NOV 2021

# BLATCHFORD RENEWABLE ENERGY

## 2022 Rate Filing

Attachment 3 - FCS00807

Blatchford Renewable Energy

Edmonton

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# 1.0 Overview

This 2022 Blatchford Renewable Energy Rate Filing is the annual filing for approval of end use customer rates and fees for Blatchford Renewable Energy ("BRE" or "Blatchford"). As per Section 3.0 the Blatchford District Energy Utility Fiscal Policy C597 ("Fiscal Policy");

> "The Utility Committee shall recommend annually to City Council the customer rates for the upcoming year, based on review of an annual rate filing prepared by the Utility subsequent to the preparation and presentation of the 4-year Business Plan."

This Rate Filing is requesting City Council approval of the following:

- Customer rates and infrastructure fees for 2022, to be set based on the approved 2021 customer rates and fees escalated by 2.7 per cent, as provided in Appendix 4.0.

In preparing this Rate Filing, BRE has followed the principles as set out in the Fiscal Policy. In particular, BRE established the forecast 2022 revenue requirement based on a traditional cost of service approach while taking into account a Policy Statement in the Fiscal Policy that end-use customers would pay "at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and annual maintenance costs" in establishing the proposed 2022 end use customer rates. This Policy Statement has guided the approach taken to design end use customer rates in Blatchford and will henceforth be referred to as Business as Usual ("BAU").

In December 2018, City Council approved the Blatchford Utility 2019 Annual Rate Filing which established the regulatory framework and customer rates for the initial year of operation of the Blatchford utility. For 2019, a "pegged approach" was used to set customer rates under which Blatchford utility customer bills were pegged to what typical utility bills would be elsewhere in the City of Edmonton in 2019 for heating, cooling, and hot water (i.e. BAU).

In December 2019, City Council approved the Blatchford Utility 2020 Annual Rate Filing, whereby a "levelized approach" was then used to update customer rates for 2020 based on escalating 2019 approved rates by 2.7 per cent, consistent with the rate setting methodology reflected in the business case presented to City Council on March 16, 2016, for the development of the District Energy Sharing System at Blatchford. Under the levelized approach, customer rates in the business case were increased by 2.7 per cent on average each year over the initial 50 years to ensure stable and consistent rate increases, with rates set to under-recover costs in the early years of the Utility's operation when the customer base is small and to gradually

recover past costs in the later years when the customer base is fully established. The levelized approach resulted in customer rates for 2020 that were:

- comparable to the 2020 rates calculated in the updated business case;
- consistent with the Fiscal Policy that requires stable consistent rate increases;
- relatively simple to understand and implement; and
- lower than rates based on the pegged approach, and therefore in accordance with the Fiscal Policy that customers pay at most a comparable fee to what they would elsewhere in the City of Edmonton.

The levelized approach was utilized again in establishing customer rates for 2021. Those rates were approved by City Council on December 9, 2020.

**In establishing 2022 customer rates, BRE is proposing to continue to use the levelized approach and escalate the approved 2021 rates by 2.7 per cent consistent with the approach utilized in the 2020 and 2021 Rate filings and the District Energy Sharing System business case. A further discussion of the methodology utilized to establish the proposed 2022 end use customer rates is included in Section 6.**

The first customer connections to the BRE system occurred in August of 2020 and a total of 8 customers were connected to the system by the end of 2020. Another 32 customers are expected to connect to the system by the end of 2021 and a further 66 customers in 2022 for a total of 106 BRE customer accounts forecast by the end of 2022. Given that customer rates are to be set utilizing the levelized approach, the 2022 forecast customer revenue will not be sufficient to fully recover BRE's 2022 forecast revenue requirement. As a result, BRE has implemented a deferral account whereby the annual revenue shortfall amounts will be accumulated in the deferral account to be recovered in future years when customer revenues exceed BRE's revenue requirement. Consistent with Section 2.1C of the Fiscal Policy, BRE will borrow (on a short term basis) from the City of Edmonton in order to meet the insufficient cash flow during its first years of operation. Further details are provided in Section 6.

BRE has provided a set of schedules with details of its 2022 revenue requirement and revenue on proposed rates in Appendix 3. These schedules utilize a very similar format and content to the Minimum Filing Requirements format utilized in the electric and gas utility industry in Alberta.

The Rate Filing is organized as follows:

Section 2.0 - Background on the Blatchford Development
Section 3.0 - Blatchford Fiscal Policy
Section 4.0 - Blatchford 2022-2025 Business Plan
Section 5.0 - 2021 Forecast Revenue Requirement
Section 6.0 - Cost of Service, Rate Design, Revenue on Proposed Rates & Bylaw 17943
Section 7.0 - Appendices 1.0 - 4.0

# 2.0 Background

The Blatchford development is aimed to be one of the world's largest sustainable communities and home to 30,000 residents. Blatchford will be comprised of two primarily residential spaces on the east and west side of the site, along with a town centre, an 80-acre central park and a civic plaza.

Blatchford Renewable Energy is a new public, city owned utility that has been established to own and operate a District Energy Sharing System ("DESS") and certain mechanical equipment within the customer buildings themselves. All buildings in Blatchford, with the exception of net-zero carbon buildings, must be connected to the DESS for all heating, cooling and domestic hot water services.

The strategic objectives of the utility remain the growth of the DESS and the integration of emerging technologies into the utility's operation to reach steady state reliable operation, financial sustainability and to achieve Council's vision for a carbon neutral community powered entirely by renewable energy. The growth of the new utility is, and will continue to be, closely connected to the land development and sales activities in Blatchford.

# 3.0 Fiscal Policy

On April 10, 2018, City Council approved the Blatchford District Energy Utility Fiscal Policy C597. The Fiscal Policy is the prerequisite required to support the first four year Utility Business Plan and Bylaw including rates. As stated in the Fiscal Policy, the purpose of the Policy is to:

1. Ensure that the Blatchford District Energy Utility is operated in a manner that reflects City Council's overall vision and philosophical objectives for BRE.
2. Ensure that there is a consistent approach year over year for the financial planning, budgeting, and rate setting for the City managed utility.
3. Ensure that BRE is financially sustainable over the long term.

In addition to the three statements noted above, the following four Policy Statements outlined in the Fiscal Policy helped establish the regulatory framework and methodology utilized in this Rate Filing:

1. The utility is to be operated in a manner that balances the best possible service at the lowest cost (public utility) while employing private sector approaches to rate setting.

2. Similar to private utilities, the utility will account for the cost of service under a full cost accounting approach. 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.
3. Through a phased approach, the utility will generate positive net income, cash flow and a rate of return sufficient to cover current year expenses, working capital requirements, and to facilitate the funding for capital infrastructure and rehabilitation and replacement of capital assets.
4. The utility is to contribute towards achieving the City's Community Energy Transition Strategy.

BRE will fund its operating and capital requirements from a number of sources. The following sources of funding will be required and utilized during the initial years of operation:

- Rate Revenue
  BRE will generate revenue through monthly customer rates. Rates will be designed to be at most comparable to what customers would pay elsewhere in the City through their energy utility bills and annual maintenance costs.
- Infrastructure Fee
  BRE will collect a one time infrastructure fee for units and buildings from the builders that connect to the DESS. For residential units, an infrastructure fee of $1,797.25 is currently approved for 2021. For each commercial development, the infrastructure fee is $20.54 per square meter ($m^2$) of floor space. This fee creates an additional source of revenue for BRE that would otherwise need to be funded by Utility rates or the non-refundable cash infusion.
- Non-refundable cash-infusions
  Non-refundable cash infusions are required for the initial years of operation to offset the capital investment required to establish BRE and allow it to grow over time to achieve financial sustainability. The total amount required is anticipated to be $93 million.
- Builder Contributed Capital
  The Builder will pay for central mechanical room equipment in multi-unit buildings, which will then be owned, operated and maintained by BRE. These will be contributed assets on BRE's balance sheet and will not attract a net depreciation expense or a return on rate base.
- Debt Borrowing
  The initial capital expenditures for BRE may be financed with long term debt but will ultimately need to be funded (and the debt servicing costs repaid) by non-refundable cash-infusions to ensure the long-term financial sustainability of the utility.

