.** How will water consumption change for each of these customer groups over those years, and in total?
- **Customer counts.** How will the number of residential, multi-residential, and commercial customers change from 2025-2027?

Why does water consumption matter?

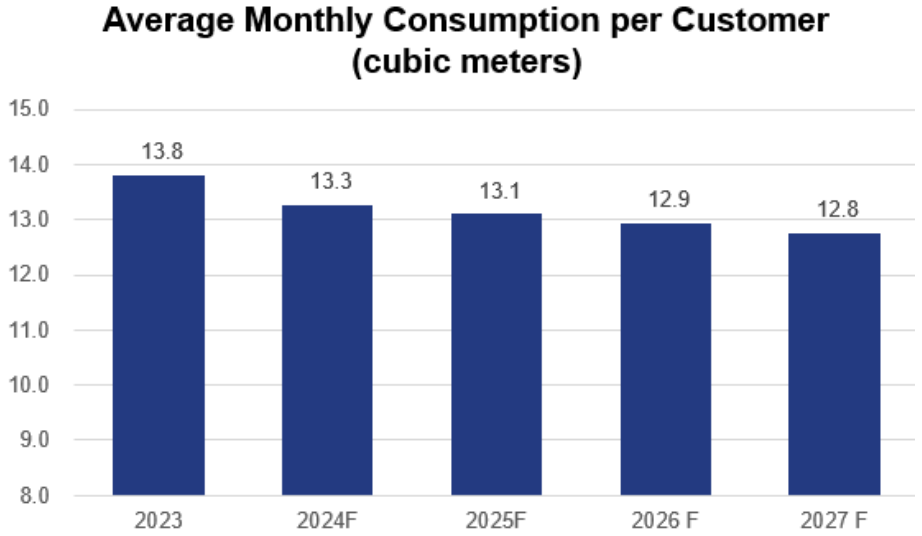
- **The cost to treat sanitary wastewater varies by volume**
- **Sanitary wastewater charges are calculated based on a customer's water consumption**

Declining water use by households

The Application forecasts a continuing decline in average monthly water use for residential customers

Residential water consumption peaked at 21.4 cubic metres (per customer per month) in 2002

Source: See section 4.8.2 of the Application (beginning p.63)



Multi-residential & Commercial customers

For larger volume customers, the Application forecasts total water consumption for the whole class

The 2025-2027 forecasts align with the 10-year trend for each of these customer groups

Source: See section 4.8.2 of the Application (beginning p.63)

MULTI-RESIDENTIAL

Average annual increase in total water consumption by multi-residential customers

COMMERCIAL

Average annual decrease in total water consumption by commercial customers

Customer counts forecast to increase

EPCOR forecasts 1.9% per year growth in the number of residential customers, and 0.8% growth in number of commercial accounts and 0.4% growth of multi-family accounts

Compared to the last PBR period, EPCOR forecasts adding 32,000 residential wastewater customers by 2027

Source: See section 4.8 of the Application (beginning p.60)

