

# Responses to City Council Questions on the 2023–26 Proposed Utility Budget

Parameters:

Budget Type: Utility

Budget Year: 2023-26

Sorted By: Question #

Question removed due to duplication:

- 23-056U

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-001U

**Document Page #:** 7

**Asked By:** Councillor Rice

**Question:**

FTE increase: In the proposed 2023-2026 waste services utility budget (2023-2026 Budget – Branch Summary by Program table), why is there a proposed 10 percent FTE increase (from 513.6 in 2022 to 562.6 in 2023)? Can a numerical breakdown of these FTEs be provided?

**Answer:**

**Waste Services Branch**

A breakdown of the FTE requests and the rationale for each is provided in Appendix A of the 2023-2024 Waste Services Utility Rate Filing.

A1: Collection Services Staff - 14 FTEs

A2: Business Integration Customer Support Centre Staff - 2 FTEs

A3: Business Integration Communal Collection Support Staff - 32 FTEs

A4: Business Integration Methods Analyst I - 1 FTE

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-002U

**Document Page #:** 9

**Asked By:** Councillor Rice

**Question:**

Net income correlated with FTEs: In the proposed 2023-2026 waste services utility budget (Summary of Budget Changes – Net Requirement table), why is the proposed net income decreasing year after year alongside a request to increase FTEs by 10 percent? Compared to previous years, fewer FTEs appeared to be correlated with a higher net income from waste services. This makes the request for additional FTEs in the proposed 2023-2026 waste services utility budget difficult to understand.

**Answer:**

**Waste Services Branch**

There is no direct correlation between Net Income and FTEs. A breakdown of the FTE requests and the rationale for each is provided in Appendix A of the 2023-2024 Waste Services Utility Rate Filing.

A1: Collection Services Staff - 14 FTEs

A2: Business Integration Customer Support Centre Staff - 2 FTEs

A3: Business Integration Communal Collection Support Staff - 32 FTEs

A4: Business Integration Methods Analyst I - 1 FTE

Net Income is lower in 2022 when compared to either 2021 or the budget for 2022 as a result of a one-time adjustment to the reported liability for landfill closure and post-closure care. An adjustment is required in 2022 to increase the liability by \$7.2 million. This increase is primarily associated with higher than previously anticipated costs required to construct the Clover Bar Landfill, slurry wall and leachate system, and to provide riverbank fortification.

The calculation of Net Income for the Waste Services utility for 2023-26 includes allowances for capital funding to meet Pay-As-You-Go (PAYG) requirements for the future fiscal years plus a risk allowance to mitigate exposure as outlined in the Waste Services Utility Fiscal Policy C558B. The Net Income proposed for 2023 and 2024, and forecast for 2025 and 2026, is significantly lower than in prior years. The utility has placed a priority on stable, consistent year over year rate increases, as opposed to escalating rate increases over time, and used existing cash to both smooth and reduce the need for PAYG and risk.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-003U

**Document Page #:** 11

**Asked By:** Councillor Rice

**Question:**

How will earnings be used: In the proposed 2023-2026 waste services utility budget (Pro-Forma Income Statement table), how do "Ending Retained Earnings" contribute to the city's overall revenue? How will these earnings be used?

**Answer:**

**Waste Services Branch**

Revenues earned by the utility stay with the utility and do not contribute to the City's overall revenue. The Retained Earnings represent the net equity accumulated by Waste Services for the benefit of ratepayers. The equity is used to fund past and future capital expenditures which are used by the utility for the benefit of ratepayers. The Waste Services Utility Fiscal Policy C558B discusses the financial principles of the utility model, including the need for the utility to be financially sustainable over the long-term and to be self-sufficient.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-004U

**Document Page #:** 13

**Asked By:** Councillor Rice

**Question:**

Budget cycle comparison: For the proposed 2023-2026 waste services capital budget (Proposed 2023-2026 Capital Budget table), can the 2019-2022 budget and actual expenditures be included in the table as a comparison?

**Answer:**

**Waste Services Branch**

The attached document compares the 2019-2022 budget and actual capital expenditures to the 2023-2026 proposed capital budget. Overall, the proposed capital budget for 2023-2026 of \$144.4 million is similar to the total capital expenditure of \$140.6 for the 2019-2022 budget cycle. Capital expenditures may vary from budget cycle to budget cycle based on the strategic direction of the utility.

# Responses to City Council Questions on the Proposed Utility Budget

Document: Utility Budget Book

Question #: 23-004U

Document Page #: 13

Asked By: Councillor Rice

## QUESTION 23-004U - Attachment

### 2019-2022 Budget & Actual Capital Expenditures Compared to 2023-2026 Projections (\$ millions)

Line #	Capital Projects	2019-2022 Budget Total	2019-2022 Act+ Proj	2023-2026 Proposed Total
	<b>Branch-wide</b>			
1	Facilities & Infrastructure Planning & Design	0.37	0.42	-
2	Facilities & Infrastructure Project Delivery	16.28	16.32	19.41
3	Waste Services Infrastructure Planning and Design (IIS)	3.88	3.43	2.27
4	Waste Services Project Delivery (IIS)	17.26	12.29	20.50
5		<b>37.79</b>	<b>32.46</b>	<b>42.18</b>
	<b>Collection Services Facilities</b>			
6	Collection Facilities and Infrastructure	2.27	2.06	-
7		<b>2.27</b>	<b>2.06</b>	-
	<b>Sustainable Waste Processing Facilities</b>			
8	Cure Site Land Use & Development	0.36	0.36	-
9	Groundwater Diversion System	8.20	10.57	-
10	Alberta Clean Energy Technology Accelerator (ACETA)	2.09	1.91	-
11	Refuse Derived Facility Enhancements	7.23	7.05	-
12	Materials Recovery Facility (MRF) Renewal	11.53	9.20	4.61
13	High Solids Anaerobic Digestion Facility	0.58	4.00	-
14	Landfill Gas to Renewable Natural Gas (RNG)	11.47	0.38	12.99
15	HSADF Digestate Screening and Mixing System	-	-	5.80
16	Organics Processing Facility (cancelled in 2021)	-	4.78	-
17		<b>41.45</b>	<b>38.23</b>	<b>23.40</b>
	<b>Vehicles &amp; Equipment</b>			
18	Waste Containers	2.88	2.90	16.13
19	Waste Services Fleet Assets	35.73	30.83	34.25
20	Waste Services Fleet Assets (Pre-approved in Sept 2022)	-	-	10.83
21	Carryforwards from Previous Budget Cycle	-	2.69	-
22		<b>38.61</b>	<b>36.42</b>	<b>61.21</b>
	<b>Waste Program Changes</b>			
23	Source Separated Organics Program	41.35	31.45	-
24	Three Stream Communal Collecton	-	-	10.39
25		<b>41.35</b>	<b>31.45</b>	<b>10.39</b>
	<b>Profiles Pending Approval</b>			
26	Energy Transition and Climate Resilience	-	-	7.27
27		-	-	<b>7.27</b>
28	<b>Grand Total</b>	<b>161.47</b>	<b>140.62</b>	<b>144.44</b>

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-005U

**Document Page #:** 68

**Asked By:** Councillor Rice

**Question:**

FTE increase: For the proposed 2023-2026 waste services utility budget (Appendix A3: Business Integration Communal Collection Support Staff), how is the proposed increase of 32 FTEs determined?

**Answer:**

**Waste Services Branch**

The requirement for the positions outlined in Appendix A3 were determined in the Three-stream Communal Collection Business Case approved by Council in April 2022 (report CO00581rev). The positions requested include waste collectors and inspectors, education and communication personnel and customer support staff. It is expected that the majority of these positions would be hired in Q2 or Q3 of 2023.

The 32 FTEs include:

- 14 FTEs for the collection of food scraps and recycling,
- One FTE for the delivery and maintenance of waste containers,
- Three FTEs for liaising with properties and managing contractors,
- Three FTEs for routing, development review and approvals, and liaising with developers,
- Two FTEs for customer support and addressing inquiries, and
- Nine FTEs for the design, development and delivery of educational programs to residents and property managers.

The FTE requirement was developed based on Waste Services' industry knowledge and the requirements of the program. Specifically, resources for each task during implementation and post implementation were identified using calculations such as: operational hours required, number of hours worked per FTE, number of services that need completion concurrently and completion timelines.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-006U

**Document Page #:** 68

**Asked By:** Councillor Rice

**Question:**

Risk analysis: For the proposed 2023-2026 waste services utility budget (Appendix A3: Business Integration Communal Collection Support Staff), how does the risk outlined in Appendix A3 of the 2023-2026 waste services utility budget align with the desire from Edmontonians to keep costs under control?

**Answer:**

**Waste Services Branch**

The request for additional FTEs is consistent with the Three-stream Communal Collection Business Case approved by Council in April 2022 (report CO00581rev). The risk(s) identified in Appendix A3: Business Integration Communal Collection Support Staff would only occur if Utility Committee reconsidered the Three-stream Communal Collection Business Case and removed these FTEs from the proposed rate filing. If the latter was to happen, the benefits of the Three-stream Communal Collection Business Case approved by Council would not be achieved. The costs associated with implementing three-stream waste collection and processing in the multi-unit sector has been fully reflected in the 2023-2024 Rate Filing.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-007U

**Document Page #:** 5

**Asked By:** Councillor Rice

**Question:**

For the proposed 2023-2026 Blatchford renewal energy utility budget, what would the impact be, as per the current development scenario, if the Energy Centre One investment of \$3.2 million is not approved in 2023-2026 capital budget?