During the review of the 2020 Annual Rate Filing on November 1, 2019, the Utility Committee requested that Administration review the Fiscal Policy to provide more flexibility in setting customer rates going forward. In particular, the Utility Committee

raised concerns that the Fiscal Policy as currently written could limit the ability for setting future customer rates if rates under the pegged approach in a given year were less than the levelized approach rates of 2.7 per cent per year. At the October 2, 2020 Utility Committee meeting, Administration recommended that specific rate setting principles be added to the fiscal policy which: (1) incorporate industry best practice utility rate setting principles; (2) further explain that customer rates may be set to recover the forecast cost of providing service over a longer term basis under the levelized approach; and (3) clarify that multiple years be used for comparison of Blatchford utility customer rates going forward to ensure they remain competitive. These rate setting principles were subsequently approved by Council on October 17, 2020 and a separate report (FCS00138 - Blatchford District Energy Utility Fiscal Policy C597 Update) was brought forward at the December 4, 2020 Utility Committee meeting that provided the full updated content of the Blatchford Fiscal Policy. City Council approved the updated Fiscal Policy on December 9, 2020.

In respect of this 2022 Rate Filing and the end-use customer rates included herein, the second Policy Statement, along with the amendments to the Fiscal Policy discussed above, were instructive in establishing the framework for the setting of the end-use customer rates, both the rate levels and the rate structure. This will be discussed further in the Rate Design section of this Filing.

A copy of the updated Fiscal Policy has been provided in Appendix 1.0.

# 4.0 2022-2025 Business Plan

The 2022-2025 Business Plan was presented to the Utility Committee on August 27, 2021 (Integrated Infrastructure Services report IIS00715). A copy of the Business Plan is included in Appendix 2.0.

The 2022-2025 BRE Business Plan provides an updated overview from the strategic and operational level for the utility.

With the first customers connected for almost a full year, the DESS has worked without interruptions. The variability and comfort of the District Energy Sharing System has provided heat through cold periods and cooling during last summer's heat waves. Planning and design activities of Blatchford Renewable Energy have focused on the extension of the distribution piping system and the design of the Sewer Heat Recovery Energy Center. The utility is currently in the process of updating its Master Plan. This is a periodic update reflecting development and energy forecasts to align with land development scenarios, and building and energy codes as more precise planning information becomes available. This will help to update the utility's financial model and can be used as a tool for future planning.

The utility is expecting to connect to 40 townhouse accounts by the end of 2021, as

projected by the sales activities of the Blatchford land development team and the construction activities by the builders. The number of expected customer accounts will increase to 106 in 2022 and to 174, 240 and 305 in the years 2023 to 2025 respectively. By 2025, Blatchford Renewable Energy expects to provide thermal energy services to a connected floor space area of 130,000 square meters, all energy coming from the first Energy Center. Because the land development depends on market conditions and builder construction timelines, the current actuals showed a slower pace of account development than initially anticipated. Future development scenarios will also need to include the medium to long term impact of COVID-19 on the real estate market in Edmonton.

# 5.0 2022 Forecast Revenue Requirement

## 5.1 Methodology and Key Assumptions

The 2022 BRE Rate Filing utilizes the methodology established in previous BRE rate filings and adheres to the principles set out in the Blatchford Fiscal Policy, which establishes the framework for how BRE will set rates, finance its capital and manage its cash position. As per the Fiscal Policy, an annual rate filing will be submitted each year requesting City Council approval of end use customer rates for the following year.

The schedules provided in the 2022 Rate Filing include revenue and expenditure amounts for the following years as approved in the 2019-2022 Operating Budget and updated in the 2020 and 2021 Annual Rate Filings: 2019 and 2020 actuals, 2020 approved budget; 2021 current forecast (with actuals to the end of August), 2021 approved budget and the 2022 proposed budget included in this 2022 Rate Filing. The updated revenues and expenditures included in the 2022 proposed annual rate filing have been incorporated into the 2022 supplementary operating budget adjustment for Utility Committee and City Council approval in December 2021.

This Rate Filing takes into account the most recent land development and sales forecast developed by the Blatchford Redevelopment Office. The first Blatchford customers connected to the system in August 2020. It is expected that fee-simple and strata townhouses will be the only residence types to be connected to the system through to the end of 2022. The airport control tower is forecast to connect to the system in 2022 as well. Other types of residences, such as multi story apartment buildings may be connected as early as late 2022 but more likely starting in 2023. The following table summarizes the actual/forecast customer connections and energy consumption during the 2019-2022 time period.

**Table 1:** Customer Connections and Energy Consumption by End Use

| Item | 2019 Actual | 2020 Actual | 2021 Approved Rate Filing | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|
| **New Customer Connections** | | | | | |
| Townhouses - Fee Simple | - | 8 | 57 | 32 | 57 |
| Townhouses - Strata | - | - | - | - | 8 |
| Apartments - 4-6 Story | - | - | - | - | - |
| Apartments - 7-10 Story | - | - | - | - | - |
| Commercial/Office | - | - | - | - | - |
| Other - Control Tower | - | - | 1 | - | 1 |
| **Total New Customer Connections** | **-** | **8** | **58** | **32** | **66** |
| | | | | | |
| **Energy Consumption (MWh)** | | | | | |
| Townhouses - Fee Simple | - | 14.1 | 311.7 | 130.6 | 432.2 |
| Townhouses - Strata | - | - | - | - | 20.5 |
| Apartments - 4-6 Story | - | - | - | - | - |
| Apartments - 7-10 Story | - | - | - | - | - |
| Commercial/Office | - | - | - | - | - |
| Other - Control Tower | - | - | 1.7 | - | 3.3 |
| **Total Energy Consumption** | **-** | **14.1** | **313.3** | **130.6** | **456.1** |

Other than the airport control tower, the current customer build-out forecast includes only residential customers to the end of 2022. Other than the possibility of small retail establishments in the base of the multi-family units being added during the forecast period, it is anticipated that there will be no larger commercial, office or institutional customer connections until the extension of the Metro Line from NAIT to Blatchford is completed, currently expected to be in 2024/2025.

As stated in previous BRE business plans and rate applications, non-refundable cash infusions are required for the initial years of operation to offset the capital investment required to establish BRE and allow it to grow over time to achieve financial sustainability. The total non-refundable cash infusions required to achieve financial stability are currently expected to be $93 million. For purposes of calculating the revenue requirement and deferral account under Cost of Service in the 2022 Rate Filing, the non-refundable cash contribution for the initial capital investments has been assumed at this time, resulting in no long term interest expense or amortization being incorporated. The 2022 revenue requirement and deferral account under Cost of Service will be amended in future annual rate filings as the availability of the non-refundable cash infusion is further clarified.

In addition, builder contributed capital will be utilized to fund certain assets, specifically equipment in the mechanical rooms of multi-unit buildings. Accordingly, for purposes of this Rate Filing all capital expenditures required during the 2021-2022 forecast period are assumed to be funded through the non-refundable cash infusion or builder contributed capital resulting in BRE having no debt or rate base on its balance sheet during the forecast period.

## 5.2 Determination of Forecast Revenue Requirement

The total 2022 forecast revenue requirement and revenue for BREU is $1.218 million and $0.173 million respectively, resulting in a revenue shortfall of $1.045 million. The following table provides a summary of the annual revenue requirement and customer revenue.