Average Monthly Customer Count

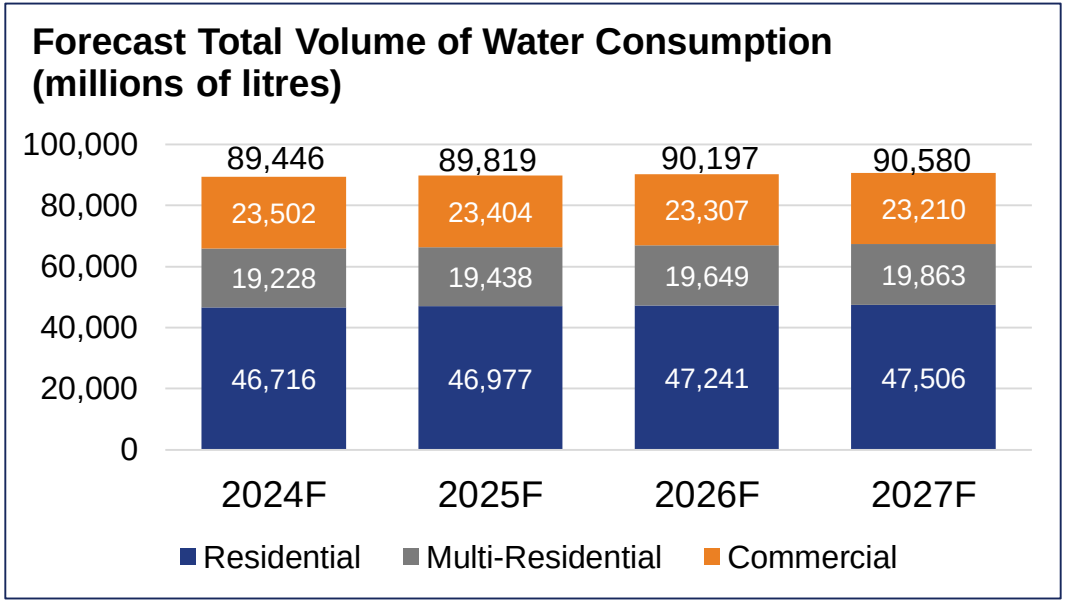
		A 2019-2023 Average	B 2025F	C 2026F	D 2027F
1	Residential	277,984	298,834	304,511	310,297
2	% annual avg. growth	1.9%	1.9%	1.9%	1.9%
3	Multi-Residential	3,798	3,863	3,878	3,894
4	% annual avg. growth	0.4%	0.4%	0.4%	0.4%
5	Commercial	17,204	17,743	17,891	18,039
6	% annual avg. growth	0.8%	0.8%	0.8%	0.8%
7	Total Customers	298,987	320,440	326,280	332,230

Total Water Consumption Forecast: Stable

Improved efficiency in water use offsets the growth in the number of customers, leading total consumption to be stable

Total water consumption is forecast to increase 0.4% per year during 2025-2027

Source: See section 4.8.3 of the Application (beginning p.64)



Utility Costs and Revenue Requirement Forecasts

Saqib Chaudhary, Director Regulatory and Business Planning
Craig Bonneville, Director Engineering and Technical Services

Operating Costs: Background

Forecast operating costs for each utility are included in the Application

- ✓ Forecast operating costs are included in the utility's revenue requirement
- ✓ There is no margin or profit for operating costs
- ✓ The forecast includes the inflation assumption, ***minus*** the 'efficiency factor'
- ✓ EPCOR bears the risk of actual costs being different than the forecast from 2025-2027
- ✓ Forecasts are prepared using a bottom-up approach, based on expected work activity, staffing, inputs and costs

Efficiency Focused

Efficiency factor incents the utility to keep its cost changes lower than inflation

Inflation Forecasts and Efficiency Factor

The PBR's revenue requirement includes a forecast of inflation, and an efficiency factor. The utility bears the risk of actual costs during 2025-2027 being different than forecast.

Inflation

Forecast based on two Statistics Canada measures, and the types of cost in each utility

Application

- Forecast inflation, less the efficiency factor, varies between 1.8% and 2% per year for the Treatment utility
- Forecast inflation, less the efficiency factor, varies between 1.9% and 2.2% per year for the Sanitary and Stormwater utilities

Efficiency Factor

EPCOR's Application proposes an efficiency factor of 0.25%

Example

- If operating costs are forecast to increase 2% in a year, EPCOR would be limited in its revenue requirement to recovering an increase of 1.75% in rates (inflation *minus* the efficiency factor)

Operating Costs

EPCOR is limiting operating costs changes to an average of 1.5% per year from 2025-2027

Operating Costs (millions)	2024F	2025F	2026F	2027F
Wastewater Treatment	$ 73.8	$ 78.1	$ 79.7	$ 81.1
Wastewater Collection: Sanitary	53.5	52.0	53.1	54.1
Wastewater Collection: Stormwater	53.6	52.1	53.3	54.3
Total	**$181.0**	**$182.2**	**$186.1**	**$189.4**
Change (%)		0.7%	2.1%	1.8%