**Answer:**

**Financial Services Branch**

- The current capacity at Energy Centre One is 1.0 megawatt (MW) of heating and cooling energy respectively, which is enough to service the first few land development stages in Blatchford.
- The expansion of Energy Centre One is needed to provide energy for land development stages in Blatchford west and east which are anticipated to come online between 2023 and 2026.
- It is expected that this additional capacity for a total of 4.25 MW of heating and 4.0 MW of cooling will come online by the end of 2023.
- If the \$3.2 million capital budget is not approved, the additional capacity can not be installed and any development above the current installed capacity cannot be served by the utility.
- Utilizing the current anticipated forecast for Blatchford, the utility expects the current capacity of Energy Centre One to be reached within the first or second quarter of 2024.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-008U

**Document Page #:** 6

**Asked By:** Councillor Rice

**Question:**

Funding source: For the proposed 2023-2026 Blatchford renewal energy utility budget, what is the funding source for the \$15.3 million (current estimate) Peaking Energy Centre that is proposed to be commissioned in 2026?

**Answer:**

**Financial Services Branch**

The funding source for the Peaking Energy Centre #4 is self-supporting tax-guaranteed debt. This is shown in the Capital Profile Reports in Attachment 2 Blatchford Renewable Energy Utility 2023-2026 Budget and Plans on page 35 (note: \$14.7 million is for project delivery and the remaining \$0.6 million for planning and design will be incurred under a currently approved composite profile which is also funded with self-supporting tax-guaranteed debt).

Typically for a utility operation the source of debt financing is self-liquidating debt, which is repaid through utility rate revenues. In the case of the initial infrastructure costs for the Blatchford Renewable Energy Utility, a non-refundable cash contribution for the initial capital investments has been assumed at this time, resulting in no debt servicing payments attributable to the final rate payer. It is assumed that the debt servicing will ultimately be repaid through this future external funding, therefore resulting in the debt to be classified as self-supported tax guaranteed. As per the Debt Management Fiscal Policy - C203D, self-supported tax guaranteed debt is debt that is repaid through non-tax levy revenues such as grants from other orders of government, user fees, or lease payments. The City would be required to fund the debt payments using property tax revenues if for some reason there was a shortfall in the debt-servicing revenue source planned to service the self-supported tax guaranteed debt.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-009U

**Document Page #:** 10

**Asked By:** Councillor Rice

**Question:**

Net operating requirement: For the proposed 2023-2026 Blatchford renewal energy utility budget (2023-2026 Budget – Branch Summary by Account Category table), why is the net operating requirement for 2024 and 2025 significantly different from 2023 and 2026? Along with this, please explain what is meant by the total net operating requirement and what positive and negative numbers mean in this context.

**Answer:**

**Financial Services Branch**

Net operating requirement is the net income of the utility (revenue less expenses). A positive net income means the utility has a net profit. The negative number means it has a net loss. The net operating requirement is shown before and after developer contributions to fund capital projects.

The net operating requirement before other revenues (developer contributions) reflects a net loss over the 2023-2026 period. The net operating requirement after considering developer contributions to fund capital projects, fluctuates over the 4 years, showing net profit in 2023 and 2026 and net losses in 2024 and 2025. The primary reason for the fluctuation is due to the timing of capital developer contributions. In 2023 there is a \$2.0 million increase in homebuilder contribution revenue (payments made by homebuilders as a contribution toward the cost of connecting to the system). This drops by \$0.5 million in 2024 and drops again by a further \$1.05 million in 2025 reducing the net position. In 2026 homebuilder contributions increase by \$0.55 million resulting in a higher net position.

The timing of developer contributions is ultimately linked to the land development progress and home builder construction activities on site.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-010U

**Document Page #:** 7

**Asked By:** Councillor Rice

**Question:**

Net income: In the proposed 2023-2026 waste services utility budget (2023-2026 Budget – Branch Summary by Program table), why did the 2022 total net income significantly decrease as compared with the 2021 actual net income?

**Answer:**

**Waste Services Branch**

The 2021 net income was higher than budget due to a one time positive revenue adjustment for the forgiveness of the utility's non-regulated loan for \$7.6 million by the City. Net Income is lower in 2022 when compared to the budget as a result of a one-time adjustment to the reported liability for landfill closure and post-closure care. An adjustment is required in 2022 to increase the liability by \$7.2 million. This increase is primarily associated with higher than previously anticipated costs required to construct the Clover Bar Landfill slurry wall and leachate system, and to provide riverbank fortification.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-011U

**Document Page #:** 2

**Asked By:** Mayor Sohi

**Question:**

Page 2 of Waste Service Cover report.

With reference to table 7 of this rate application it is noted that the utility proposes to retain a profit of \$5.56 million in 2023 and \$4.65 million in 2024.

What are the plans for this retained profit?

**Answer:**

**Waste Services Branch**

The calculation of Net Income for the Waste Services utility includes allowances for capital funding to meet Pay-As-You-Go (PAYG) requirements for the future fiscal years plus a risk allowance to mitigate exposure as outlined in the Waste Services Utility Fiscal Policy C558B. The Net Income proposed for 2023 and 2024, and forecast for 2025 and 2026, is significantly lower than in prior years. The utility has placed a priority on stable, consistent year over year rate increases, as opposed to escalating rate increases over time, and used existing cash to both smooth and reduce the need for PAYG and risk.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-012U

**Document Page #:** 15

**Asked By:** Mayor Sohi

**Question:**

Page 16 Attach 2: Proposed waste services utility budget and plans 2023-2026

The retained earnings shown in the proforma tables are in the \$100Ms. Can you provide some context on why the retained earnings are so high?

What policies govern how much retained earnings or cash should be held by the waste utility?

What are the plans for the retained earnings or cash in the 2023-2026 vs. future budget cycles?

In addition to the retained earnings, does waste have a capital or operating reserve? If so, what amount is currently in the reserve(s) and what amount is planned to be allocated to the reserve(s) for 2023-2026?

**Answer:**

**Waste Services Branch**

Retained Earnings represent the equity accumulated by Waste Services over time. The retained earnings balance consists of accumulated operating surplus as well as equity in tangible capital assets, which is the value of the utility's tangible capital assets, less the debt used to finance those assets. The large majority of the utility's retained earnings are equity in tangible capital assets. The accumulated operating surplus portion of retained earnings are used to fund past and future capital assets which are used by the utility for the benefit of ratepayers. The utility has tangible capital assets with a book value close to \$350 million. The utility is guided by Waste Services Utility Fiscal Policy C558B, which includes targets for key financial indicators such as cash, net income, debt and rate increases. The 2023-2026 indicators are reported on page 18 of the 2023-2024 Rate Filing.

The calculation of Net Income (which ultimately becomes retained earnings) for the Waste Services utility includes allowances for capital funding to meet Pay-As-You-Go (PAYG) requirements for the future fiscal years plus a risk allowance to mitigate exposure as outlined in the Waste Services Utility Fiscal Policy C558B. The Net Income proposed for 2023 and 2024, and forecast for 2025 and 2026, is significantly lower than in prior years. The utility has placed a priority on stable and consistent year over year rate increases, as opposed to escalating rate increases over time, and used existing cash to both smooth and reduce the need for PAYG and risk. Waste Services does not have any capital or operating reserves.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Capital Budget Book

**Question #:** 23-013U

**Document Page #:** N/A

**Asked By:** Mayor Sohi

## **Question:**

General Question about Blatchford Utility Budget:

During Nov 4th Utility Committee, on the Blatchford update, Jim Beckett said: "This development has developed more slowly than expected. When that happens the time for large capital investments need to be thought through very very carefully... Focus on risk management on a go forward basis."

Based on his comments, what would be a reasonable alternative capital expansion planning, design and delivery timelines(s) based on more conservative assumptions about pace of land development, lot sales, and waiting until inflation and supply chain issues have alleviated some more?

## **Answer:**

**Financial Services Branch**

- In the early stages of the utility the timing of infrastructure investment is ultimately linked to the land development progress and construction activities on site. These in turn are impacted by a variety of external and internal factors, such as permitting, rezoning, interest rates, supply chain issues, housing market conditions, etc.
- The utility is working hand in hand with the Blatchford land development team who updates the community's development scenario on a frequent basis for integration in the utility's master plan.
- The development and recommendation of the updated sewer heat exchange energy centre business case is just one example showing the importance of timely decision making when it comes to critical utility infrastructure. The pace of land development, using development assumptions 25% faster and slower than anticipated, has been analyzed as part of the Sewer Heat Exchange Energy Centre business case (section 8.5 on page 37 of 61).
- The utility continues to monitor the timing of design and construction of critical infrastructure on a frequent basis with ongoing updates provided to Council through the annual business plan, budget and rate filing applications. This also includes updates on currently experienced supply chain and inflation issues for the utility's construction projects.
- In general, the utility will only start the design and delivery of any utility infrastructure when the respective capacity is needed to ensure that sustainable energy can be provided when the builder and customer needs it.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Capital Budget Book

**Question #:** 23-014U

**Document Page #:** 8

**Asked By:** Mayor Sohi

**Question:**

Page 8 of The Blatchford admin's cover report indicated that: "Currently, looking at variations of these factors in the updated financial model, the required cash infusion could be in a range between \$70 and \$93 million".

Does the \$70 to \$93 million range already include the capital investments of \$27 million proposed in the 2023-2026 budget?

**Answer:**

**Financial Services Branch**

- Yes, the range includes the City's initial investment in the previous and upcoming four year capital budget cycle.
- Administration's goal is to receive the full amount of the cash infusion from sources outside of the City, e.g. grants from other levels of government.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Capital Budget Book

**Question #:** 23-015U

**Document Page #:** 14 of BRE Rate Filing

**Asked By:** Mayor Sohi

**Question:**

The report indicates that the "Operation and Maintenance costs include \$200,000 (\$150,000 in 2023 and \$50,000 in 2024) to address a motion made at Executive Committee on October 12, 2022. The increased cost of \$200,000 is to undertake a feasibility study to expand the Blatchford Renewable Energy Utility to areas adjacent to Blatchford outside the current service area, including but not limited to Hangar 14."