**Table 2:** Revenue Requirement, Customer Revenue and Revenue Surplus/(Shortfall) ($000s)

| | 2019 | 2020 | 2020 | 2021 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| **Item** | **Actual** | **Approved Budget** | **Actual** | **Approved Budget** | **Current Forecast** | **Proposed Rate Filing** |
| **Revenue Requirement** | | | | | | |
| Operating Costs | 853.2 | 1,255.7 | 726.2 | 1,205.3 | 1,033.6 | 1,218.0 |
| Depreciation | - | - | - | - | - | - |
| Return on Rate Base | - | - | - | - | - | - |
| Revenue Offsets | - | - | - | - | - | - |
| **Total Revenue Requirement** | **853.2** | **1,255.7** | **726.2** | **1,205.3** | **1,033.6** | **1,218.0** |
| | | | | | | |
| **Revenue** | | | | | | |
| Revenue on Proposed Rates | - | 24.1 | 29.5 | 34.2 | 14.2 | 51.0 |
| Infrastructure Fee | 7.0 | 75.3 | - | 104.2 | 57.5 | 121.8 |
| **Total Revenue** | **7.0** | **99.4** | **29.5** | **138.4** | **71.8** | **172.9** |
| | | | | | | |
| **Revenue Surplus (shortfall)** | (846.2) | (1,156.3) | (696.7) | (1,066.8) | (961.9) | (1,045.1) |

The revenue requirement for BRE does not include any depreciation or return on rate base as it is expected that all capital additions during the forecast period will be funded by a combination of the non-refundable cash infusion and builder contributions, as noted above. Accordingly, BRE will have no assets on its balance sheet during the forecast period and no equity, debt, interest expenses, return on equity or depreciation expense.

### OPERATING COSTS

Initial operation of the first stage of the DESS, with a relatively small number of connections and accounts, will be managed internally by BRE in partnership with other City departments, external contractors and technical experts. Operation and maintenance is being provided by the City's Facilities Maintenance Services (FMS) section within the City Operations department. BRE has been working with FMS to develop operating protocols and maintenance procedures. Operations and maintenance started after commissioning, and engineering and operational support will primarily be provided internally with some support from external technical consultants and contractors. Service providers have been engaged for all aspects of

utility operation. BRE will determine an opportune time to engage an external partner as per City Council's direction, which will likely occur when the initial stage of operations have matured and during the next planning stages for future infrastructure.

The following table summarizes the forecast Operating Costs by major expense category.

**Table 3:** Operating Costs by Major Expense Category ($000s)

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Operating Costs** | | | | | | |
| Utilities | 15.7 | 38.0 | 69.3 | 74.9 | 65.4 | 80.4 |
| Operations & Maintenance | 581.7 | 820.9 | 445.3 | 797.0 | 451.7 | 825.5 |
| Administration | 223.9 | 312.3 | 208.8 | 225.1 | 447.5 | 228.4 |
| Customer Billing Services | 24.7 | 22.1 | 0.9 | 31.5 | 6.0 | 8.4 |
| Corporate Administration/Shared Services | 7.1 | 62.4 | 1.8 | 76.7 | 63.0 | 75.2 |
| **Total Operating Costs** | **853.2** | **1,255.7** | **726.2** | **1,205.3** | **1,033.6** | **1,218.0** |

The following sections provide further detail in respect of each of the major operating cost categories shown in Table 3 above.

## UTILITIES

BRE requires electricity, natural gas and water/drainage/sewer utility services in order to operate the DESS. The following table summarizes the cost of utilities over the forecast period.

**Table 4:** Utilities Cost ($000s)

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Utility Costs** | | | | | | |
| Electricity | 15.6 | 31.5 | 61.4 | 55.0 | 55.0 | 60.0 |
| Natural Gas (incl. Carbon tax) | 0.1 | 4.1 | 1.8 | 5.5 | 2.5 | 6.0 |
| Telephones | - | 2.3 | 0.7 | 2.4 | 2.4 | 2.4 |
| Water/Drainage/Sewer | - | - | 5.4 | 12.0 | 5.5 | 12.0 |
| **Total Utilities** | **15.7** | **38.0** | **69.3** | **74.9** | **65.4** | **80.4** |

## OPERATION & MAINTENANCE COSTS

The forecast Operation & Maintenance costs for each year are comprised of the following cost categories: (1) Operation & Maintenance for all BRE owned assets, (2) Personnel, (3) Training & Development and (4) Technical Consultants.

The infrastructure built and installed to serve customers at Blatchford requires ongoing maintenance as well as a workforce to manage BRE's day to day operations. The forecast operation and maintenance costs for 2021-2022 are based on a capital maintenance factor (i.e. a per centage of capital) for each class of assets (e.g. ground heat exchange

equipment, energy center equipment, distribution piping, etc.) applied to the total capital in service each year for each class of assets and real time experience by FMS based on initial years of operation. The capital maintenance factors were based on industry standards for similar type of equipment. It also took into account initial warranty considerations for the equipment. Operations and maintenance will initially be provided by the City's Facilities Maintenance Services Branch.

BRE will have up to six direct employees responsible for the managing of day to day operations during the forecast period. The following table provides details of the six direct employees including position title and the portion of each employee's time that will be allocated to BRE (a per centage of some employee's time will be allocated to other renewable energy projects currently being undertaken by the City of Edmonton).

**Table 5:** BRE Personnel

| | Full Time Equivalent | | |
|---|---|---|---|
| **Employee Title** | **2020 Actual** | **2021 Current Forecast** | **2022 Proposed Rate Filing** |
| Director - Renewable Energy Systems | 0.4 | 0.4 | 0.4 |
| Program Manager - Renewable Energy Systems | 0.7 | 0.7 | 0.7 |
| Project Coordinator/Manager - Renewable Energy Systems | 0.7 | 0.7 | 0.7 |
| Communication and Marketing Position | - | 1.0 | 1.0 |
| Coop Engineering Student | 1.0 | 1.0 | 1.0 |
| Administrative Assistant | 0.3 | 0.3 | 0.3 |

The total forecast cost of BRE personnel was determined by applying the full time equivalent factor in the table above to each employee's current total compensation (base salary plus benefits). The cost of all but the communication and marketing position is included in the Personnel cost category in the Operation and Maintenance cost grouping. The cost of the communication and marketing position has been included in the Marketing, Education and Communication cost category described in the Administration Costs section below.

In addition to the operation and maintenance costs and the direct BREU employees, consultants will be retained to assist with technical and operational aspects of running BRE. A cost of $244,078 has been forecast for technical consultants in 2022.

Forecast costs for training and development were also included in the Operation and Maintenance Cost Forecast. For 2022 an estimate of $7,349 was included.

Costs related to the leasing/rental of equipment has been included in the BRE budget. The 2022 forecast cost includes a total of $6,102 for the lease/rental of computers.

The following table summarizes the total Operation and Maintenance Costs over the forecast period.

**Table 6:** Operation & Maintenance Cost ($000s)

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Operations & Maintenance** | | | | | | |
| Energy Center 1/Main Distribution System | - | 197.8 | 72.0 | 178.4 | 75.0 | 168.2 |
| Customer Connections and Meters | - | 18.5 | - | 22.1 | - | 32.6 |
| Personnel | 329.9 | 337.5 | 354.6 | 344.3 | 373.6 | 367.3 |
| Training and Development | 9.0 | 6.8 | 1.4 | 7.0 | - | 7.3 |
| Equipment Rental | 2.5 | 25.6 | 0.0 | 6.0 | 3.1 | 6.1 |
| Technical Consultants | 240.3 | 234.6 | 17.2 | 239.3 | 0.1 | 244.1 |
| **Total Operating Costs** | **581.7** | **820.9** | **445.3** | **797.0** | **451.7** | **825.5** |

## ADMINISTRATION COSTS

The forecast Administration costs each year are: (1) Marketing, Education and Communication, and (2) External Professional Services Costs.

