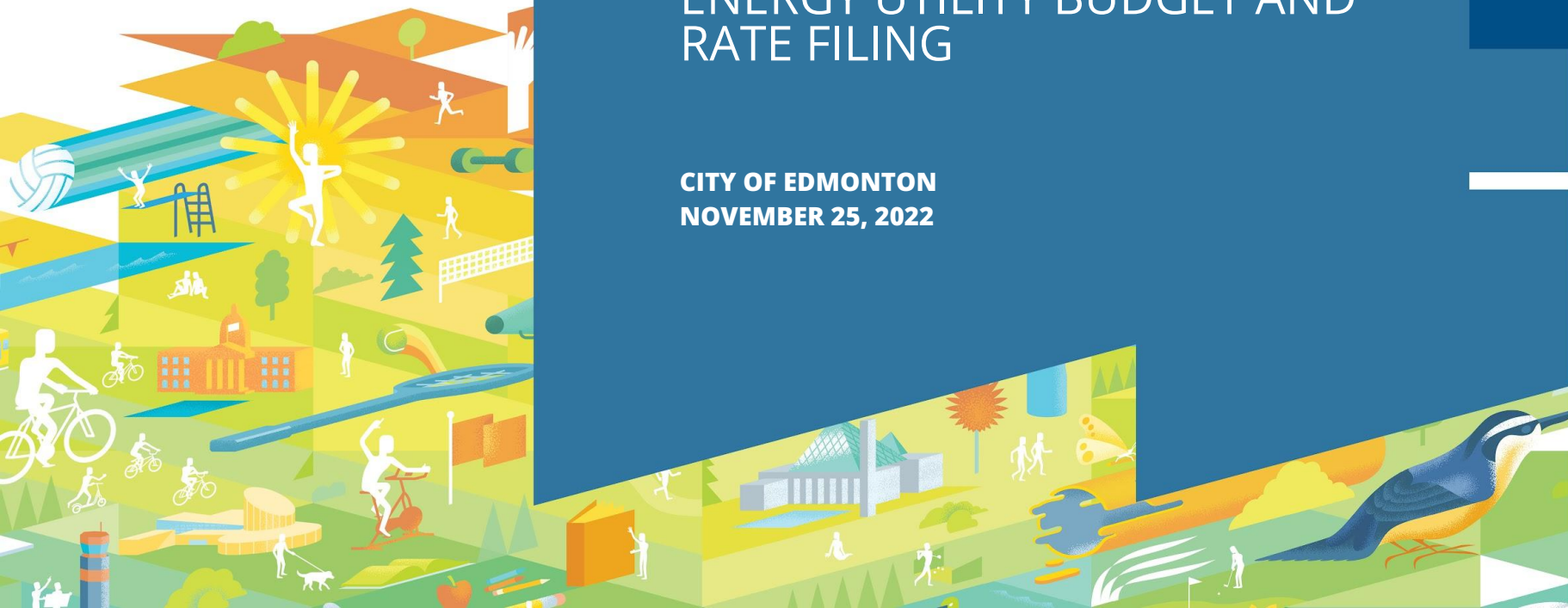


## Edmonton



# ENERGY UTILITY BUDGET AND RATE FILING

**CITY OF EDMONTON  
NOVEMBER 25, 2022**

# Presentation Outline

1. Proposed 2023 - 2026 Priorities and Budgets
  - a. Energy Centre Development Plan
  - b. Capital Priorities
    - i. Sewer Heat Energy Centre - Business Case
  - c. Operating Priorities
  - d. Budgets and Utility Financial Statements
2. 2023 Annual Rate Filing
  - a. Townhouse rate increase
  - b. Multi-Unit Rates (KPMG Presentation)
  - c. 2023 Rates and Fees



## Proposed 2023 - 2026 Priorities

- Continuing operations providing sustainable energy
- Managing increased design and site construction activities of homes and buildings
- Supporting a growing customer base, including new multi-unit product types
- Reviewing opportunities to grow the utility outside its current service areas
- Continued investigation of external partners
- Seeking grant funding for necessary cash infusion