Operating costs are forecast to average $185.9 million per year during the PBR term

Capital Expenditures: Background

Forecast capital investments for each utility are included in the Application

- ✓ The Application includes business cases for every capital project valued greater than $5 million for WWT or $10 million for WWC (Appendix F and Appendix G)
- ✓ We prioritize capital projects based on a detailed assessment of scopes, costs and risks
- ✓ Projects fall into four categories:
  - Reliability and Life Cycle Replacement
  - Regulatory, Health, Safety and Environment
  - Efficiency and Performance Improvement
  - Growth and Customer Requirements

Ongoing investment is required to renew infrastructure and maintain reliability

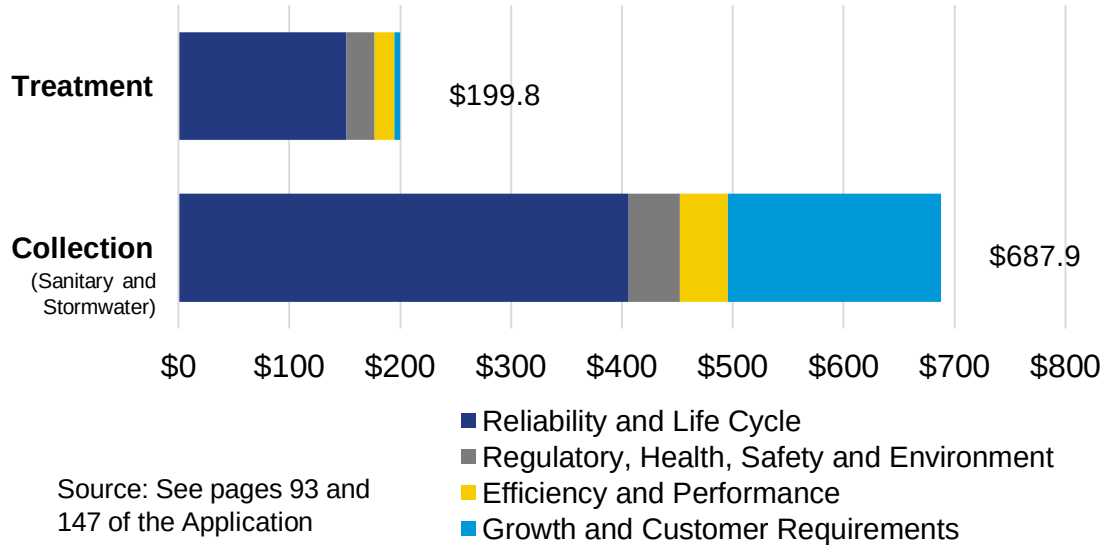
Average Utility Asset Life

- **23 years in wastewater treatment**
- **40 years in wastewater collection**

Capital Expenditures

EPCOR's Application proposes investing $887 million in wastewater infrastructure from 2025-2027

Forecast Capital Expenditures (2025-27, $millions)



Source: See pages 93 and 147 of the Application

More than $550 million is targeted to investments in reliability and life cycle replacements

Capital Program: Treatment System

Investments in the treatment system maintain reliability, improve odour control and protect river water quality

Reliability / Life Cycle Replacement

- Digester improvements
- Electrical buildings and utility rack
- UV disinfection system upgrades
- Primary effluent channel upgrades
- Plant pipe rehab and upgrades
- Sludge and supernatant pipeline rehab
- Flare capacity

Efficiency / Performance Improvement

- Secondary aeration blower upgrades

Regulatory, Health, Safety and Environment

- Odour control improvements
- Clover Bar Groundwater Transfer

Growth / Customer Requirements

- No projects over $5M

Capital Program: Collection System

Investments in the stormwater and sanitary systems maintain reliability, address odour, and improve community flood protection