The Marketing, Education & Communication costs include an estimate for time and materials required for marketing, communication and education of the Blatchford Community to utility customers during the forecast period.

A cost of $105,764 was forecast for 2022 for external professional services to assist with non-technical (e.g. financial) aspects of setting up BRE.

The following table summarizes the Administration costs.

**Table 7:** Administration Cost ($000s)

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Administration** | | | | | | |
| Marketing, Education & Communication | 69.4 | 121.7 | 59.9 | 120.3 | 71.3 | 122.7 |
| External Professional Services | 154.6 | 190.6 | 148.9 | 104.9 | 376.2 | 105.8 |
| **Total Administration** | **223.9** | **312.3** | **208.8** | **225.1** | **447.5** | **228.4** |

## CUSTOMER BILLING SERVICES COSTS

BRE has entered into a service level agreement with EPCOR for billing and customer service support for Blatchford Renewable Energy's customers. EPCOR, along with the City's 311 services, will also be involved in customer service functions as it relates to billing, technical and emergency communication and planning. BRE incurred a Monthly Base Services Fee of $6.50 per account per month for billing and customer service support in 2020 and 2021 plus an Additional Monthly Fee of $45.93 per account per month. This Additional Monthly Fee is required in 2020 and 2021 as EPCOR is currently in the process of replacing its Customer Information/Billing System and is required to manually bill BRE customers until BRE has been set up in the new billing system, currently expected to be late in 2021. Beginning January 1, 2022, once BRE customers have been fully set up in EPCOR's new billing system, BREU will incur a Monthly Base Services Fee of $6.50 per account per month for billing and customer service

support in 2022 plus a charge of $3,097, the first charge in what will be an annual charge over a ten year period to recover the cost of setting up Blatchford accounts in EPCOR's new billing system .

**Table 8:** Customer Billing Services Cost ($000s)

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Customer Billing Services** | | | | | | |
| Monthly Billing Charges | - | 22.1 | 0.9 | 31.5 | 6.0 | 5.3 |
| Annual Billing Automation Charge | - | - | - | - | - | 3.1 |
| One-time Set up Costs | 24.7 | - | - | - | - | - |
| **Total Customer Billing Services** | **24.7** | **22.1** | **0.9** | **31.5** | **6.0** | **8.4** |

## CORPORATE ADMINISTRATION COSTS COSTS

The forecast Corporate Administration costs each year are: (1) Shared Services; (2) Asset Usage Fees, and; (3) Transportation and Insurance costs.

Financial, regulatory and legal support for the utility is provided by the Financial and Corporate Services department and the City's Legal Services Branch which has significant expertise in utility management. Both areas are involved in the management of the bylaw, the fiscal policy, annual rate filings and operating and capital budget development for the utility.

The following table summarizes the Corporate Administration Costs over the forecast period.

**Table 9: Corporate Administration Cost ($000s)**

| Item | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| **Corporate Administration** | | | | | | |
| Shared Services | 1.3 | 49.2 | 0.4 | 53.2 | 53.2 | 51.2 |
| Asset Usage Fees | - | 7.5 | - | 16.7 | 3.0 | 17.1 |
| Other - Transportation and Insurance | 5.8 | 5.6 | 1.4 | 6.7 | 6.7 | 6.8 |
| **Total Corporate Administration** | **7.1** | **62.4** | **1.8** | **76.7** | **63.0** | **75.2** |

## FRANCHISE FEES AND PROPERTY TAXES

BRE, as a municipally owned utility, is currently not required to pay a franchise fee or property taxes on its facilities to the City of Edmonton. Accordingly there are no franchise fees or property tax amounts included in the 2022 forecast revenue requirement.

## DEPRECIATION/AMORTIZATION

BRE's revenue requirement does not include any amounts for depreciation/amortization during the forecast period. It is anticipated that BRE's capital requirements during the initial forecast period will be completely funded through a combination of the non-refundable cash infusion and builder contributions. As a result, contributed assets

will be equal to gross assets on the balance sheet resulting in no rate base for BRE for the forecast period.

### RETURN ON RATE BASE/INTEREST EXPENSES

As noted above, BRE's assets will be fully funded via the non-refundable cash infusion as well as builder contributions resulting in no rate base during the forecast period. As a result BRE's revenue requirement will not include any return on rate base or interest expenses during the forecast period.

### REVENUE OFFSETS

Revenue offsets are miscellaneous revenues earned by a utility and can include items such as late payment penalties, revenue from rental of company owned property and miscellaneous fees and non-rate revenues. No revenue offsets are forecast during the forecast period.

### RATE BASE

As noted previously, all required capital for the BRE system during the forecast period is projected to be financed by a combination of the non-refundable cash infusion and builder contributions resulting in no rate base on BRE's balance sheet. The following table provides a summary of the mid year net property, contributions and rate base.

**Table 10:** Mid-Year Net Property, Contributions and Rate Base ($000s)

| | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|
| **Item** | **Actual** | **Actual** | **Current Forecast** | **Proposed Rate Filing** |
| **Rate Base** | | | | |
| Mid-year Net Property | - | 9,731.2 | 19,488.7 | 19,515.0 |
| Mid-year Net Contributions | - | (9,731.2) | (19,488.7) | (19,515.0) |
| **Net Mid-year Rate Base** | **-** | **-** | **-** | **-** |

### CAPITAL ADDITIONS AND CAPITAL EXPENDITURES

The capital additions to date were related entirely to the development and construction costs associated with the building of the geoexchange borefield, Energy Center One and the distribution piping system for Phase One of the Blatchford development.

Capital expenditures will be incurred during the forecast period related to the planning, design and initial construction of the Sewer Heat Recovery Energy Center ("SHX"). The in-service date for the SHX is expected to be 2023, pending actual development and sales on site and a further review of the strategic master plan for the utility, which is ongoing.

Administration brought forward an additional capital budget request in the amount of $5.0 million in December 2020 for the design and construction of the Energy Transfer Stations. Energy Transfer Stations within apartment buildings will distribute the energy from the District Energy Sharing System into the building units. The utility will design and construct the Energy Transfer Stations and will own, operate and maintain them. The full cost for designing and construction of the Energy Transfer Stations will be recovered

from builders. By designing and constructing the Energy Transfer Stations, the utility ensures that proper mechanical systems are in place leading to the highest operational and financial efficiencies for the operation and maintenance of the District Energy Sharing System.

During the 2021 spring capital budget adjustment Council approved a capital budget adjustment of $8.65 million over three years (2021 to 2023) to advance the design and delivery of the distribution piping system for the District Energy Sharing System for the current land development stages and the NAIT development in the Blatchford community. Following current projections, this planned buildout will allow the connection of the District Energy Sharing System to 251,000 square meters of building space providing up to 33,000 kW of thermal energy. The expansion of the distribution piping system follows the growth in the land development, representing a prudent and flexible approach to ensure that essential utility services will be provided to future residents, institutions, and businesses in Blatchford.

The following table provides a summary of the forecast capital additions and capital expenditures during the forecast period.