# Energy Centre Development Plan

- At full build out, peaking energy centres provide energy for energy demand spikes/extreme weather (used only minutes/day)
- Going to all renewables for peaking was estimated to cost over \$200 million extra in capital needs (2016 estimate) for minimal GHG improvement in the long run
- Council approved mix of renewables and natural gas peaking energy in 2016
- Renewable fuel development for peaking is ongoing and might be cost competitive when needed



*\*Exact Energy Centre locations to be determined.*

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# Proposed 2023 - 2026 Budget - Capital Priorities

- **Expansion of Energy Center #1**
  - Align with development growth to provide base and peak loads
  - 4.25 MW heating and 4.0 MW cooling capacity
- **Extension of Distribution Piping System**
  - To accommodate development growth in Blatchford market and west and east sections
- **Construction of the next Energy Centre**
  - Additional peaking capacity likely be needed by 2026
  - Initial utility master plan included the Sewer Heat Exchange Energy Centre
  - Update of business case necessary to address operational and financial realities

# Proposed 2023 - 2026 Budget - Sewer Heat Business Case

- **Three Alternatives considered**

- Option 1: Sewer Heat Exchange Energy Centre
- Option 2: Alternative - Geo-exchange Energy Centre
- Option 3: Advancement of previously planned peaking Energy Centre, ahead of Sewer Heat Exchange Energy Centre

- **Recommendation to advance Option 3**

- Lowest initial capital costs and reduced impact on utility's financial health
- Best flexibility to adjust to development and grow utility customer base
- Implementation of renewable fuel sources

# Impacts

	Initial Capital Cost (Class 5, pre-tax, no contingency)	GHG Emission Reductions (over 25 years)	Energy Source 2023-2026	Energy Source 2026-2030
<b>Option 1 (Advance Sewer Heat Exchange)</b>	\$45.3M	141,522 tonnes	Base and Peaking: Energy Centre One (renewable energy)	Base and Peaking: Energy Centre One  Peaking: Sewer Heat Exchange
<b>Option 3 (Advance Peaking Energy Centre #4 in advance of Sewer Heat Exchange)</b>	\$10.3M	140,226 tonnes (Includes natural gas use)	Base and Peaking: Energy Centre One (renewable energy)	Base and Peaking: Energy Centre One  Peaking: Energy Centre #4

- Capital cost difference: \$35M
- GHG emissions difference: Approximately 1,326 tonnes over a 25 year period (equates to 1%)

# Proposed 2023 - 2026 Budget - Operating Priorities

- Continuous provision of reliable energy services for growing customer base in the Blatchford community
- Additional capital and operational oversight for existing and new utility infrastructure
- Increased connection activities for single and multi-unit customer buildings
- Connection studies for buildings outside current utility service area, including NAIT and Hangar 14
- Preparation for engagement of external utility partner
- Evolving rate structure and load research considerations

# Proposed 2023 - 2026 Budget - Capital Budget

(\$000's)

Capital Projects	Profile Number	2023 Budget	2024 Budget	2025 Budget	2026 Budget	2023-2026 Total
<b>Previously Approved</b>						
Blatchford District Energy Sharing System - Energy Transfer St	22-83-8384	1,500	2,000	-	-	3,500
Distribution Piping System	21-83-8384	1,200	-	-	-	1,200
<b>Total Previously Approved</b>		2,700	2,000	-	-	4,700
<b>2023-2026 Capital Budget Requests</b>						
Blatchford District Energy System [DES]	17-02-2107	2,698	483	-	-	3,181
Distribution Piping System	21-83-8384	1,220	1,220	1,220	1,220	4,881
Energy Center #4 - Blatchford Renewable Energy	23-83-8385	-	436	5,680	8,560	14,676
<b>Total 2023-2026 Capital Budget Requests</b>		3,918	2,139	6,900	9,780	22,738
<b>Recommended 2023-2026 Capital Budget Approval</b>		<b>\$6,618</b>	<b>\$4,139</b>	<b>\$6,900</b>	<b>\$9,780</b>	<b>\$27,438</b>