Does BRE unit feel that this added scope is a priority and well-aligned with next steps for the District Energy Strategy implementation, or are there other feasibility studies or business development needs within the Blatchford/Royal Alex/Kingsway, City Centre or other opportunity areas that should ideally be prioritized ahead of this work?

**Answer:**

**Financial Services Branch**

- The District Energy Strategy identifies priority areas within the City of Edmonton for District Energy development.
- The District Energy developments in Blatchford and the Downtown have been identified in Edmonton's Community Energy Strategy as key priorities for growth.
- The Blatchford Renewable Energy Utility Bylaw identifies and allows the opportunity to expand the District Energy Sharing System outside of the current service area in Bylaw 17943.
- Any opportunity to expand the utility outside of Blatchford needs to be analyzed to understand the social, environmental and economic impact for the utility.
- While the utility is currently focused on the development inside the service area, opportunities outside that area could be beneficial for the utility and if properly resourced and funded, as indicated in the budget, should be pursued.
- Ultimately, it is Council's direction to guide the timing of this work, as it was in the motion from Executive Committee.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-016U

**Document Page #:** 14 of BRE Rate Filing

**Asked By:** Mayor Sohi

**Question:**

The report indicates: "A cost of \$442,500 was forecast for 2023 for external professional services to assist with non-technical aspects of operating BREU."

Can you please provide more details on the specific scope of work and deliverables required under external professional services to assist with non-technical aspects of operating BREU?

**Answer:**

**Financial Services Branch**

The \$442,500 in external professional services (including technical and non-technical services) shown in Table 7 is for the following services:

- \$288,500 for engineering services to assist with operational support, planning and building design reviews, inspections, and utility standards development;

- \$60,000 for marketing, education and communication activities and materials ;

- \$29,000 for general professional services for energy meter installations and Measurement Canada inspections and;

- \$65,000 for management consulting services such rate design work and feasibility studies as it relates to NAIT.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-017U

**Document Page #:** 17 of BRE Rate Filing

**Asked By:** Mayor Sohi

**Question:**

What fuel source will be used for the peaking energy center?

What would be the risks to only funding the detailed design of the peaking energy centre and deferring the construction phase until we know for sure land development is on pace to need it by 2026?

**Answer:**

**Financial Services Branch**

- The current anticipated fuel source for the peaking energy centre as it stands today would be natural gas, but the utility is investigating the opportunity to replace natural gas with less carbon intensive fuels such as renewable natural gas or hydrogen.
- As renewable energy technologies advance and energy providers continue to 'green' their products, the utility anticipates there will be opportunities to utilize renewable fuels at the time when the peaking energy centre is anticipated to become operational (2026).
- The integration of different fuel sources or new technologies would need to be analyzed to understand the impact on the project and Blatchford's vision.
- It's the utility's intention to advance the planning and design of the peaking energy centre and adjust the construction phase to the progress aligned with land development and overall construction activities in Blatchford.
- The proposed four year budget is based on the current land development and builder construction activities forecast in Blatchford. As many internal and external factors will influence the development of the forecast, the utility will continue to be nimble in its operational and fiscal approach, and will need to make adjustments along the way.
- In general, the utility will only start the construction of any utility infrastructure when the respective capacity is needed to ensure that sustainable energy can be provided when the builder and customer needs it.
- The utility will continue to work closely with the Blatchford land development team to understand construction timelines to ensure that energy will be available for its customers. Regular updates will be given to Council on the progress, timelines and ensuing risks in the annual business plan and budget submissions.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-018U

**Document Page #:** 22 of BRE Rate Filing

**Asked By:** Mayor Sohi

**Question:**

Can you explain how the cost of the renewable energy credits used to offset the GHG emissions are incorporated into the customer rates?

What is the annual budgeted cost for the renewable energy credits for Blatchford?

**Answer:**

**Financial Services Branch**

The customer rates for Blatchford Renewable Energy are derived from the business-as-usual comparison, based on the fiscal policy set by Council: "All customer charges will be based upon cost of service with the end user (customer) paying at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and annual maintenance costs."

This fiscal policy means the renewable energy credits are not directly incorporated in the customer rates. The City purchases renewable energy credits centrally on behalf of the whole organization to offset some of the City of Edmonton's carbon emissions associated with its electricity use. The cost for renewable energy credits in the initial stages of utility development have ranged between \$2,000 and \$3,000 annually.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Capital Budget Book

**Question #:** 23-019U

**Document Page #:** 22 of BRE Rate Filing

**Asked By:** Mayor Sohi

**Question:**

Are there any homes not connected to the energy system? If so, is there comparative data on how much they have paid for utilities vs. homes that have connected to the district energy system?

**Answer:**

**Financial Services Branch**

- Within the first two stages of development, no builder has applied for the exemption opportunity, however one potential builder has started consultations to be exempted from the utility's service.
- Buildings may be exempt from connecting to the District Energy Sharing System if they are designed, built and certified to a net-zero carbon standard, to the satisfaction of Blatchford Renewable Energy.
- Blatchford rates follow the principle outlined in the Utility's fiscal policy: "All customer charges will be based upon cost of service with the end user (customer) paying at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and annual maintenance costs."

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-020U

**Document Page #:** p18, BREU Budget

**Asked By:** Mayor Sohi

**Question:**

The report says: "Current capacity at Energy Centre One is one megawatt (MW) of heating and one megawatt of cooling energy, which is enough to service the first few land development stages in Blatchford. The expansion of Energy Centre One is needed to provide energy for land development stages in Blatchford west and east, which are anticipated to come online between 2023 and 2026."

How many total number of homes and or buildings is the current capacity of Energy Centre One intended to serve? When is the first few land development stages expected to be fully completed

**Answer:**

**Financial Services Branch**

- The exact number of development stages and homes intended to be served by an energy center is difficult to provide with a high degree of accuracy as the total amount of thermal energy required per home/building depends on the builder's intention and product. For example, the builder determines the size of the home/building, if secondary and/or garden suites will be built, if parkade heating is required, etc.
- Utilizing the current anticipated forecast for Blatchford, the utility expects the current capacity of Energy Centre One to be reached within the first or second quarter of 2024. This forecast is driving the timing of the completion of the extension of Energy Centre One in early 2024.
- Given the current development scenario, that forecast could be between 100 and 150 buildings, depending heavily on the type of buildings to come online.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-021U

**Document Page #:** 6

**Asked By:** Councillor Tang

**Question:**

Can you elaborate on the Circular Economy initiatives contemplated?

**Answer:**

**Waste Services Branch**

Some of the City's actions related to supporting the development of a circular economy are described in the Waste Reduction Roadmap (Roadmap '24) (report CO00390). These include:

- Implementing a single-use item reduction bylaw. This will drive adoption of reusable alternatives, a key element of the circular economy.
- Working with community partners to incentivize reuse at community clean up events (with funding provided by Capital City Clean Up).
- Augmenting the Reuse Directory to include listings related to renting, repairing, refilling, rescuing, and reusing, all actions that support a circular economy.
- Providing grants to community groups that propose innovative initiatives that reduce residential waste, increase the amount of material reused locally, directly enhance the knowledge, ability and/or motivation of the intended audience to engage in activities that result in waste reduction and/or reuse, and foster long-term changes in behaviour that result in waste reduction.
- Facilitating the Waste Reduction Network to support private sector advances in the circular economy. Members of the network learn from each other and connect directly with City staff who are able to share information and expertise.
- Engaging with the province on the implementation of Extended Producer Responsibility, which will help support a circular economy for packaging, paper products and single-use products.

Waste operations also support the development of a circular economy through the following activities:

- Creation of refuse derived fuel, which is used as a substitute for traditional fuels.
- Operation of the Reuse Centre, which encourages reuse by accepting and providing unique items to be redistributed back into the community, and highlights the benefits of reuse through waste reduction programs and education.
- Support of the Alberta Clean Energy Technology Accelerator (ACETA), which is finding new ways to process waste to create energy.
- Operation and upgrading of the Material Recovery Facility to enhance the recycling of residential waste.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-022U

**Document Page #:** 6

**Asked By:** Councillor Tang

**Question:**

When will the Waste Innovation initiatives start (e.g. improved refuse derived fuel process, research hub, etc.)? Is there an estimate of how much partner contribution (funding) this collaboration will attract?

**Answer:**

**Waste Services Branch**

The Alberta Clean Energy Technology Accelerator (ACETA) incubation facility is intended to be self-funded, with tenants responsible for paying leases to cover the costs of the facility. The incubation facility was completed in summer 2022 and is located at the Edmonton Waste Management Centre. The facility is set up in four separate pods, fully autonomous from each other to allow each tenant to safely do testing with no risk of impacting the others. There is currently one tenant using the facility, and work will be done in 2023 to find other organizations to use the remaining three pods. The contribution amount from the four institutional partners is expected to total \$6.5 million.

The ACETA incubation facility is intended to provide a space for advancing research in clean energy. It provides access to resources and feedstocks such as processed municipal solid waste and biomass, syngas from municipal solid waste residuals, landfill gas, anaerobic digestion gas, and other processed materials or byproducts from solid waste processing and conversion. It also provides access to technology for hydrocarbon processing, upgrading and refining as well as experimentation and technology development.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-023U

**Document Page #:** 8

**Asked By:** Councillor Tang

**Question:**

Why did we not set a higher target for the 2026 Residential Diversion Rate when compared to 2022?