Reliability / Life Cycle Replacement

- Drill drop maintenance hole renewal
- Fleet vehicles
- Flow Control facilities rehabilitation
- High Priority Renewal
- Relining
- Large Trunk Rehab
- Local System Rehab
- Maintenance Hole and Catch Basin replacement
- Small Trunk Rehab
- Outfall Rehab

Growth / Customer Requirements

- Dry Ponds
- Low Impact Development
- Private Development Coordination
- LRT utility relocates

Regulatory, Health, Safety and Environment

- Access maintenance hole
- Corrosion and Odour Reduction Duggan Tunnel

Efficiency / Performance Improvement

- Smart Ponds

Stormwater System | Sanitary System | Both Sanitary and Stormwater

Capital Program Highlight 1

Dry Ponds

$115.4M to mitigate neighbourhood flooding in high-risk communities

- A critical element of our plan to mitigate flood risks across city
- Reduce risk of sewer backups and road ponding after storm events
- Requires lower capital investment than traditional engineering approaches
- 11 active and planned dry pond projects (part of federal DMAF funding received in 2020)

Parkallen Dry Pond

Capital Program Highlight 2

Low Impact Development (LID)

$51.3M for green infrastructure that will capture, absorb and filter stormwater before it enters the collection system to mitigate flood risk

- On both public property and privately-owned commercial, industrial and institutional properties
- Aligns with City's Building Great Neighbourhoods program
- Supports climate change adaptation
- Will maintain and improve health of local creeks and the NSR

LID feature in Rideau Park

Capital Program Highlight 3

Renewal Programs

$72.2M for high priority repairs and replacements of sanitary and stormwater assets

- Continuation of an existing program to increase funding based on forecast costs
- Prevent risk of unexpected failures that can disrupt customers' sewer service
- Prevent other impacts from failure, like street flooding, backups and subsidences

$60.1M to rehabilitate or replace aging local sewer pipes

- Prevent failures that can cause sewer backups, subsidences and other customer disruptions and safety risks
- Aligns with City's Building Great Neighbourhoods program
- A more cost-effective approach compared to high costs of emergency repairs

Capital Program Highlight 4

Gold Bar Odour Control Improvements

$13.6M to continue addressing the main sources of odour emissions from the Gold Bar Wastewater Treatment Plant

Addressing the two most significant remaining sources of odour generation:

1. Headworks diversion structure → Install foul-air collection ducting
2. Four primary clarifiers → Install fabric cover on clarifiers

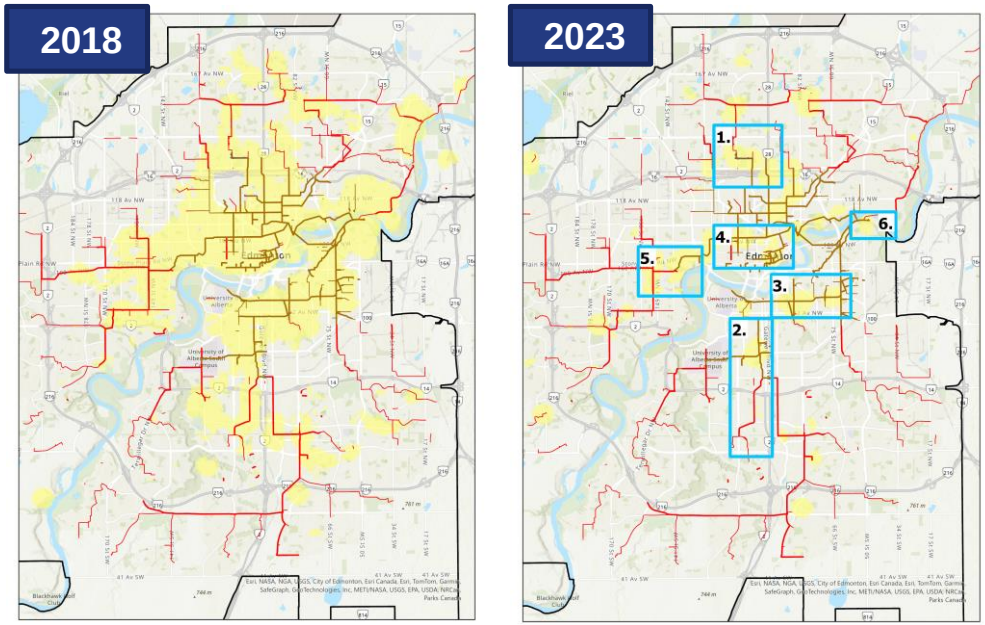
To move foul air from these areas to existing scrubbers for treatment