**Table 11:** Capital Additions and Capital Expenditures ($000s)

| | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|
| Item | Actual | Actual | Current Forecast | Proposed Rate Filing |
| **Construction Work in Progress - Previous Year Balance** | - | 18,744.2 | 91.2 | 3,491.2 |
| Current Year Capital Expenditures - Energy Center 1 | 18,744.2 | 718.1 | 52.6 | - |
| Current Year Capital Expenditures - Sewer Heat Exchange | - | 91.2 | 800.0 | 810.0 |
| Current Year Capital Expenditures - Distribution Piping System | - | - | 2,600.0 | 4,850.0 |
| Current Year Capital Expenditures - Energy Transfer Stations | - | - | - | 1,500.0 |
| | | | | |
| Less: Current Year Capital Additions - Energy Center 1 | - | (19,462.4) | (52.6) | - |
| Less: Current Year Capital Additions - Sewer Heat Exchange | - | - | - | - |
| Less: Current Year Capital Additions - Distribution Piping System | - | - | - | - |
| Less: Current Year Capital Additions - Energy Transfer Stations | - | - | - | - |
| **Construction Work in Progress - Current Year Balance** | **18,744.2** | **91.2** | **3,491.2** | **10,651.2** |

# 6.0 Cost of Service, Rate Design and Revenue on Proposed Rates

The traditional regulatory approach in setting end use customer rates in the utility industry typically involves the preparation of a cost of service study which includes the grouping of the utility's customers into unique customer classes. The cost of service study then sets out to allocate the utility's total forecast revenue requirement to each of

those customer classes based on well established cost functionalization, classification and allocation methodologies. End use customer rates are then designed to fully recover the forecast revenue requirement allocated to each of those customer classes. The resulting forecast revenue derived from the end use customer rates recovers the utility's total annual forecast revenue requirement.

## 6.1 Cost of Service Study

As was the case with the 2019, 2020 and 2021 Rate Filings, in this 2022 Rate Filing a traditional cost of service study was not completed for several reasons. Firstly, using the levelized approach (as discussed further below) to set end-use customer rates does not align with a traditional cost of service study in that end use rates are not designed to recover the total revenue requirement allocated to each rate class in a given year. Secondly, there is only one type of traditional end use customer (i.e. residential) connecting to the BRE system during the forecast period. While there are two separate fixed charges for the BRE's residential customers (one for townhouses and another for condominiums/apartments) as described in the Rate Design section below, the reason for those separate charges is as a result of utilizing the BAU concept/principle to initially set rates in 2019 and not necessarily due to cost differences in serving these two types of residential customers. Finally, given that the utility is in its very early years of operation there is, at best, very limited data available with respect to essential information required to complete a cost of service study such as consumption data/patterns for the various types of customers and information with respect to the impact (from both design and operational perspectives) of the various types of customers on the BRE system.

## 6.2 Rate Design and Proposed End-Use Customer Rates

**2019 CUSTOMER RATES - PEGGED APPROACH**

The Blatchford Utility 2019 Annual Rate Filing established the regulatory framework and customer rates for the initial year of operation of the Blatchford Utility. The 2019 Rate Filing was guided by the overarching Policy Statement contained in the Blatchford District Energy Utility Fiscal Policy:

> "Similar to private utilities, the Utility will account for the cost of services under a full cost accounting approach. 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."

Under a traditional Cost of Service approach, customer rates are established to allow BRE to recover its annual costs to operate ("revenue requirement"). However, given the small number of Blatchford residents and utility customers in the first few years of

operation, customer rates established using the traditional Cost of Service approach would result in rates being significantly higher than comparable fees paid elsewhere in the City of Edmonton, and what BRE customers could reasonably be expected to incur. Therefore, an alternative method to set customer rates for the initial years of development and operation of BRE was required.

In order to develop the customer rates for the 2019 Rate Filing, Administration engaged Grant Thornton to assist in establishing the regulatory framework and identifying and quantifying customer rates using alternative methodologies. The customer rates proposed in the Blatchford Utility 2019 Annual Rate Filing, and ultimately approved by City Council, were based on Grant Thornton's recommendation to utilize a **"pegged approach"** to establish customer rates. Under this approach, Blatchford utility bills were pegged to what utility bills would be elsewhere in the City of Edmonton. Grant Thornton determined the typical utility bill (i.e. Business as Usual or BAU) in 2019 for heating, cooling, and hot water that would be paid elsewhere in the City of Edmonton for the types of dwellings that are to be built in the initial stages of the Blatchford development. In accordance with the Fiscal Policy, differences in the annualized maintenance costs to be paid by Business as Usual and BRE customers were also included as adjustments to the typical Business as Usual bills. BRE also used this approach to establish the Business as Usual amounts in the 2020 Rate filing as discussed further below.

**2020 CUSTOMER RATES - LEVELIZED APPROACH**

Having initially set customer rates for 2019 based on the pegged approach, a **"levelized approach"** was then used to set rates for 2020, consistent with the rate setting methodology in the business case presented to City Council on March 16, 2016 for the development of the District Energy Sharing System at Blatchford. Under the levelized approach, customer rates in the business case are increased by 2.7 per cent on average each year over the initial 50 years to ensure stable and consistent rate increases (a key utility rate setting principle). Rates under-recover costs in the early years of the Utility's operation when the customer base is small, but gradually recover past costs in the later years when the customer base is fully established.

In line with the levelized approach, customer rates recommended in the 2020 Annual Rate Filing and approved by City Council in December 2019 (Bylaw 19062 To Amend Bylaw 17943 Blatchford Renewable Energy Utility) increased the 2019 approved customer rates by 2.7 per cent. As part of the 2020 Annual Rate Filing, Administration engaged Grant Thornton to also calculate customer rates for 2020 based on the pegged approach to confirm rates under the levelized approach were at most a comparable fee to elsewhere in Edmonton. Under the pegged approach, the 2020 variable rate was $0.0263/kWh, the fixed charge for townhouses was $1.54/day, and the fixed charge for apartments was $1.17/day. Whereas under the levelized approach, the 2020 variable rate was $0.0255/kWh, the fixed charge for townhouses was $1.47/day, and the fixed charge for apartments was $1.15/day.

The levelized approach was utilised again to establish rates for 2021 in the 2021 Rate Filing whereby the 2020 approved customer rates were increased by 2.7 per cent. This

resulted in a 2021 variable rate of $0.0262/kWh, a fixed charge for townhouses of $1.51/day, and a fixed charge for apartments of $1.18/day. The 2021 customer rates were approved by City Council on December 9, 2020.

**2022 CUSTOMER RATES**

Administration is recommending that the levelized approach continue to be used to establish customer rates for 2022, based on the approved 2021 customer rates escalated by 2.7 per cent. This approach results in customer rates for 2022 that are:

- comparable to the 2022 rates determined in the updated business case upon which the $93 million non-refundable cash infusion and the Blatchford Utility Fiscal Policy key financial indicators were established;
- consistent with the Blatchford Utility Fiscal Policy that requires stable consistent rate increases;
- relatively simple to understand and implement;
- lower than rates based on the pegged approach and therefore in accordance with the Blatchford Utility Fiscal Policy that customers pay at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and annual maintenance costs.

The proposed customer rates for 2022 are summarized in the table below:

**Table 12:** 2022 Proposed BRE Customer Rates

| Rate Component | | 2022 Rate |
|---|---|---|
| **Fixed Charge ($/day)** | | |
| | Townhouses | 1.55 |
| | Apartments | 1.21 |
| | | |
| **Variable Charge ($/kWh)** | | 0.0269 |

**2022 CUSTOMER RATES - COMPARISON TO BAU**

As discussed in Section 3.0 above, on October 17, 2020 Council approved specific rate setting principles to be added to the Fiscal Policy, including the following principle that multiple years be used for comparison of Blatchford utility customer rates going forward to ensure they remain competitive.

> "7. Customer rates based on the forecast cost of providing service will be assessed annually to ensure they remain competitive with other longer-term heating and cooling options.
>
> a. The Utility will strive for customers to pay at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and maintenance costs.
>
> b. The assessment will take into account the longer-term nature of utility infrastructure being used to provide services to customers, and market

fluctuations that may occur annually in the commodity price of gas and electricity relative to the stable cost of providing thermal energy from the Blatchford District Energy Sharing System."