**Answer:**

**Waste Services Branch**

Waste Services is committed to providing transparency in its operations and reports and forecasts diversion by tracking waste material to its end use wherever possible. The diversion rate targets are based on realistic expectations for how waste will be sorted by residents. Currently, incremental improvements to diversion are being achieved through residents sorting their waste into four streams, automated collection and operational improvements to processing facilities. Large-scale increases are not likely until further significant changes to the waste system are implemented. These include the adoption of three-stream source separation in the multi-unit sector (households that receive communal collection), changes to recycling methods or other end-use markets, or additional waste processing opportunities.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-024U

**Document Page #:** 8

**Asked By:** Councillor Tang

**Question:**

For the service standards set out by Waste Services: if we want to change the service standards listed, what does it take? Would we need to change the rate? Would we need to change the 25-year Waste Strategy?

**Answer:**

**Waste Services Branch**

Service standards were established in report CR\_7173 which was approved by Council in 2019. Changing the service standards would require a renewed business case analysis and could impact the utility rate. Any contemplated changes to service standards would be designed to align with the goals of the 25-year Waste Strategy.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-025U

**Document Page #:** 8

**Asked By:** Councillor Tang

**Question:**

For the Material Recovery Facility upgrade, construction was expected to occur in late 2022. Has construction started?

**Answer:**

**Waste Services Branch**

Construction on the Materials Recovery Facility began in July 2022 and the upgrades are expected to be complete by the end of June 2023. Prior to that, the facility will begin receiving recycled material as it ramps up to full capacity. This is reflected in the 2023-2024 Waste Services Utility Rate Filing's Capital Project Summary (Schedule 11.1, page 48) proposing the remaining \$4.6 million budget in 2023.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-026U

**Document Page #:** 13

**Asked By:** Councillor Tang

**Question:**

For Expenditure Changes: In the past 4 years, what were some data-driven measures that helped to increase efficiency and led to cost savings?

**Answer:**

**Waste Services Branch**

Waste Services uses data to drive innovation and continuous improvement, while empowering decision makers to make choices that result in improved outcomes. Recent examples of data driven measures that have resulted in cost savings or efficiencies include:

- Average time to deliver waste carts to new homes: Through data analytics, the process has been streamlined. The average time of delivery has been reduced from an average of 19 business days to five business days.
- Collection cost per kilometre: Analysis of this data, comparing resource type (i.e. City crew or contract crew) as well as location within the City, informed contract renegotiations, reducing potential contract increases.
- Waste processing cost per tonne: A review of organic waste processing cost per tonne increased efficiency and reduced costs in two ways. Organic waste collected through the seasonal yard waste collection is processed outdoors which produces a higher grade of compost for a reduced cost when compared to the indoor composting of food scraps. An informed decision was made to use contract service providers for processing organic waste for a reduced cost compared to constructing an organics processing facility at the Edmonton Waste Management Centre.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-027U

**Document Page #:** 16

**Asked By:** Councillor Tang

**Question:**

For the projects under 'Cash Flow Adjustment', why can't the income earned (net income) contribute to these projects?

**Answer:**

**Waste Services Branch**

Net Income earned will contribute to the Capital Expenditures for these projects. The "Cash Flow Adjustment" portion reconciles the four-year budget with the Rate Filing due to timing differences between originally budgeted costs versus updated spending projections. This ensures rates are being calculated on the correct timing of expenditures. The total Capital Expenditure requested for approval in the Rate Filing is the total at the bottom of the table on page 16 - "Total Forecast per 2023-2024 Waste Services Utility Rate Filing" within the 2023-2026 Waste Services Utility Budget and Plans (Attachment 2).

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-028U

**Document Page #:** 13

**Asked By:** Councillor Tang

**Question:**

What would be the impact/implications of either a 0.45%, 0.45%, 0.45%, 0.45% increase from 2023-2026 or a 0%, 0%, 0.9%, 0.9% increase from 2023-2026 for the utility rate? Would we still have a positive Net Income?

**Answer:**

**Waste Services Branch**

The calculation of Net Income for the Waste Services utility for 2023-2026 includes allowances for capital funding to meet Pay-As-You-Go (PAYG) requirements for the future fiscal years plus a risk allowance to mitigate exposure as outlined in the Waste Services Utility Fiscal Policy C558B. The Net Income proposed for 2023 and 2024, and forecast for 2025 and 2026, is significantly lower than in prior years. The utility has placed a priority on stable, consistent year over year rate increases, as opposed to escalating rate increases over time, and used existing cash to both smooth and reduce the need for PAYG and risk. The proposed rate increase of 0.9% for 2023 would cost a typical residential customer \$5.16 per year and a typical communal collection customer \$3.36 per year.

The City's Corporate Economist has forecast the change in the Consumer Price Index (CPI) at 3.3%, 1.9%, 2.1% and 2.1% for 2023 to 2026, respectively. The 0.9% annual increase proposed is well below the rate of inflation. The Waste Services Utility Fiscal Policy C558B considers rates to be stable and consistent when the year over year change in rates is within  $\pm 2\%$  of CPI.

Reducing the rate increases to a 0.45%, 0.45%, 0.45%, 0.45% increase for 2023 to 2026 or a 0%, 0%, 0.9%, 0.9% increase for 2023 to 2026 would result in net income of \$4.7, \$2.8, (\$1.1) and (\$2.4) million for 2023 to 2026 in the first scenario and net income of \$3.8, \$0.9, (\$2.1) and (\$2.4) million for 2023 to 2026 in the second scenario. Both scenarios result in negative net income starting in 2025. The Waste Services Utility Fiscal Policy C558B requires the utility to have a positive net income.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-029U

**Document Page #:** 5

**Asked By:** Councillor Tang

**Question:**

From the Utility Advisors Report (Attachment 5): If the reserve revenue goes towards needs that we currently face so that we can better combat our waste diversion goals now, is it still seen as subsidizing future residents' waste habits?

**Answer:**

**Waste Services Branch**

The need for higher net income in 2023 and 2024 is driven by the need for higher Pay-As-You-Go (PAYG) funding as outlined in Table 11.2 Capital Project Financing Summary in the 2023-2024 Waste Services Utility Rate Filing. The inclusion of PAYG funding in the calculation of the utility's revenue requirement is governed by the Waste Services Utility Fiscal Policy C558B. The average period for a generation is generally considered to be between 20 to 30 years. Two years is a relatively small portion of a generation.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-030U

**Document Page #:** 4

**Asked By:** Councillor Tang

**Question:**

From the Utility Advisors Report (Attachment 5): Why did we switch to a two-year rate filing? Which policy is this?

**Answer:**

**Waste Services Branch**

As per the Waste Services Utility Fiscal Policy C558B, customer rates may be set either annually or for up to four years at a time. On August 26, 2022, Waste Services presented report CO01379 to Utility Committee. The report outlined the proposed business planning changes for the utility, including the change to a multi-year rate filing. As the utility matured and rate increases stabilized, the opportunity to exercise the multi-year rate filing option enabled by Policy C558B aligns the utility budget cycle to the corporate four-year process. Moving from an annual rate filing to a four-year rate filing is a significant change. Waste Services proposed to present two-year rate filings for 2023-2024 and 2025-2026 to prepare for the transition to a four-year rate filing for 2027-2030. Multi-year rate filings also simplify the administrative process, provide rate certainty for residents and budget certainty for Administration.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-031U

**Document Page #:** 13

**Asked By:** Councillor Tang

**Question:**

For the 2 new FTEs, if there is a focus on "increased customer connections" why not hire someone in marketing or public/customer relations?

**Answer:**

**Financial Services Branch**

- The additional 2.0 FTEs are needed for a new Project Coordinator and a Business Analyst position. These positions are related to the business planning and engineering support required to manage anticipated utility growth, the additional energy center construction and capacity, the extension of the distribution piping network as well as increased customer connections.
- The additional work for these positions related to customer connections includes working with home builders on building design and construction and inspecting their construction activities for compliance with design.
- Additional customer connections also includes the work required for transferring energy usage to EPCOR for customer billing and managing on site service calls for residents (meter issues, etc).
- The utility currently has 1.0 FTE from Marketing and Communications to support the utility's communication, marketing and customer service needs. The utility is also supported by the Director, Blatchford Marketing & Sales, who provides communication, marketing and customer service support for both the utility and the land development. No additional marketing and communications FTE resources are required at this stage of the utility's development.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-032U

**Document Page #:** 12

**Asked By:** Councillor Tang

**Question:**

For Growth/New Services: By what date/year would the feasibility study to expand the Utility to areas adjacent to Blatchford need to be undertaken to potentially explore and initiate this option in the future? Is this needed now, or can still be completed in the future for consideration (i.e. is there a window of opportunity we might be missing if unfunded)?

**Answer:**

**Financial Services Branch**

- The District Energy Strategy identifies priority areas within the City of Edmonton for District Energy development.
- The District Energy developments in Blatchford and the Downtown have been identified in Edmonton's Community Energy Strategy as key priorities for growth.
- The Blatchford Renewable Energy Utility Bylaw identifies and allows the opportunity to expand the District Energy Sharing System outside of the current service area in Bylaw 17943.
- Any opportunity to expand the utility outside of Blatchford needs to be analyzed to understand the social, environmental and economic impact for the utility.
- The expected outcomes of any feasibility study would include a projected timing of connection ("window of opportunity"), which can vary from building to building.
- While the utility is currently focused on the development inside the service area, opportunities outside that area could be beneficial for the utility, and if properly resourced and funded as indicated in the budget, should be pursued.
- Ultimately, it is Council's direction to guide the timing of this work, as the work is being driven by an Executive Committee motion.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-033U

**Document Page #:** 5

**Asked By:** Councillor Tang

**Question:**

From Attachment 1 Blatchford Renewable Energy 2023 Rate Filing: Even though the business case and Blatchford District Energy Utility Fiscal Policy were reviewed/updated in 2016 and 2018, we still haven't secured the non-refundable cash infusion needed for the initial years of operation. What options are there for this cash infusion, and when will it be required?