EPCOR has made a commitment to Alberta Environment & Protected Areas and the nearby community to continuously improve odour control at Gold Bar and act as a good neighbour by actively managing odour sources within the plant.

Capital Program Highlight 5

Odour mitigation in wastewater collection system

$220 million for projects that contribute to odour reduction



- Since 2018, odour reports have decreased more than 52%
- Key areas of focus now and over the PBR term:
  1. Lauderdale
  2. SW Edmonton (Steinhauer to Bonnie Doon)
  3. Mill Creek
  4. Downtown
  5. West Jasper Place
  6. Gold Bar

Returns on Debt and Equity Capital

Saqib Chaudhary
Director, Regulatory & Business Planning

All sources of capital earn a return

$887M

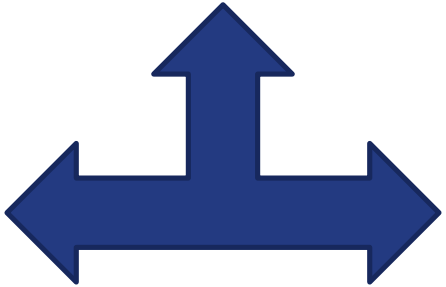
in capital will be invested in the wastewater utilities from 2025-2027

Where does the capital come from to make this investment?

60%

Comes from Debt

Lenders to the utility earn interest on the capital they lend to the utility



40%

Comes from Equity

The utility invests its previous earnings, and earns a fair return on the equity it has invested

New Cost of Debt Forecast

EPCOR's wastewater utilities will borrow about $460 million to implement the 2025-2027 PBR

Debt

Calculated based on the risk of the utility, not EPCOR's overall risk profile, and market rates at the time of the application

The Application includes:

- **Forecast cost of new debt: 4.65% for the 2025-2027 term**, and the actual interest costs for existing debt
- **EPCOR bears the risk if the actual cost of debt is different** than the forecast
- Additional context: EPCOR issues its own debt, which is not backed by the City and does not impact the City's borrowing limits

Return on Equity (ROE)

EPCOR will invest about $430 million of equity in the wastewater utilities to implement the 2025-2027 PBR

ROE Phase-In

EPCOR has proposed reducing customer costs by $25.6 million during the PBR by phasing-in the ROE for the sanitary and stormwater utilities.

The proposal completes the ROE phase-in begun in the 2022-2024 PBR.

The Application includes:

- Treatment Utility: A Return on Equity of 10.8% from 2025-2027
- Sanitary and Stormwater Utilities: A Return on Equity of 9% in 2025, 9.9% in 2026 and 10.8% in 2027
- The ROE of 10.8% was based on a third-party consultant's report (Appendix D of the Application) and the Fair Return Standard

EPCOR Consultant's Recommendation

EPCOR's expert consultant recommended a Return on Equity of 10.8%

- Recommendation based on three different analytical models
- Consultant's analysis supported ROE in a range of 10.5% to 12.2% based on applying the three models to comparable utilities
- Consultant concluded that US water utilities are the most relevant comparator. EPCOR return of 10.8% on 40% equity ratio would still result in lower returns than US water utilities
- The City's consultant and the Utility Advisor also filed views on ROE, which EPCOR will respond to later in the proceeding

Returns on Equity rise and fall as interest rates change.

The recommended ROE reflects the change in interest rates since the 2022-2024 PBR was set in 2021

Customer Rates and Bill Forecasts

Saqib Chaudhary
Director, Regulatory & Business Planning

Rate-setting in 2025-2027 PBR Application

Revenue Requirement

The revenue requirement is the cost to operate the utilities from 2025-2027, based on the forecast number of customers and their water consumption.