## 2019 - 2022 - Capital Spend (\$000's)

Capital Projects	Profile Number	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2019-2022 Total
Blatchford District Energy System [DES]	17-02-2107	18,744	718	95	54	19,611
Blatchford Utility Planning and Design	CM-83-8383	-	91	728	806	1,624
<b>Total Actuals to Date</b>		<b>\$18,744</b>	<b>\$809</b>	<b>\$823</b>	<b>\$860</b>	<b>\$21,236</b>

- Total capital expenditures from 2019-2022 - \$21.2M
  - Construction and design of the district energy system - \$19.6M
  - Planning and design work for the utility - \$1.6M

# Proposed 2023 - 2026 Budget - Operating Budget

## Branch - Blatchford Renewable Energy Utility

### Pro-Forma Income Statement

(\$000)	2021 Actuals	2022 Projected	2023 Budget	2024 Budget	2025 Budget	2026 Budget
<b>Revenues</b>						
Rate Revenue	11	14	145	694	1,225	2,007
Infrastructure Fees	43	67	996	755	1,590	1,933
Grant Revenue	56	-	-	-	-	-
<b>Total Revenue</b>	<b>\$110</b>	<b>\$81</b>	<b>\$1,141</b>	<b>\$1,449</b>	<b>\$2,815</b>	<b>\$3,940</b>
<b>Expenses</b>						
Operating and maintenance	908	1,021	1,690	1,611	1,648	1,636
Amortization of tangible capital assets	143	142	177	386	572	736
Interest	555	573	1,203	1,523	1,935	2,547
<b>Total Expense</b>	<b>\$1,606</b>	<b>\$1,735</b>	<b>\$3,070</b>	<b>\$3,520</b>	<b>\$4,155</b>	<b>\$4,919</b>
<b>Total Net Operating Requirement before other revenue</b>	<b>(\$1,496)</b>	<b>(\$1,654)</b>	<b>(\$1,929)</b>	<b>(\$2,071)</b>	<b>(\$1,340)</b>	<b>(\$979)</b>
Other Revenue - Developer Contribution - Capital	-	-	2,000	1,500	450	1,000
<b>Net Income/(Loss)</b>	<b>(\$1,496)</b>	<b>(\$1,654)</b>	<b>\$71</b>	<b>(\$571)</b>	<b>(\$890)</b>	<b>\$21</b>