**Answer:**

**Financial Services Branch**

- Administration and Council have been preparing grant applications and have lobbied other levels of governments for external grant opportunities. To date, we have not received confirmation on any grants.
- We are currently working on a submission for the Federal Government as part of the Smart Renewables and Electrification Pathways Program (SREP) from Natural Resources Canada.
- In March 2019, Administration provided five options for addressing the non-refundable cash infusion required to fund the initial stages of infrastructure development for the Blatchford Renewable Energy utility. These were:
  - Federal and provincial grant funding
  - Blatchford utility debt (self-liquidating debt that would be funded through customer utility fees & charges)
  - Blatchford land development retained earnings
  - Partnership with other utility providers
  - City of Edmonton tax supported debt (least preferred)
- The cash infusion is needed over the first 10 to 15 years of the utility, depending on infrastructure needs and development growth.
- The effort to secure the non-refundable cash infusion has been ongoing from the start of the project in 2017.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-034U

**Document Page #:** 28

**Asked By:** Councillor Tang

**Question:**

From Attachment 1 Blatchford Renewable Energy 2023 Rate Filing: Will the infrastructure fee per unit decrease over time? Will it be easier for builders to build and connect to system in the future?

**Answer:**

**Financial Services Branch**

- For 2023, BREU has proposed a 2.7 per cent increase to the approved 2022 Infrastructure Fees and it is expected that an annual increase at or near 2.7 per cent will be proposed by BREU over the next several years, if not longer.
- The 2.7 per cent increase proposed for 2023 is consistent with increases approved for the 2020, 2021 and 2022 fees, is also consistent with the annual increases included in the City's financial model presented in the business case for developing the Blatchford District Energy Sharing System and will allow the Infrastructure Fee to keep pace with the escalation in cost to build the utility infrastructure required to service BREU's customers.
- BREU is expecting that connection requirements for the builders will get easier as builders become more experienced with the technical and operational requirements.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-035U

**Document Page #:** 28

**Asked By:** Councillor Tang

**Question:**

From Attachment 1 Blatchford Renewable Energy 2023 Rate Filing: Are Townhouse Lots and Multi-Unit lots usually the same size? If they are not, why is the Infrastructure fee the same price for both (for residential)?

**Answer:**

**Financial Services Branch**

- Typically, multi-unit lots would be larger in size than townhouse lots.
- Current infrastructure fees for townhouse and multi-unit lots are charged per unit. While individual multi-units might be smaller in size than townhouse units, this is offset through common spaces in multi-units which require heating and cooling.
- As part of the next evolution of rate and fee design the utility will investigate the opportunity to charge the infrastructure fee on more detailed design information such as square meters or nominal capacity. The result of this work will be brought forward to Council for review.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-036U

**Document Page #:** 10

**Asked By:** Councillor Tang

## **Question:**

For Chart Branch Summary By Program:

1. How did you use net income in 2022 (\$5.907M)? What is the plan for future net income? Will they go into a reserve for contingency (i.e., accounting for unanticipated cost increases on capital projects)?
2. Why was there such a big change in net income from 2021 to 2022?
3. Does the FTE count include considerations for bringing more employees in-house or converting them full-time?

## **Answer:**

### **Waste Services Branch**

1. Net Income earned by the utility stays with the utility and adds to the net equity accumulated by Waste Services for the benefit of ratepayers. The equity is used to fund past and future capital expenditures.
2. The 2021 net income was higher than budget due to a one-time positive revenue adjustment for the forgiveness of the utility's non-regulated loan for \$7.6 million by the City. Net Income is lower in 2022 when compared to the budget for 2022 as a result of a one-time adjustment to the reported liability for landfill closure and post-closure care. An adjustment is required in 2022 to increase the liability by \$7.2 million. This increase is primarily associated with higher than previously anticipated costs required to construct the Clover Bar Landfill slurry wall and leachate system, and to provide riverbank fortification.
3. The additional FTEs, as outlined in Appendix A of the 2023-2024 Rate Filing (beginning on page 64), increase the total number of full-time positions and employees in the branch. The two customer support centre staff, outlined in Appendix A2, are replacing temporary staff with full-time staff. The remaining additional FTEs will create net-new positions, including the Collection Services staff, outlined in Appendix A1, that will replace contracted staff with City staff.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-037U

**Document Page #:** 18

**Asked By:** Councillor Tang

**Question:**

From Attachment 1 Waste Services Utility Rate Filing:

1. What is the number of Near Miss Incidents in the table?
2. For Kg/Capita Residential Waste Generated, why is 'No Increase from 2021" in columns for 2023 to 2026 projected listed as 363 kg when the 2021 actual was 333kg? Would this not be considered an increase?

**Answer:**

**Waste Services Branch**

1. A near miss incident is a hazard that does not result in injury, illness or damage, but has the potential to do so. Reporting of near miss incidents is strongly supported as it presents an opportunity to control a workplace hazard and reduce future potential safety incidents. Future targets in the table are as follows:

2022: 255

2023: 281

2024: 309

2025: 340

2026: 374

2. Future targets are based on the 2020 result of 363 kg. The table found on page 18 of the 2023-2024 Rate Filing noting this measure contains an error. Targets from 2022 to 2026 should indicate "No increase from 2020 (363 kg)" with no reference to 2021.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-038U

**Document Page #:** 25

**Asked By:** Councillor Wright

**Question:**

On page 25 of Report CO01380 Attachment 2, it states that "Other decreases include reduced internal aggregate sales." To what can this reduction be attributed - inconvenient opening times (e.g. evenings and weekends closed) for internal purchasers or is it non-competitive prices or is the required material not available or of inferior quality? Please advise what total external sales have been over the past three years and the top three external purchasers.

**Answer:**

**Waste Services Branch**

Historically, recycled aggregate products were generated for the sole purpose of implementation into City of Edmonton projects. Contractors working on City projects were required to obtain their recycled aggregate from the City's Aggregate Recycling program. Over time, as capacity became available, the City began selling the products to external clients as well.

In 2021, construction agreements were adjusted to allow contractors to acquire recycled aggregate material from other providers rather than requiring them to purchase from the City's two Aggregate Recycling sites. The reasons for moving in this direction are detailed in the Aggregate Recycling Program report (CO001474) that will be presented to Utility Committee on November 25, 2022.

External sales for the past three years were \$0.42 million (2019), \$0.35 million (2020) and \$0.35 million (2021). Waste Services cannot disclose customer information as it is private and confidential.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-039U

**Document Page #:** p. 5

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: What are the estimated costs if garbage was collected every week instead of every two weeks? What impact would this have on diversion rates?

**Answer:**

**Waste Services Branch**

Administration completed detailed analysis on collecting garbage both weekly and bi-weekly as part of the Single Unit Waste Set-Out Business Case (report CR\_7173). Based on calculations completed in 2019, moving to weekly garbage collection would increase the estimated capital costs by \$22 million and the estimated operating costs by \$184 million over the course of 30 years (2020-2049). This is also expected to decrease residential diversion by one per cent due to the increase in garbage collection. Further detailed analysis would be required should Council wish to move in this direction. Based on the business case analysis, the size of the black carts and the collection schedule was determined to encourage sorting and waste reduction by households, and to increase diversion.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-040U

**Document Page #:** p. 6

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: With the diversion rate of blue bags at 70%, can Waste Services outline the process of what is diverted and where different items are sent (e.g., third party for processing, overseas/ within Alberta, etc)? Are there any ways to get that diversion rate higher or items that are currently non-recyclable that have promising innovations?

**Answer:**

**Waste Services Branch**

The 70 per cent diversion rate includes the average amount of contamination in collected materials, which is approximately 22 per cent. The greatest opportunity to improve diversion is to increase resident participation in the recycling program because recyclable material that is incorrectly put into the waste stream (black carts) cannot be recovered or diverted. Additional diversion can be achieved by processing the recycling contamination along with other residential waste through a waste-to-energy process.

All recyclable materials recovered from the Materials Recovery Facility are marketed by the contracted facility operator, who has discretion to determine where to sell the material. Currently, all plastic is sold to processors in Canada, all metal is sold to processors in North America, and paper and cardboard is sold to a mix of domestic and international processors.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-041U

**Document Page #:** p. 6

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: "Refuse Derived Fuel" - The proposed budget states that "[w]aste services is exploring market opportunities to sell this product... [and] [t]his will increase the waste diversion rate and keep this material out of landfill." What are the capacities to explore this?

**Answer:**

**Waste Services Branch**

Waste Services is exploring additional partners in the region for waste-to-energy projects. The market for refuse derived fuel and other waste products continues to evolve with the advent of new green-tech initiatives, carbon budgeting requirements, and regulation changes (specifically Extended Producer Responsibility) which all affect demand for waste products. Waste Services remains active in the local, national, and (to a lesser extent) international waste communities to ensure that it is current with new trends and able to explore new opportunities.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-042U

**Document Page #:** p. 6

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: "Reduction/Regulation of Single-use Items" - What will the grants look like "to help businesses meet and exceed the bylaw requirements"?

**Answer:**

**Waste Services Branch**

The Single-use Item Reduction Grant program launched on November 7, 2022, with the goal of helping organizations adopt reusable alternatives to single-use items. The grant funding will help eligible organizations prepare for the City's new Single-use Item Reduction Bylaw before it comes into effect on July 1, 2023. While reusable alternatives offer both environmental benefits and long-term cost savings, upfront costs can be a barrier. The grant will support early-adopters through this change.

Eligible applicants include businesses, large event organizers, registered charitable organizations and community groups. Applications will be accepted until December 31, 2022, or until all funding is allocated. A total of \$73,000 in grant funding is available in 2022. Each grant is valued at up to \$5,000, depending on the specific activity an organization commits to implementing. Eligible activities include, but are not limited to, purchasing reusable alternatives to single-use items, and purchasing, leasing or renting the equipment needed to wash and sanitize those items.