- Operating expenses
- Depreciation and amortization
- Returns on capital (debt and equity)
- *Minus* any revenues received from fees and sources outside of rates
- *Minus* the Efficiency Factor applied to forecast inflation
- *Minus* EPCOR's voluntary discount to the recommended ROE in 2025 and 2026
- *Minus* the refund of deferral account balances from 2025 to 2027

Cost of Service Updates

Adjustments in how much revenue is collected from different groups of customers based on their cost of service.

- Cost of Service Study
- Forecast changes in customer counts by customer type
- Other changes in rate class design (e.g. changes to City zoning categories)
- Revenue to Cost ratios

Wastewater Collection and Treatment Rates for 2025-2027

Wastewater Cost of Service Studies

The Application includes updates to rates based on Cost of Service studies

- A core regulatory principle is that rates are based on cost of service
- All rates are being updated to reflect the cost of service for each type of customer, and each type of wastewater utility (treatment, stormwater, sanitary)
- There is no change to total revenue being collected
- For nearly all customers, the updates do not materially impact their bills

Updates to Stormwater Billing

- The Application also includes stormwater rate changes to implement the City of Edmonton's recent zoning changes (effective April 1, 2025).
- For more than 300,000 customers, there is minimal effect on their bill from the net changes to zoning and the Cost of Service study adjustments.
- EPCOR has proactively identified about 350 customers whose impacts are larger. We will be reaching out to them with information and options.
- Three potential programs to help these customers mitigate bill increases:

Commercial Low Impact Development Program	Stormwater Rebate Program	Intensity Adjustment Program (currently "Stormwater Credit Program")

Highlight

Stormwater Management Rebate Program

Incentivizes customers to install Low Impact Development (LID) features on their properties (e.g., rain gardens, box planters)

Reduce flow into the wastewater collection system	Decrease risk of neighbourhood flooding	Reduce risk of sewer backups
Prevent other damage from flooding	Provide system capacity for future growth	Improve property drainage
Add green spaces in the city	Improve water quality of flows	Broader environmental benefits

Rebates by customer type

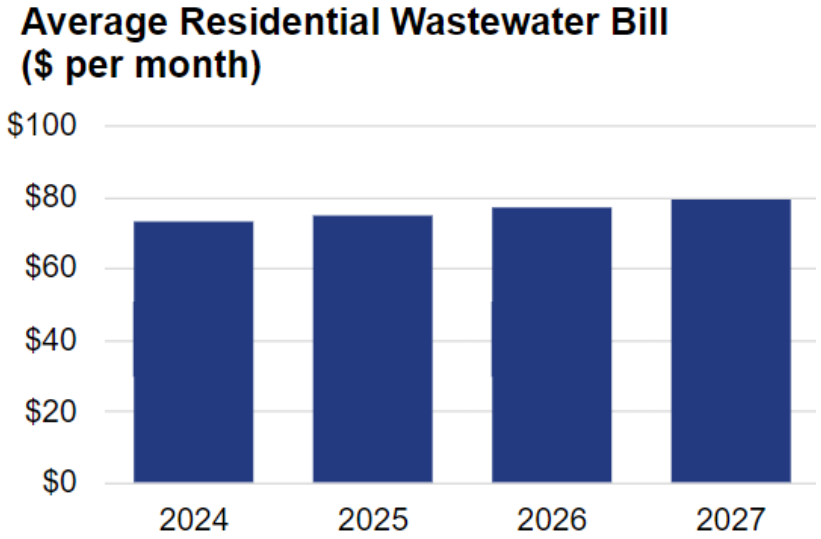
- $2,000 – single-family residential
- $5,000 – multi-family residential
- $10,000 – industrial, commercial, institutional

EPCOR

Average Bill Changes - Residential

The average residential bill for wastewater utility service is forecast to increase 2.9% per year from 2025-2027