# Proposed 2023 - 2026 Budget - Financial Statements

## Branch - Blatchford Renewable Energy Utility

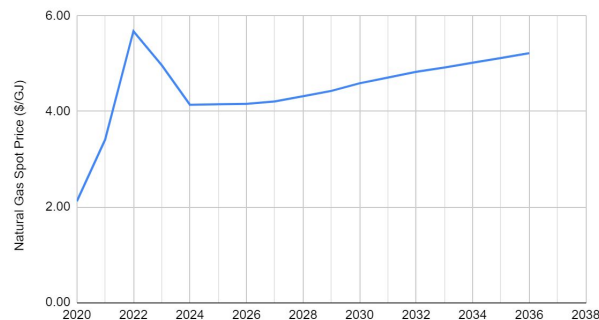
### Pro-Forma Balance Sheet

(\$000)	2021 Actuals	2022 Projected	2023 Budget	2024 Budget	2025 Budget	2026 Budget
<b>Assets</b>						
Cash and cash equivalents	10,905	8,777	6,336	3,857	2,170	824
Accounts Receivable	56	56	56	56	56	56
<b>Total Assets</b>	<b>\$10,961</b>	<b>\$8,833</b>	<b>\$6,392</b>	<b>\$3,913</b>	<b>\$2,226</b>	<b>\$880</b>
<b>Liabilities</b>						
Accounts payable and accrued liabilities	178	178	178	178	178	178
Short-term debt	16,000	16,000	16,000	16,000	16,000	16,000
Long-term debt	19,310	19,547	24,815	27,024	33,550	42,771
<b>Total Liabilities</b>	<b>\$35,488</b>	<b>\$35,725</b>	<b>\$40,993</b>	<b>\$43,202</b>	<b>\$49,728</b>	<b>\$58,949</b>
<b>Net Financial Assets (Net Debt)</b>	<b>(\$24,527)</b>	<b>(\$26,892)</b>	<b>(\$34,601)</b>	<b>(\$39,289)</b>	<b>(\$47,502)</b>	<b>(\$58,069)</b>
<b>Non-Financial Assets</b>						
Tangible capital assets	11,174	11,885	19,665	23,782	31,104	41,693
<b>Total Non-Financial Assets</b>	<b>\$11,174</b>	<b>\$11,885</b>	<b>\$19,665</b>	<b>\$23,782</b>	<b>\$31,104</b>	<b>\$41,693</b>
<b>Retained Earnings/Deficit</b>	<b>(\$13,353)</b>	<b>(\$15,007)</b>	<b>(\$14,936)</b>	<b>(\$15,507)</b>	<b>(\$16,398)</b>	<b>(\$16,376)</b>

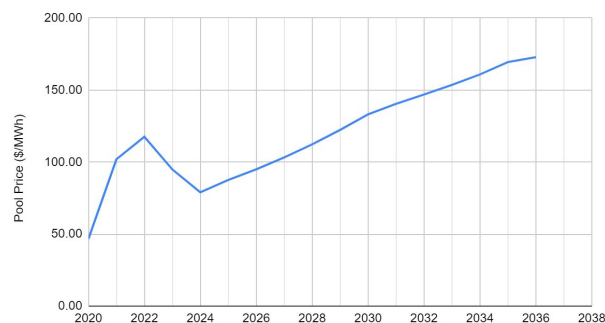
# 2023 Rate Filing - Townhouse Rate Increase

- The Blatchford District Energy Fiscal Policy C597A requires that “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 principle referred to as “Business as Usual” (BAU).
- Recent increases in the cost of natural gas and electricity in Alberta has resulted in large increase in the natural gas and electricity utility bills in Edmonton (i.e. BAU).
- Increase in 2023 BREU rates greater than previous annual increases (2.7%) required to keep pace with increased BAU.

EDC Natural Gas Spot Price Forecast\*



EDC Pool Price Forecast\*

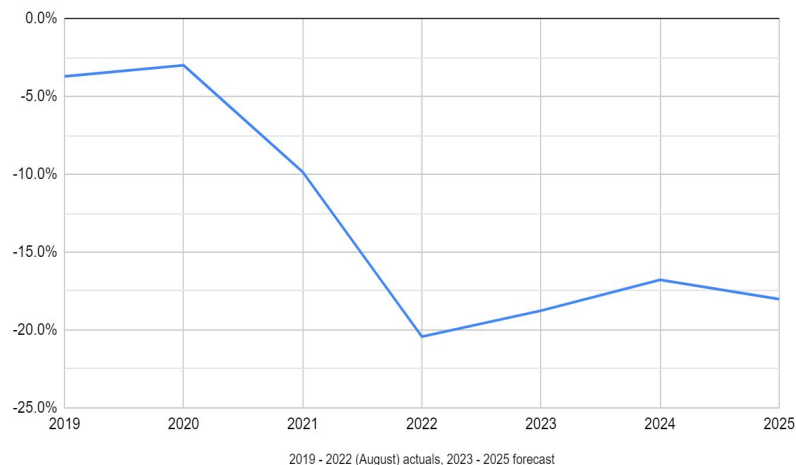


\*Export Development Canada provides natural gas price projections that the City uses for these forecasts

# 2023 Rate Filing - Townhouse Rate Increase

- BREU is proposing a 10% increase over the 2022 rates for the Townhouse Monthly Charge and the Variable charge.
- The proposed 10% increase for 2023 will help close the gap between BAU and BREU annual energy utility bills (20% difference in 2022).
- BREU will monitor changes in electricity and natural gas commodity prices in Alberta and government policies (e.g. carbon levy).
- BREU will revisit the BAU/BREU energy utility bill analysis and required changes in BREU rates in preparation for the 2024 Annual Rate Filing.