The grant applications process is simple and straightforward, and funding will be provided through a single payment once an application is approved. As a condition of receiving the funding, successful applicants are required to track the impact of their transition from disposables to reusables in terms of the number and type of single-use items avoided, change in operating cost, impacts on customer/client satisfaction and change in litter around the organization.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-043U

**Document Page #:** p. 6

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: "Extended Producer Responsibility Program" - The proposed budget indicates there "will be a major shift in accountability and responsibility from the City to producers for the Blue Bag program and the Hazardous and Special Products program" in reference to the Government of Alberta extended producer responsibility program. How is Administration accounting for this shift in the proposed budget?

**Answer:**

**Waste Services Branch**

The financial implications to Waste Services with respect to the future implementation of Extended Producer Responsibility (EPR) in Alberta are unknown at this time and have not been included in the 2023-2024 Waste Services Utility Rate Filing. As noted in the October 26, 2022 memo to Council (Reference No.: 452166540-001) Administration will continue to work with the Government of Alberta and other entities involved in implementing EPR to ensure the interests of Edmontonians are well represented. Administration will update Council as more information becomes available and as progress is made in the lead up to the April 1, 2025 transition date. Any known associated financial impacts will be incorporated into the 2025-2026 rate filing.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-044U

**Document Page #:** p. 9

**Asked By:** Councillor Rutherford

**Question:**

Proposed Waste Services Waste Utility Budget and Plans 2023-2026: An "incremental Change to Full-time Equivalents" notes a change of 49.0. How many of these Full-time Equivalents are full-time, part-time, etc.? Are all of these jobs front-line positions? If not, please provide a breakdown and explanation of the level of positions (front-line, supervisor, manager, etc.) included in the 49 Full-time Equivalents.

**Answer:**

**Waste Services Branch**

Of the 49 positions being requested 47 are full-time, front-line positions and two are full-time, front-line, in-scope supervisory positions. A full breakdown of the FTE requests and the rationale for each is provided in Appendix A of the 2023-2024 Waste Services Utility Rate Filing:

A1: Collection Services Staff - 14 FTEs

A2: Business Integration Customer Support Centre Staff - 2 FTEs

A3: Business Integration Communal Collection Support Staff - 32 FTEs

A4: Business Integration Methods Analyst I - 1 FTE

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-045U

**Document Page #:** p. 6

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Utility Rate Filing 2023-2024: In regard to Waste Reduction and Residential Diversion, is the City on track to meet the goals outlined in the 25 Year Waste Management Strategy? How could the City be more aggressive in Waste Reduction and Residential Diversion?

**Answer:**

**Waste Services Branch**

The 25-year Waste Strategy (approved by Council in 2019) set out a number of waste reduction and residential diversion policy and program directions. While the COVID-19 pandemic delayed some program implementations, Waste Services has started work on most programs and is largely on track with the initiatives set out in the Waste Strategy. This includes the implementation of the Edmonton Cart Rollout to single unit households, three-stream sorting and collection in apartments and condos and the development of a single-use item reduction bylaw. Waste Services will also explore opportunities to reduce waste and increase diversion in the Industrial, Commercial and Institutional (ICI) sector through regulation and engagement as well as working with industry partners to explore advanced waste processing opportunities to increase diversion.

As a result of the work undertaken to date, the single unit residential diversion rate increased from 18 per cent in 2020 to 34 per cent in 2021, an increase of 16 per cent. The 25-year Waste Strategy set a target of 90 per cent residential diversion from landfill, and the additional work outlined above will continue to move the City closer to that target.

Specific to waste reduction, Waste Services has developed and implemented the Waste Reduction Roadmap for 2021-2024 (Roadmap '24). The roadmap identifies 10 actions to reduce waste on a per capita basis and the City is currently seeing the success of these actions. For example, as a result of Action 2 (work with internal and external partners to establish reuse opportunities at bin events), 15 community organizations that hosted clean-up events worked with reuse organizations to rescue over 5 tonnes of material from disposal.

The greatest opportunity Waste Services has to positively impact residential waste diversion is to engage with residents on proper sorting techniques. Waste Services provides the option for residents to reduce their waste generation at the household level by selecting a small waste cart. This not only reduces their monthly waste utility rate but also provides opportunity to optimize household waste sorting and reduction. Currently, approximately 10 per cent of households use a small garbage cart. Waste Services' goal is to reduce waste generation on a per capita basis by 20 per cent by 2044. In 2021, the waste generation rate per person was 333 kg, compared to the 2019 baseline of 363 kg. This is an eight per cent reduction.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-046U

**Document Page #:** p. 24

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Utility Rate Filing 2023-2024: The footnote indicates that the new City of Edmonton Debt Management Fiscal Policy (C203D) and the Waste Services Utility Fiscal Policy (C558B) will be reviewed at the same time to "ensure alignment." However, the Debt Management Fiscal Policy was discussed as part of the November 14, 2022 City Council agenda without reference to the Waste Services Utility Fiscal Policy. How will the City ensure alignment of these policies?

**Answer:**

**Waste Services Branch**

The updated City of Edmonton Debt Management Fiscal Policy (C203D) was approved by City Council on November 14, 2022. With the revised policy now in place, Administration will undertake a review of the Waste Services Utility Fiscal Policy C558B. If required, Waste Services will initiate a revision of policy C558B to ensure the utility's debt financing principles and debt servicing levels conform to the guidelines set out in policy C203D. Upon initial review the utility does not anticipate significant updates to the debt financing principles within the utility fiscal policy as a result of the revised City of Edmonton Debt Management Fiscal Policy (C203D).

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-047U

**Document Page #:** p. 53

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Utility Rate Filing 2023-2024: What are the distinctions between Classes of landfill? Where is the Class III landfill located?

**Answer:**

**Waste Services Branch**

Landfills in Alberta are classified by the waste streams they accept. There are three classes of landfills: Class I – Hazardous waste landfill; Class II – Non-hazardous waste landfill; and Class III – Inert waste landfill. The Class III landfill is located at the Edmonton Waste Management Centre and was originally established for the 1987 tornado debris. The Class III landfill ceased operations in 2008 and was closed in 2022.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-048U

**Document Page #:** p. 65

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Utility Rate Filing 2023-2024: Are the 14 FTEs permanent year round positions? Or 6 month x 2 = 1 FTE? - As examples.

**Answer:**

**Waste Services Branch**

The 14 FTEs requested in Appendix A1: Collection Services Staff are permanent year-round positions.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-049U

**Document Page #:** p. 66

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Utility Rate Filing 2023-2024: Given that volume of inquires and escalations have not decreased after the cart rollout, are there any underlying services to explain ongoing volume of inquires? Anything else in processes or operationally that can address frequent concerns?

**Answer:**

**Waste Services Branch**

The increase in inquiries reflects the ongoing adjustments to the new cart collection system. The majority of inquiries received are reports from residents about their waste not being collected. Each inquiry is investigated. While some investigations determine the waste was missed by the collector, in most cases the waste was not collected due to a resident's incorrect set-out. In these instances, the resident is informed about the requirements so they can properly set-out waste for collection for future pick-ups.

To support residents in adjusting to the new cart collection system, Waste Services is hiring two staff for the Customer Support Centre (see Appendix A2 for more detail) and redesigning [edmonton.ca/waste](https://edmonton.ca/waste) with the goal of increasing usability for residents as well as making relevant information easy to find. In addition, marketing and communications activities will continue, including promoting the use of the WasteWise app, in an effort to help residents gather relevant and timely information on waste sorting instructions, collections schedules and helpful notifications.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-050U

**Document Page #:** p. 20

**Asked By:** Councillor Rutherford

**Question:**

Waste Services Waste Containers: Has Waste Services considered a fee for the initial bins to residential properties to offset some of the cost for new bin and maintenance?

**Answer:**

**Waste Services Branch**

The majority of waste containers for multi-unit properties that receive communal collection are City-owned and are funded by the utility rate. Some specialty containers such as compactors are self-funded by the property. A consistent funding model for containers perpetuates equity among customers. Alternative funding solutions, such as implementing a one-time fee for the container, or shifting ownership responsibility for containers to the property can be considered in future business plans. However a key consideration of changing the funding model would be addressing the equity concern, with some customers using containers funded by the utility while other (new) customers fund their own containers.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-051U

**Document Page #:** 44

**Asked By:** Councillor Wright

**Question:**

Under Non-Rate Revenue, Line 7 (Other Program Revenue) says "included in this category are revenues generated from environmental initiatives such as aggregate crushing." What is the amount of revenue associated with aggregate crushing? What is the location of where the aggregate crushing is taking place?

**Answer:**

**Waste Services Branch**

The program's total sales, revenue and other attributes are summarized in the Aggregate Recycling Program report (CO001474) that will be presented to Utility Committee on November 25, 2022. As noted in the business case, the Recycled Aggregate program does not generate income for the City. To break even and remain sustainable, the price charged to City contractors for recycled aggregate would need to increase by \$3.50 per tonne (\$19.00 to \$22.50). This price increase includes the commitment to a 10-year capital replacement requirement valued at \$2.8 million and a total capital improvement of \$6.5 million to remain operational for 20 years.

Waste Services operates two Aggregate Recycling locations: the Southeast Aggregate Recycling site at 5221-17 Street and the Northwest Aggregate Recycling site at 18403-107 Avenue.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-052U

**Document Page #:** 6

**Asked By:** Councillor Salvador

**Question:**

How long is the peaking component of Energy Centre 4 expected to be operational?