Taking this principle into account, Administration has determined the BAU amounts for 2022 using the same methodology utilized in the 2021 Rate Filing including utilizing a five year average (2019 actual to 2023 forecast) of annual BAU bill amounts to "peg" what utility bills would be elsewhere in the City of Edmonton, rather than a single year as was used in the 2019 and 2020 Rate Filings. Administration used a five year average BAU bill amount to peg utility bills outside of Blatchford in order to take into account market fluctuations that may occur in commodity prices and potential swings in year to year electric and natural gas utility bills outside of Blatchford. In addition, to calculate the 2022 BAU amounts, BRE updated the following assumptions that were utilized to calculate the BAU bill amounts in the 2021 Rate Filing:

- The continued use of the current electricity and natural gas regulated rate options (instead of competitive contracts) for determining both the electricity and natural gas portions of the BAU bill amounts for each year.
- The latest forecast (third quarter of 2021) of long term natural gas and electricity prices were utilized to determine the variable electricity and natural gas rates in the BAU bill calculations.
- Carbon tax rates of:
    - $35/tonne in 2019 (actual Provincial rate in 2019),
    - $30/tonne in 2020 (actual Federal rate in 2020),
    - $40/tonne in 2021 (current Federal Rate for 2021)
    - $50/tonne in 2022 (published Federal Rate for 2022)
    - $65/tonne in 2023 (published Federal Rate for 2023)

The following table provides a summary of the average annual energy costs (including utility bills and maintenance costs) for a BRE customer compared to a BAU customer, based on the projected five year costs from 2019-2023, for townhouse and apartment customers at Blatchford.

**Table 13:** Summary of Five -Year Average Annual BRE/BAU Bill and Maintenance Costs for a Typical Customer ($)

| | Blatchford Customers | | | Business as Usual Customers | | | Difference | |
|---|---|---|---|---|---|---|---|---|
| Customer Type | 5 Year Average BRE Energy Utility Bill Amount | BRE Maint. Costs | BRE 2021 Energy Utility bill and Maintenance Costs | 5 Year Average BAU Energy Utility Bill Amount | BAU Maint. Costs | 5 Year Average Annual BAU Energy Utility Bills & Maintenance Costs | BRE less BAU ($) | BRE less BAU (%) |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | =(1) + (2) | | | =(4) + (5) | =(3) - (6) | =(7) / (6) |
| Townhouse | $ 1,368 | $ 440 | $ 1,808 | $ 1,636 | $ 289 | $ 1,924 | $ (117) | -6.1% |
| Apartment | $ 1,203 | $ 297 | $ 1,500 | $ 1,136 | $ 444 | $ 1,580 | $ (80) | -5.1% |

BRE Rate Schedules with the proposed end use customer rates have been included in Appendix 4.0.

As BRE grows and matures and more operational information and consumption data become available, BRE will investigate alternatives in future rate filings to the single rate class, two component rates proposed in this Rate Filing, such as:

- Splitting the current single rate class into separate townhome and apartment rate classes.
- Adding rate classes as different end use customers (e.g. commercial/retail/office, institutional (e.g. NAIT), industrial, etc.) connect to the DESS.
- The option of setting rate classes based on a size (MW) or consumption (MWh) differentiation rather than end use.
- Implementing separate rate components for heating and cooling.
- Implementing a seasonal or time of use component.
- Adding a demand (e.g. $/kW) component to certain rate classes to encourage efficient use of the system.
- Utilizing an inclining block variable charge to encourage conservation, and
- Basing the fixed charge on a $/m$^2$/month basis rather than a $/customer/month basis.

BRE will continue to gain experience with operating and maintaining the DESS system and gathering actual metered customer usage data (e.g. total consumption, consumption patterns, time of use, etc.) before implementing any of the alternatives noted above.

**INFRASTRUCTURE FEE**

BRE has implemented an Infrastructure Fee to charge the builders that connect residences and commercial developments to the DESS. For residential units, an infrastructure fee for 2021 of $1,797.25 per unit was approved and is currently in place. For each commercial development, the approved infrastructure fee for 2021 is $20.54 per square meter of floor space. This fee creates an additional source of revenue for BRE that would otherwise need to be funded by utility rates or the non-refundable cash infusion. To establish the proposed Infrastructure Fee for 2022, BRE is proposing to increase the approved 2021 infrastructure fee by 2.7 per cent, the same increase that is being proposed for BRE's end use customer rates. The proposed Infrastructure Fee for 2022 is shown in the table below:

**Table 14:** 2022 Proposed Infrastructure Fee

| Infrastructure Fee | 2022 Fee |
|---|---|
| **Residential - all ($)** | $ 1,845.78 |
| **Commercial ($/m$^2$)** | $ 21.09 |

# 6.3 Revenue on Proposed Rates

**RATE REVENUE**

The proposed rates for 2022, as discussed above, were applied to the 2022 forecast customer billing determinants (i.e. number of accounts and total consumption) to derive the 2022 forecast rate revenue.

**INFRASTRUCTURE FEE REVENUE**

The proposed Infrastructure Fee, as outlined above, was applied to the 2022 forecast number of customer connections to derive the 2022 forecast Infrastructure Fee revenue.

The following table summarizes the forecast Rate Revenue and Infrastructure Fee Revenue.

**Table 15: Forecast Rate and Infrastructure Fee Revenue**

| | 2019 | 2020 | 2020 | 2021 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Item | Actual | Approved Budget | Actual | Approved Budget | Current Forecast | Proposed Rate Filing |
| **Revenue** | | | | | | |
| Rate Revenue | - | 24.1 | 29.5 | 34.2 | 14.2 | 51.0 |
| Infrastructure Fee Revenue | 7.0 | 75.3 | - | 104.2 | 57.5 | 121.8 |
| **Total Revenue** | **7.0** | **99.4** | **29.5** | **138.4** | **71.8** | **172.9** |

# 6.4 Deferral Account and Interest on Financing

As shown in Table 2 in Section 5 above, BRE will realize a revenue shortfall each year during the 2019 to 2022 time period. Section 2.1 C of the Fiscal Policy states: "Where the Utility's cash position is insufficient to meet cash flow requirements, the Utility will borrow from the City of Edmonton on a short term basis, with the interest being paid by the Utility at an interest rate that compensates the City of Edmonton reflecting the Fund Balance were the cash was drawn." Accordingly, it is assumed that the annual revenue shortfall during the forecast period will be financed by short-term debt obtained from the City of Edmonton at prevailing rates. The annual revenue shortfall amount and the interest expense associated with the deferral account balance each year are shown in the table below.

**Table 16:** Annual Revenue Shortfall and Interest Expense

| Item | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|
| Total Revenue | 7.0 | 29.5 | 71.8 | 172.9 |
| Total Revenue Requirement | 853.2 | 726.2 | 1,033.6 | 1,218.0 |
| Annual Revenue Surplus (Shortfall) | (846.2) | (696.7) | (961.9) | (1,045.1) |
| | | | | |
| Deferral Account Opening Balance | - | (854.6) | (1,578.4) | (2,591.8) |
| Annual Revenue Surplus (Shortfall) | (846.2) | (696.7) | (961.9) | (1,045.1) |
| Deferral Account Closing Balance | (846.2) | (1,551.3) | (2,540.3) | (3,636.9) |
| | | | | |
| **Annual Interest Costs** | **(8.5)** | **(27.1)** | **(51.5)** | **(85.6)** |
| | | | | |
| Deferral Account Closing Balance Including interest Costs | **(854.6)** | **(1,578.4)** | **(2,591.8)** | **(3,722.5)** |

It is expected that as BRE grows and more customers are connected to the system that annual customer revenue will exceed BRE's annual revenue requirement and the short term debt obtained to cover the deferral account balance will be paid back to the City of Edmonton.

## 6.5 Bylaw 17943

The purpose of this bylaw is to:

(a) Regulate connections between building mechanical systems and the Blatchford district energy sharing system;
(b) Regulate access to the Blatchford district energy sharing system;
(c) Prevent damage or misuse of the Blatchford district energy sharing system; and
(d) Prescribe fees and charges related to the Blatchford district energy sharing system.