**Percentage Difference between BAU and BRE Annual Energy Utility Bills (with 10% annual increase in BREU rates from 2023-2025)**



# Rate-Setting Approach for Multi-unit Customers

## Purpose

The City of Edmonton engaged KPMG LLP in July 2022 to conduct a study to recommend an alternative rate-setting approach for its multi-unit renewable energy utility customers in the Blatchford community. This presentation provides a subset of the key findings from the completed study and the recommended rate setting approach.

*\*KPMG's scope of work was limited to the rate-setting approach. The City utilized the recommended approach to prepare multi-unit customer rates.*

# KPMG Methodology



## Benchmarking DE Utilities

**Seven Canadian DE utilities were selected to inform this study.**

Benchmarking research was conducted to collect relevant information including customer class definitions, rate components and proportions, and common challenges.



## Customer Landscape Review

The study reviewed the forecasted customer landscape in Blatchford to **understand the characteristics of buildings/customers that would be impacted by the adoption of a new multi-unit rate-setting approach** and determine if separate customer classes may be warranted.



## BAU Rate Build-up

An approximate BAU rate analysis was developed to identify the proportional utility costs charged to customers from conventional utilities to achieve similar energy outputs. This study provided a perspective on the **comparable fees for similar multi-unit customers to what they would be elsewhere in the City of Edmonton** through their energy utility bills.





## Context for the Comparison

The comparator DE utilities represent a variety of services and approaches to serve their communities.

Comparator	System Temperature	Heating	Cooling	DHW	On-site DE Equipment	Technical Specifications
Blatchford DESS	Ambient	✓	✓	✓	✓	Geothermal, natural gas peaking
LIEC - Richmond	Ambient	✓	✓	✓	✓	Geothermal, natural gas peaking
BMDEU - Burnaby	High Temp.	✓		✓	✓	Geothermal, sewage heat recovery, natural gas peaking
DES - Whistler	Ambient	✓	✓	✓		Waste Water Treatment Plant, natural gas peaking
NEU - Vancouver	High Temp.	✓		✓	✓	Sewage heat recovery, natural gas peaking
LEC - North Vancouver	High Temp.	✓		✓	✓	Natural gas, plus some solar, geothermal, waste heat recovery
DES - Surrey	High Temp.	✓		✓	✓	Natural gas, plus heat pump and renewable natural gas
CES - Langford	Ambient	✓	✓	✓	✓	Geothermal, waste heat recovery from local arena ice maker



## Next Steps

1. Calculation of Actual Utility Rate
2. Technical Definition of Nominated Capacity

## Future Considerations

1. Reevaluation of rate-setting approach for institutional customers
2. Separate rate structure for heating and cooling
3. Reevaluation of rate-setting approach for fee-simple townhouse customers

# 2023 Rates and Fee Schedule

Rate Component	2022 Approved Rates	Proposed Increase (10%)	2023 Proposed Rates
<b>Variable Charge (\$/kWh):</b>	\$0.0269	\$0.0027	\$0.0296
<b>Monthly Charge (\$/day):</b>			
Townhouse Lot	\$1.55	\$0.16	\$1.71
Apartments	\$1.21	Discontinued	Discontinued
<b>NEW - Monthly Charge (\$/kW peak demand/month):</b>			
Multi-unit Lot	N/A	New	\$12.50

# 2023 Rates and Fee Schedule

	2022 Approved Fees	Proposed Increase (2.7%)	2023 Proposed Rates
<b>Infrastructure Fee:</b>			
Townhouse lot - Residential (\$/unit)	\$1,845.78	\$50.06	\$1,895.84
Multi-unit lot - Residential (\$/unit)	N/A	N/A	\$1,895.84
Multi-unit lot - Commercial (\$/m2)	\$21.09	\$0.57	\$21.66



# Thank you. Questions?