**Answer:**

**Financial Services Branch**

- The exact duration and load share of Energy Centre #4 will depend on many factors such as development of the land and builder activities on site. This also includes the type of buildings which are coming online and their respective energy demand from the District Energy Sharing System.
- Generally speaking, Energy Centre #4 would be operating, in peaking conditions, until the Sewer Heat Exchange Energy Centre becomes operational, and provides the necessary base load for Blatchford.
- Operationally, coupled with the expansion of Energy Centre #1, the utility will always maximize use of Energy Centre #1, which operates on renewables, until the Sewer Heat Exchange Energy Centre becomes operational, as indicated above.
- The operational intent for Energy Centre #4 is to run only as needed to cover the peaking conditions, when buildings need additional heating or cooling.
- The utility, in its current growth, will provide regular updates to Council on when certain infrastructure investments will be needed to ensure that the energy supply is ready for when buildings need to connect to the District Energy Sharing System.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-053U

**Document Page #:** 6

**Asked By:** Councillor Salvador

**Question:**

Could Energy Centre 4 be a test case for hydrogen, rather than a natural gas boiler?

**Answer:**

**Financial Services Branch**

- The current anticipated fuel source for the peaking energy centre as it stands today would be natural gas, but the utility is investigating the opportunity to replace natural gas with less carbon intensive fuels such as renewable natural gas or hydrogen.
- As renewable energy technologies advance and energy providers continue to 'green' their products, the utility anticipates there will be opportunities to utilize renewable fuels at the time when the peaking energy centre is expected to become operational (2026).
- The integration of different fuel sources or new technologies would need to be analyzed to understand the impact on the project and Blatchford's vision.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-054U

**Document Page #:** 34

**Asked By:** Councillor Salvador

## **Question:**

There is only a \$2.4M difference in the Present Value between Option 1 Sewer Heat Exchange Energy Centre and Option 3 for Initial construction of peaking Energy Centre, in advance of the Sewer Heat Exchange Energy Centre. The Risk Matrix tables did not include reputational risk associated with using a natural gas boiler to the Blatchford project and it's stated mission and vision. Is it possible the reputational risk could be significantly greater than these PV savings? Have we done any analysis on the potential for reputational risk with Option 3?

## **Answer:**

**Financial Services Branch**

- The \$2.4M difference in the Present Value represents the difference in the total capital and operating costs of all Energy Centres in Blatchford at full build out based on the three options presented. Table 3 on page 34 of 61 in the Sewer Heat Exchange Energy Centre Business Case is comparing the total build out costs for options 1, 2 and 3.
- The total build out cost for option 3 is less than option 1. Both build out scenarios include the development of the Sewer Heat Exchange and Energy Centre #4, as well as all other Energy Centres. The numbers reflect the cost impacts that result from changing the order in which the energy centres are built. Under each option the cash flows vary due to the changing order in which centres are built and the difference reflects the time value of money.
- The direct capital costs impact between Sewer Heat Exchange and Energy Centre #4 is shown in figure 9 in the Sewer Heat Energy Center Business Case (page 31 out of 61). The capital cost implications for the upcoming budget cycle to advance the sewer heat recovery option is \$45.3 million. The capital cost to advance the peaking energy centre is \$10.3 million.
- The development of the District Energy Sharing System has always included the use of peaking energy centres to address 'peaking' energy loads which is defined by the extra energy needed in the system for 'extremes' which could be short periods of time when community energy demand spikes or there are extreme weather events.
- As part of the 2016 business case, Council was presented with two options to meet this peaking energy demand - either using all renewable energy or using non-renewable energy sources (high efficiency natural gas boilers and cooling towers).
- The differences in the initial capital cost estimate for the two options were significant - over \$200 million as estimated in 2016 dollars - with only a marginal improvement in greenhouse gas reductions.
- In the context of the constrained economic environment and the marginal improvement in greenhouse gas reductions achieved through the use of renewables vs. peaking power, Council directed Administration to use a mix of renewables and peaking energy centres.
- The recommendation provided adjusts the order of energy centre developments (bringing on the peaking energy centre before the Sewer Heat Exchange Energy Centre).
- Administration has carefully weighed the pros and cons of the recommendation taking into account operational flexibility of a growing utility, current land development progress, environmental impacts and the utility's long term fiscal health.
- Option 3 temporarily deviates from the short term sustainability goals, however the impact on GHG emission reduction and renewable energy production is relatively small and short lived in the medium term, and with the future construction of the Sewer Heat Exchange Energy Centre, these goals will be re-achieved and maintained.
- The recommended option 3 would result in the lowest initial capital costs and hence provides some financial relief in the utility long term funding gap, while fully providing the necessary generation capacity to adjust to a growing utility customer base and keep the vision for Blatchford intact.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:**

**Question #:** 23-055U

**Document Page #:** 48

**Asked By:** Councillor Salvador

**Question:**

Table 3-1: Modelling Inputs used the Natural Gas Rate of \$1.79/GJ. This is substantially lower than historical averages, and dramatically lower than present rates. Natural Gas prices are expected to rise significantly on a GJ basis as a result of the carbon price increasing to \$170/TonneCO<sub>2</sub>e. How realistic is this natural gas rate as a modelling input, and if a realistic rate is different what would the effect of a more realistic rate be on Table 3: Comparative Present Value of the Project Costs Analysis for all three Options (pg. 34)?

**Answer:**

**Financial Services Branch**

- The gas price was assumed based on an escalated 2018 natural gas rate from ATCO North mid-use tariff for the year 2022, when the analysis was conducted.
- Carbon pricing, in accordance with the federal government plan, has been included.
- We have revisited the gas rate assumptions in the model and updated them with the latest EDC forecast data. With a forecasted natural gas rate of \$8.15 /GJ plus carbon pricing in 2026 the results of the lifecycle cost comparison still shows option 3 as the lowest cost option.
- The reason being, in all three options, more than 95% of the energy delivery is provided by Energy Centre #1 and later the Sewer Heat Exchange Energy Centre. Natural gas, if used at all (please see answer to 23-053U), represents a very small percentage of the overall energy generation mix and thus changing the gas rate does not have a significant impact on the lifecycle cost outcomes. Using the updated values in Table 3 would result in a small reduction in PV difference from \$2.4 million to \$2.3 million between option 1 and 3.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Capital Budget Book

**Question #:** 23-057U

**Document Page #:** 32

**Asked By:** Councillor Salvador

**Question:**

Would debt incurred for a Sewer Heat Exchange Energy Centre be considered Self-Liquidating Debt under the proposed Debt Management Fiscal Policy?

**Answer:**

**Financial Services Branch**

No, the funding source for the Energy Centre #4 is Self-Supporting Tax-Guaranteed Debt (as outlined in the capital profile report for 23-83-8385, page 35), which is currently supported by the City of Edmonton rather than utility rates while the Blatchford Renewable Energy Utility is in its early stages of development.

Typically for a utility operation the source of debt financing is self-liquidating debt, which is repaid through utility rate revenues. In the case of the initial infrastructure costs for the Blatchford Renewable Energy Utility, a non-refundable cash contribution for the initial capital investments has been assumed at this time, resulting in no debt servicing payments attributable to the final rate payer. It is assumed that the debt servicing will ultimately be repaid through this future external funding, therefore resulting in the debt to be classified as self-supported tax guaranteed. As per the Debt Management Fiscal Policy - C203D, self-supported tax guaranteed debt is debt that is repaid through non-tax levy revenues such as grants from other orders of government, user fees, or lease payments. The City would be required to fund the debt payments using property tax revenues if for some reason there was a shortfall in the debt-servicing revenue source planned to service the self-supported tax guaranteed debt.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:**

**Question #:** 23-058U

**Document Page #:** 32

**Asked By:** Councillor Salvador

**Question:**

CORRECTION TO 23-057U

The Waste Services Rate Filing indicates that "Funding for the utility's vehicle and equipment replacements are incorporated into the capital program instead of the Fleet Services Reserve. As older equipment purchased by Fleet Services gets replaced, the remaining reserve contribution will be exhausted. The reserve is expected to be fully consumed in 2022." For clarity, is the debt used to acquire Waste Services fleet vehicles (e.g. in Waste Services Fleet Assets - Composite Capital Funding Request) Self-Liquidating Debt?

**Answer:**

**Waste Services Branch**

Currently, Waste Services funds its fleet assets with the utility's retained earnings. The use of self-liquidating debt is prioritized for assets with a longer life, such as facilities and infrastructure. Since mobile equipment has a lower average life of around eight to 10 years, these assets are selected to be funded with retained earnings to make optimal use of the utility's cash balances and reduce interest expenses. The utility may choose to fund its fleet assets with self-liquidating debt in the future, if interest rates decline, as permitted by Waste Services Utility Fiscal Policy C558B.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-059U

**Document Page #:** 191

**Asked By:** Councillor Salvador

**Question:**

Of the \$45.1M allocated to Waste Services Fleet Assets Composite Renewal, what proportion is being spent on low or zero-emissions vehicles?

**Answer:**

**Waste Services Branch**

Waste Services is committed to the Energy Transition Strategy, its goals and Action Plan. Within the Fleet Assets Composite renewal profile, 15 light-duty electric vehicles are being procured along with appropriate charging infrastructure. Low or zero emission heavy-duty vehicles for waste collection and transfer have only recently been introduced to the market and Waste Services has significant interest and is monitoring the success of these via industry associations. Waste Services has also signed a memorandum of understanding with a hydrogen hybrid technology provider and is in discussions with other hybrid technology providers to test this technology on waste collection vehicles.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-060U

**Document Page #:** 191

**Asked By:** Councillor Salvador

**Question:**

Is there a funding option to pilot hydrogen fleet options with Waste Services? Have we spoken with the Hydrogen Hub and our federal and provincial partners about the opportunity to pilot hydrogen fleet options for waste?