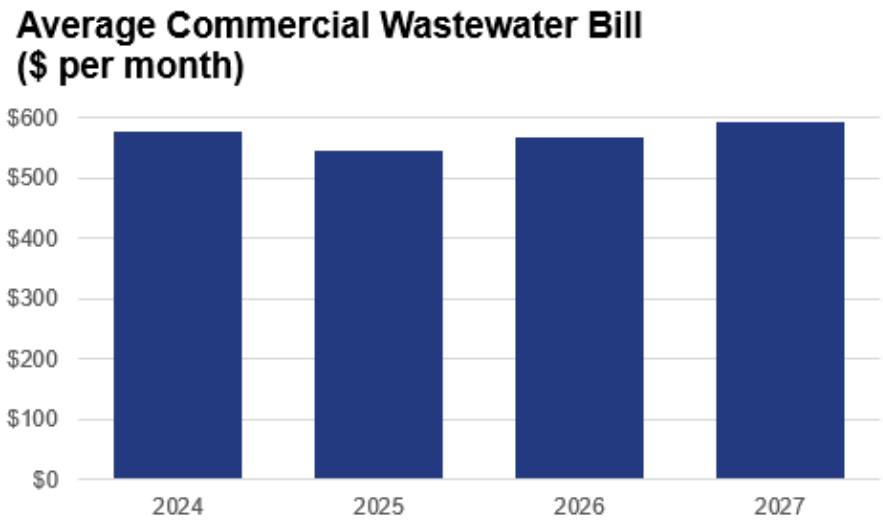
- Average monthly bill will increase by $2.20 each year
- Overall changes remain well below recent consumer inflation rates
- The bill projection includes the return of deferral account balances



Average Bill Changes - Commercial

The average commercial customer bill for wastewater utility service is forecast to increase 1.1% per year from 2025-2027

- Water use varies significantly by the type of commercial customer
- Total water consumption for commercial customers is forecast to slightly decrease by 2027
- The bill projection includes the return of deferral account balances, which are greater for this customer class



Recap

Key Outcomes of the PBR

Under the 2025-2027 PBR, EPCOR's wastewater treatment and collection utilities will…

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in the reliability and performance of the wastewater collection and treatment system

Deliver stable and predictable rates

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Average bill change per year for Residential customers ($2.20/month) and 1.1% per year for Commercial customers

Make Edmonton a greener, more flood resilient community, while meeting stringent performance standards for reliability, safety, quality and environmental protection

Public Engagement and Performance Measures

Martin Kennedy
Director, Communications & Public Engagement

Public Engagement

We engaged stakeholders to inform policy, priority-set and share reviews on balancing system performance and rate-design, as well as specific proposals in the application

- We targeted input at the Advise level
- We sought input through a combination of online surveys and in-depth interviews with residential and commercial customers
- The engagement report is found at **Appendix H** of the Application

Audiences we engaged:

- Residential and multi-residential customers
- Developers and property managers
- Gold Bar community and communities surrounding the Gold Bar WWTP

Public Engagement

	What we learned	What we're doing
Balancing affordability and reliability	**Highest ranked concern:** Cost of utility services However, most customers supported higher investment for long term efficiencies, reliability and reduced flood risk	PBR application delivers an average annual bill change of 2.9% for the average residential customer over the next three years
Aligning performance focus to customer priorities	**Top priorities:** • Reducing contamination in treated water returned to river • Quick response to blocked sewers and emergencies **Other priorities:** • Safety, odour reduction • Reduced flooding risk • Reduced environmental footprint	Funding allocated to capital and operating programs reflects these customer priorities Updated performance measures reflect customer service impacts

Public Engagement

	What we learned	What we're doing
Customer preferences for rate stability	Overwhelmingly, customers prefer the utility to bear the risk of revenue surpluses and deficits to keep bills stable and predictable over time	PBR model sees the utility bear most risks for cost variance during the PBR term Non-Routine Adjustment mechanism available in defined scenarios only
Flood protection program design	82% support for investments in flood prevention targeted to higher-risk areas of city 62% support for utilities providing financial support to homeowners to help them reduce flood risk on their property and in the community	PBR application reflects ongoing and increased resourcing to help homeowners reduce flood risk Continues the implementation of the SIRP approach Includes developing plan to protect Gold Bar WWTP from flood risk