Bylaw 17943 was approved by City Council in December 2018. Schedule B of Bylaw 17943 contained the Customer Rates and Infrastructure Fees for 2019. Bylaw 17943 was amended for the first time by Bylaw 19062 in December 2019 to reflect new Customer Rates and Infrastructure Fees for 2020. In December 2020, Bylaw 17943 was amended a second time, by Bylaw 19494, to reflect new customer rates and infrastructure fees for 2021. Financial and Corporate Services Report FSC00808, to be presented at the November 24, 2021 Utility Committee Meeting, recommends the approval of Bylaw 19899, to amend Blatchford Renewable Energy Utility Bylaw 17943 for the third time to reflect the new fees and charges outlined in this Rate Filing to be effective for the period January 1,2022 to December 31, 2022.

# 7.0 Appendices

- 1.0 Fiscal Policy

- 2.0 2022-2025 Business Plan
- 3.0 Minimum Filing Requirements Schedules
- 4.0 Proposed 2022 Rate Schedules

# Council Policy

## Blatchford District Energy Utility Fiscal Policy

| | |
|---|---|
| **Program Impacted** | Financial Management<br>*The City of Edmonton's resilient financial position enables both current and long-term service delivery and growth.* |
| **Number** | C597A |
| **Date of Approval** | December 9, 2020 |
| **Approval History** | April 10, 2018 |
| **Next Scheduled Review** | December 9, 2023 |

**Statements**

1. The Utility is to be operated in a manner that balances the best possible service at the lowest cost (public utility) while employing private sector approaches to rate setting.
2. Similar to private utilities, the Utility will account for the cost of service under a full cost accounting approach. 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.
3. Through a phased approach, the Utility will generate positive net income, cash flow and a rate of return sufficient to cover current year expenses, working capital requirements, and to facilitate the funding for capital infrastructure and rehabilitation and replacement of its capital assets.
4. The Utility is to contribute towards achieving the City's Energy Transition Strategy.

**The purpose of this policy is to:**

1. Ensure that the Blatchford District Energy Utility is operated in a manner that reflects City Council's overall vision and philosophical objectives for the Utility.
2. Ensure that there is a consistent approach year over year for the financial planning, budgeting, and rate setting for the City managed Utility.
3. Ensure that the Utility is financially sustainable over the long term.

**Rate Setting Principles**

1. Customer rates will be understandable, practical and cost-effective to implement.
2. Customer rates will fairly apportion the cost of providing service among customers.
3. Customer rates will be stable and predictable from year to year.
4. Customer rates will provide revenue stability for the Blatchford Renewable Energy Utility.
5. Customer rates will promote the efficient use of energy.
6. Customer rates will be based on the forecast cost of providing service.
    a. In the initial years of operation as the customer base continues to grow, a levelized approach may be used to establish rates and recover the forecast costs of providing service over a longer-term basis.
    b. The under-recovery of costs under the levelized approach in the early years of the Utility's operations will be accumulated in a regulatory deferral account to be recovered in later years when the customer base is more fully established.
7. Customer rates based on the forecast cost of providing service will be assessed annually to ensure they remain competitive with other longer-term heating and cooling options.
    a. The Utility will strive for customers to pay at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and maintenance costs.
    b. The assessment will take into account the longer-term nature of utility infrastructure being used to provide services to customers, and market fluctuations that may occur annually in the commodity price of gas and electricity relative to the stable cost of providing thermal energy from the Blatchford District Energy Sharing System.

**Financial Indicators**

Financial indicators are measures that provide financial information about the sustainability of the Utility. Taken collectively, these indicators allow for periodic assessment on whether the Utility is moving towards or away from financial sustainability.

1. **Rate Sufficient to Meet Expenditures and Cash Flow (Positive Net Income and Positive Cash Position)**
    a. The Utility will generate positive net income, cash flow and a rate of return sufficient to cover current year expenses, working capital requirements, and to facilitate the funding for capital infrastructure and rehabilitation and replacement of its capital assets.
    b. The management of the Utility's cash position is the responsibility of Administration, taking into consideration current borrowing rates and current and future cash requirements.
    c. Where the Utility's cash position is insufficient to meet cash flow requirements, the Utility will borrow from the City of Edmonton on a short term basis, with the interest being paid by the Utility

at an interest rate that compensates the City of Edmonton reflecting the Fund Balance where the cash was drawn.

Indicator Targets:

i. Positive Net Income
ii. The target combined Cash Position of the Utility is the Pay As You Go funding required as identified in the Capital Plan.
iii. Stable consistent rate increases.

**2. Debt Financing of Capital**

a. The Utility will not utilize long-term Debt to finance current operating expenditures.
b. Debt will be considered for Capital Expenditures for:
    i. projects with long-term benefits;
    ii. major rehabilitation or upgrade of existing assets; and
    iii. emerging requirements to support corporate priorities and strategic plans.
c. The Utility will follow the City of Edmonton's process for debt issuance, including the term of the debt and will be consolidated with City debt in determining the City's position relative to the legislated debt limits.

Indicator Target:

The Debt to Net Assets Ratio is a measure of the extent that capital investment is financed through debt, presented on a combined basis and calculated as follows:

Total Long Term Debt
divided by
Net book value of Non-Contributed Assets
= Debt to Net Assets Ratio

The target for the Debt to Net Assets Ratio may vary between 50% and 70%, taking into consideration borrowing rates. Incremental targets, by year, are as follows:

2030 - 98% 2040 - 85% 2050 - 70% 2060 - 60%

**Financial Planning**

Budget and financial planning follow the general principles of budget, long range planning, and management of capital assets as established by the City of Edmonton and in accordance with Public Sector Accounting Standards defined by the Public Sector Accounting Board.

The Utility will prepare a 4-year Business Plan, to be presented annually to the Utility Committee, prior to the preparation of the multi-year operating and capital budgets or supplemental budget adjustments.

The Utility Committee shall recommend annually to City Council the customer rates for the upcoming year, based on review of an annual rate filing prepared by the Utility subsequent to the preparation and presentation of the 4-year Business Plan.

**Definitions**

**Cash Flow** - the ability of the Utility to meet its financial obligations as payments are due.

**Capital Assets** - assets of the Utility meeting the requirements defined under Public Sector Accounting Standard PS3150.

**Capital Investment Outlook** - a 10-year forecast of capital required to ensure that appropriate infrastructure are in place to meet service needs, including the replacement of Contributed Assets.

**Capital Plan** - a 4-year plan for funding capital infrastructure approved by City Council.

**Contributed Assets** - capital assets of the Utility for which funding was provided from non-rate sources. Examples may include infrastructure constructed by the Blatchford Development, partnership funding, grants, etc.

**Debt to Net Assets Ratio** - is a measure of the extent to which the net book value of non-contributed assets is being financed by debt.

**Financial Indicators** - a set of financial measures that provide signals on the financial health of the Utility.

**Financial Sustainability** - financial sustainability is achieved when all targets set for the Financial Indicators (as recommended by the Utility Committee and approved by City Council) are attained.

**Full Cost Accounting** - shall include cost allocation from services provided by City Administration and may include administration costs, and other shared services such as Communication, Human Resources, Information Technology, Law, Corporate Procurement and Supply Services, Financial Services, Fleet and Facility Maintenance, and general corporate overhead.

**Investment in Utility Financed Assets** - Net Book Value of Utility Financed Assets minus associated outstanding debt used to pay for the assets.

**Net Book Value** - acquisition costs of original costs of capital assets minus their accumulated depreciation.

**Pay As You Go** - the amount of cash required to implement the Capital Plan; annual amount to be funded from operating revenues.

**Rate Revenue** - revenue generated through monthly customer rates.

**Regulated Activities** - are activities that are core to the services provided by the Utility. Examples include, the provision of energy for heating and cooling and domestic hot water.

**Utility** - refers to the Blatchford District Energy Utility, a self-funded operation that provides energy services for heating, cooling and domestic hot water to customers on a fee for service basis at rates regulated by City Council.