**Answer:**

**Waste Services Branch**

Waste Services is committed to the Energy Transition Strategy, its goals and Action Plan. Hydrogen powered waste collection vehicles have only begun being tested in the industry and Waste Services is monitoring the success of these via industry associations. Waste Services has also signed a memorandum of understanding with a hydrogen hybrid technology provider and is in discussions with other hybrid technology providers to test this technology on waste collection vehicles.

Waste Services works closely with its corporate partner Fleet and Facility Services to bring more alternative vehicle technology into its business. Fleet and Facility Services is directly engaged in this industry and is currently working on proof-of-concept and pilot programs for hydrogen propulsion and other emission friendly technologies to transition the City of Edmonton fleet and mobile equipment to zero emissions technology.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-061U

**Document Page #:** NA

**Asked By:** Councillor Stevenson

## Question:

Peaking Energy Centre (Blatchford Renewable - Attachment 3)

- a) Does the proposed peaking energy centre use natural gas?
- b) Does the net present value evaluation include escalating carbon pricing?
- c) What is the \$1.79/GJ natural gas price assumption based on?
- d) Has the cost / benefit analysis of Scenarios 1A and 1B been revisited since 2015 in light of the City's carbon budget and escalating carbon pricing?
- e) The GHG savings are calculated in this report as relative to a development scenario with no renewables. The Carbon Budget, conversely, considers absolute carbon increases. How do the options compare when considering absolute carbon generation?
- f) What is the impact of the peaking energy station not being located in a building parkade in terms of the highest and best use of land in Blatchford and/or land sales?

## Answer:

**Financial Services Branch**

a) Does the proposed peaking energy centre use natural gas?

- The current anticipated fuel source for the peaking energy centre as it stands today would be natural gas, but the utility is investigating the opportunity to replace natural gas with less carbon intensive fuels such as renewable natural gas or hydrogen.
- As renewable energy technologies advance and energy providers continue to 'green' their products, the utility anticipates there will be opportunities to utilize renewable fuels at the time when the peaking energy centre is expected to become operational (2026).
- The integration of different fuel sources or new technologies would need to be analyzed to understand the impact on the project and Blatchford's vision.

b) Does the net present value evaluation include escalating carbon pricing?

- Yes, carbon pricing, in accordance with the federal government plan, has been included.

c) What is the \$1.79/GJ natural gas price assumption based on?

- The gas price was assumed based on an escalated 2018 natural gas rate from ATCO North mid-use tariff for the year 2022, when the analysis was conducted.
- We have revisited the gas rate assumptions in the model and updated them with the latest EDC forecast data. With a forecasted natural gas rate of \$8.15 /GJ (commodity and delivery) plus carbon pricing in 2026 the results of the lifecycle cost comparison still shows option 3 as the lowest cost option.
- The reason being, in all three options, more than 95% of the energy delivery is provided by Energy Centre #1 and later the Sewer Heat Exchange Energy Centre. Natural gas, if used at all (please see answer to a), represents a very small percentage of the overall energy generation mix and thus changing the gas rate does not have a significant impact on the lifecycle cost outcomes.

d) Has the cost / benefit analysis of Scenarios 1A and 1B been revisited since 2015 in light of the City's carbon budget and escalating carbon pricing?

- The decision and direction from Council at the time was to continue with option 1B and not been revisited since.

e) The GHG savings are calculated in this report as relative to a development scenario with no renewables. The Carbon

# Responses to City Council Questions on the Proposed Utility Budget

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Budget, conversely, considers absolute carbon increases. How do the options compare when considering absolute carbon generation?

- The greenhouse gas reduction from the operation of the District Energy Sharing System is generated through replacement of natural gas (furnaces) and grid electricity (air conditioners) with renewable energy from the District Energy Sharing System.
- The operation of Blatchford Renewable Energy and the greenhouse gas impacts have been integrated in the City's overall carbon budget, which evaluates absolute carbon changes from emissions levels in 2021. The District Energy System will support emissions neutral growth in the Blatchford Community and will therefore result in no impact to 2021 emissions as indicated in the report.
- With Blatchford's District Energy Sharing System operating year after year the absolute carbon generation will be integrated in the City emissions while Blatchford grows.

f) What is the impact of the peaking energy station not being located in a building parkade in terms of the highest and best use of land in Blatchford and/or land sales?

- The final location of the peaking Energy Centre still needs to be determined which will happen during design effort, if the reports recommendation is approved.
- The utility will need to analyze the benefit of building the peaking Energy Center inside of a new building (including impact of land sale price) versus building a separate stand-alone building. For this business case analysis, conservatively, the construction of a stand alone building has been assumed.

# Responses to City Council Questions on the Proposed Utility Budget

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**Document:** Utility Budget Book

**Question #:** 23-062U

**Document Page #:** 14

**Asked By:** Councillor Stevenson

**Question:**

Table 6 shows a total of \$200k (\$150k in 2023 and \$50 in 2024) for technical consultants to address a technical study to explore expanding DESS system beyond Blatchford. However, page 13 also notes an ongoing annual technical consultant cost of \$150k. What is the full technical consultant requirement?

**Answer:**

**Financial Services Branch**

The reference on page 13 to the \$150,000 for the technical consultants is for the same cost item referenced at the top of page 14: \$200,000 in total (\$150,000 for 2023 and \$50,000 for 2024) to address the October 12, 2022 Executive Committee motion to undertake a feasibility study to expand the BREU to areas outside the current Blatchford service area. This cost item is shown in the "Technical Consultants" line in Table 6. There are no consultant costs related to this item beyond 2024.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-063U

**Document Page #:** 22

**Asked By:** Councillor Stevenson

**Question:**

- a) Blatchford residents are not eligible for the natural gas rebates being provided by the Province. Is this being considered in the pegging process for determining utility rates?
- b) Does the pegging approach still take a variable usage approach? ie if residents use less energy, they will pay less on their bills?

**Answer:**

**Financial Services Branch**

a) The Alberta Provincial Government Natural Gas Rebate Program is expected to be in effect from October 2022 to March 2023 and will be applied to customer natural gas bills if the regulated monthly natural gas rate charged by any one of Alberta's three regulated utility providers is above \$6.50 per gigajoule. If the regulated natural gas rate does not exceed \$6.50 per /GJ, customers will not see any rebates on their monthly bill. For the purpose of calculating Business as Usual (BAU) in the 2023 Rate Filing, the Natural Gas Rebate program was not factored into the determination of the annual BAU energy utility bills as the forecast natural gas commodity cost for the period October 2022 to March 2023 was lower than \$6.50/GJ.

b) Yes, the pegging approach used to establish BRE's customer rates takes into account variable usage such that if a resident uses less energy it will result in a lower BREU utility bill for that resident.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-064U

**Document Page #:** 28

**Asked By:** Councillor Stevenson

**Question:**

Is the infrastructure fee comparable to utility hook ups in other communities?

**Answer:**

**Financial Services Branch**

The comparison of utility "hook ups" to BREU's Infrastructure Fee would depend on the particular community and utility. Utilities in some communities may charge up front fees or require security deposits (sometimes referred to "hook-up" costs) for new customers and customers moving from one service location to another. The BREU Infrastructure Fee is not comparable to these types of fees/charges.

The BREU infrastructure Fee is a one-time up front fee charged to builders/developers as a contribution toward the fixed cost of providing thermal energy service and would be somewhat comparable to the one-time up front payment charged to builders and developers by electric and natural gas utilities in Alberta (typically referred to as the customer contribution) to cover a portion of the cost of connecting the customer's residence/facility to the electric or natural gas system.

BREU's Infrastructure Fee is comparable to similar fees charged by other district energy utilities in Canada to new customers connecting to the district energy system.

# Responses to City Council Questions on the Proposed Utility Budget

**Document:** Utility Budget Book

**Question #:** 23-065U

**Document Page #:** 7

**Asked By:** Councillor Stevenson

**Question:**

Blatchford Renewable (Attachment 2)

Page 7 shows that Energy Centre One will be providing 29,762MWh of power by 2026. Page 10 of Attachment 1 says the demand will be 14,900MWh will be needed by 2026. Where is the gap that needs to be filled by the peaking energy system?

**Answer:**

**Financial Services Branch**

- Page 7 shows the cumulative thermal energy provided by the District Energy Sharing System from 2021 to 2026, while page 10 of attachment 1 shows figures on a per year basis (not cumulative).
- While there should be no gap in the sum of the numbers shown on page 10 of attachment 1 (with the sum representing the cumulative energy provision) and the information shown on page 7, there are slight differences in sums in both tables which are a result of temporal distribution differences, adjusted energy use intensities, and build out assumptions.
- Operationally, as per current development scenario, Energy Centre #1, coupled with its expansion, will carry the development growth for its base and peak loads until 2026 from renewables.
- The utility will always maximize use of Energy Centre #1, however additional peaking demand will be provided from the suggested Energy Centre #4, anticipated to be needed in 2026.
- The operational intent for Energy Centre #4 is to run only as needed to cover the peaking conditions, at the time when buildings need additional heating or cooling.
- Generally speaking, Energy Centre #4 would be operating, in peaking conditions only, until the Sewer Heat Exchange Energy Centre becomes operational and provides the necessary increased base load for Blatchford from renewables (anticipated in 2030).
- The design intention has always been and will continue to be to cover the base and a good portion of the peak energy demand from renewables (Energy Centre #1 and Sewer Heat Exchange Energy Centre).
- The exact duration and load share of all energy centres will depend on many factors such as development of the land and builder activities on site. This also includes the type of buildings which are coming online and their respective energy demand from the District Energy Sharing System.
- The utility, in its current growth, will provide regular updates to Council on when certain infrastructure investments will be needed to ensure that the energy supply is ready for when buildings need to connect to the District Energy Sharing System.