Performance Measures – Background

Performance Measures in the PBR are a *penalty regime* that protects customers and the environment

- The PBR model gives utilities an incentive to find efficiencies and reduce its costs
- Performance Measures provide protection against the utility cutting costs at the expense of core performance expectations
    - The regulator sets a level of performance *below which* the regulator can levy a financial penalty for underperformance

Performance measures in the PBR establish a set of financial penalties for underperformance

Performance Measures

Performance measures are set by Utility Committee

- EPCOR recommends performance measures for consideration
- Utility Committee reviews and sets the measures
- Recommended measures are based on industry benchmarks, historic trending, stakeholder feedback and targeted performance goals
- Performance is externally verified, and reported annually
- Weightings and penalties differ between wastewater treatment and collection to reflect the differing natures of operations and stakeholder expectations

Additional Data

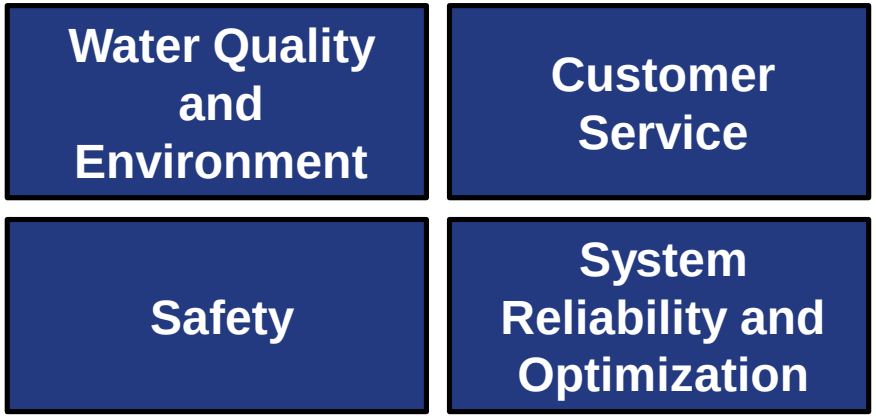
EPCOR reports data in addition to the performance measures through its Annual PBR report to Utility Committee.

Utility Committee can request or direct additional data of interest be included in EPCOR's annual PBR report

Performance Measures

Four performance categories recommended for the 2025-2027 PBR Application

- The four top-level categories are unchanged from the previous PBR cycle
- There are no changes to the weighting between the categories
- There are changes proposed to specific measures within each category



Performance Measures

Wastewater Service Quality

Index	Measure
Wastewater Quality & Environmental	Wastewater Effluent Limit Performance
	Environmental Incidents
Customer Service	H_2S 1-hour Exceedances
	H_2S 24-hour Exceedances
	Scrubber Uptime
System Reliability & Optimization	Enhanced Primary Treatment
	Biosolids Management*
	Energy Efficiency
Safety	Near Miss & Hazard Identification Reporting
	Worksite Inspections & Observations
	All Injury Frequency Rate

*** New or amended proposed measure in the 2025-2027 PBR application**

Wastewater Collection

Index	Measure
Environmental	Stormwater Flow Monitoring
	Reportable Environmental Incidents
	Stormwater Rebate Projects*
Customer Service	**Stormwater Facility Response Time***
	Deficient Appurtenances Response Time*
	Sewer Odour Response Time*
	Service Connections – Average Time
System Reliability & Optimization	Service Maintenance Calls Resolved
	Emergency Dig Ups – Service Restored
	Sewer Odour Hotspots
	Full Property Flood Inspections
Safety	Near Miss & Hazard Identification Reporting
	Worksite Inspections & Observations
	All Injury Frequency Rate

QUESTIONS?

In addition to the speakers, a range of subject matter experts are registered and available to provide information

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