**Utility Financed Assets** - assets of the Utility for which funding has been provided from rates either through debt or Pay As You Go funding.

AUG 2021

# BLATCHFORD RENEWABLE ENERGY

## 2022 - 2025 Business Plan

Attachment 1 - IIS 00715

Blatchford Renewable Energy

Edmonton

# Table of Contents

# Blatchford

The City of Edmonton is leading the development of a new, centrally located community with a bold and exciting vision set by City Council in 2010:

*Blatchford will be home to up to 30,000 Edmontonians living, working and learning in a sustainable community that uses 100% renewable energy, is carbon neutral, significantly reduces its ecological footprint, and empowers residents to pursue a range of sustainable lifestyle choices.*

Blatchford is optimizing how we live, work and play. This is being achieved by providing an abundance of park spaces, natural habitats, walkways and bikeways for use in all seasons. Transit will be readily accessible. Work, education, and amenities will be close and convenient. Public spaces are bringing people together and creating a strong sense of community.

Environmental sustainability is being achieved by minimizing heat, power and water consumption. Buildings in Blatchford are built with high energy-efficiency standards and connect to an innovative District Energy Sharing System that uses geoexchange, sewer heat exchange and solar as renewable energy sources. Water conservation in the community is managed through low impact development features like bioswales, bioretention areas, tree cells, cisterns, rain gardens and wetlands.

Blatchford is a landmark development for Edmonton and for Canada. As the world grows and changes, so will Blatchford. It will continue to incorporate the best ideas of the day and will be a progressive development that serves as an inspiration to other communities.

# Blatchford Renewable Energy

A new public, city-owned utility has been established to help achieve the City's long term goal of 100 percent renewable energy and carbon neutrality for Blatchford. Blatchford Renewable Energy owns and operates the neighbourhood's District Energy Sharing System, including future mechanical equipment within certain customer buildings. All buildings in Blatchford, with the exception of net-zero carbon buildings, must be connected to the District Energy Sharing System for all heating, cooling and domestic hot water services.

Buildings seeking to be exempted must be designed, built and certified to a net-zero carbon standard, or better. Within the first two stages of development, no builder has yet applied for the exemption opportunity.

Blatchford Renewable Energy's goals align with City Council's strategic goals, with a special focus on Climate Resilience. Its operation supports the City Plan and the Community Energy Transition Strategy by significantly reducing greenhouse gas emissions and increasing energy resilience in the heart of Edmonton.

The first stage of the District Energy Sharing System has been operational for over two years now, so the utility's focus has shifted to day-to-day operations, maintaining and connecting new customers, while also planning future stages such as the sewer heat recovery system and updating the utility's development master plan.

## COORDINATION WITH LAND DEVELOPMENT

The development and operation of the utility is closely connected to the Blatchford Redevelopment Office's land development work. As the land developer, the Blatchford Redevelopment Office is responsible for land use planning, engineering design, construction of public infrastructure, and selling fully serviced parcels of land to builders.

Close collaboration between the Blatchford Redevelopment Office and Blatchford Renewable Energy ensures planning and construction are aligned, and expedites monitoring and updating the financial performance of both entities. As with any large land development project, Blatchford uses a staging plan. However, the sequence and timing of the stages are subject to change depending on the market conditions. The current operational, energy and financial model for the utility is based on the most recent development scenario for Blatchford and will be adjusted as necessary and in alignment with the land development plans.

*One of the first show homes in the community serviced by Blatchford Renewable Energy.*

*The community's first geoexchange field is located underneath the stormwater pond in the community.*

# Business Plan Priorities

## Strategic Plan

The strategic objectives of Blatchford Renewable Energy focus on the growth of the District Energy Sharing System and the integration of emerging technologies into the utility's operation. The overall goal is to reach steady, reliable operation and financial sustainability while achieving Council's vision for a carbon neutral community powered entirely by renewable energy.

Growth of the utility infrastructure is closely aligned with the pace of the land development and market uptake. Blatchford Renewable Energy will follow the Blatchford land development schedule and will adjust accordingly as housing market considerations change. Overall, a staged approach for the land development and utility is planned in Blatchford, which will include periodic updates to the utility's energy and financial models. Land development needs to be flexible to adjust to market demands and conditions. Any changes to the land development scenario would likely have an impact on Blatchford Renewable Energy's staging and infrastructure needs.

The utility is currently updating its development Master Plan. The initial one was generated in 2015. This is part of a periodic update of the development and energy forecast for the utility infrastructure due to changes in land development scenarios, building and energy codes, and as more precise planning information becomes available. An example is the integration of the recently approved NAIT Campus Development plan into the forecast, which provides better information on buildings and timelines of construction at NAIT over the next decades to come. The results of this Master Plan update will help Blatchford Renewable Energy to further refine its financial and rate planning model and to use it as a future planning and development tool.

In 2019, NAIT purchased 13.27 hectares of land within Blatchford. Throughout the last year, significant progress was made in aligning the utility's operation with key site developments, including the design and process to connect to future NAIT buildings on Blatchford lands and the design and construction of the LRT into Blatchford.

Thanks to the integration of its Campus Development Plan, NAIT will become a significant customer to the District Energy Sharing System and the utility over the next decades. Current estimates anticipate a total thermal energy requirement for NAIT

development of up to 22 percent if fully connected to the District Energy Sharing System infrastructure.

In alignment with the requirements of the land sale agreement between NAIT and the City, both parties are working on the development of specific DESS connection and exemption design guides to use when NAIT buildings are planned and developed. The joint agreement on DESS design and exemption guides is expected by the end of September 2021, and will ensure that NAIT's and BRE's social, financial and environmental goals are protected and that future synergy in energy developments can be explored together.

This will likely lead to an adjusted rate design structure, as is typical for larger utility customers and NAIT's significant energy provisions, including a capacity charge in addition to standard fixed and variable rate considerations. Final rate design considerations for NAIT, aligned with the utility's Fiscal Policy, will be presented to Council at the appropriate time.

Work also continues on the Metro Line LRT development in Blatchford, which will result in two new stations in the community: NAIT / Blatchford Market and Blatchford Gate. To align with the sustainable energy vision for the community, the two stations will include building-integrated photovoltaics installed on the station canopy, making them the first net zero carbon LRT stations in the City of Edmonton. Additionally, the utility complexes that service the LRT system in this area will be future-proofed to enable future connections to the District Energy Sharing System to share thermal energy with the broader system.

The utility continues to monitor the regulatory situation around the provision of renewable electricity, which would complement the full renewable energy spectrum for Blatchford. While opportunities have been discovered through the new provincial small-scale generation and micro-generation regulation, more work is needed to develop a regulatory framework and business case for implementation.

Achieving financial sustainability for the new utility depends on a number of factors, including external capital injections, stable rate structure and other related utility rates and fees. This relationship will be outlined in more detail in a separate section in this Business Plan. From an operational perspective, the strategic vision includes an agreement with an external utility service provider to operate and maintain the utility infrastructure, while the utility remains municipally owned. While still in its infancy, the utility continues to evaluate the timing and opportunities to engage an external service provider.

# The Next Four Years

The continued focus over the next four years will be on the operational performance and growth of the first Energy Center connected to the initial stages of housing development in the community. The first Blatchford residents have been connected for almost a full year, and the District Energy Sharing System has worked without any interruptions or concerns. The variability and comfort has provided comfortable heat through cold spells in February and cooling during the heatwave in June and July of this year.

The operations and engineering teams are monitoring the performance of the first energy center carefully as more customers are getting connected, to decide when and how to extend the thermal energy capacity. This exercise will provide valuable information about operational performance and forecast scenarios, which will be implemented in the medium and long term growth forecasts.

Another focus in the next four years will be on the buildout of the distribution piping system for the next stages of the land development, including the NAIT area. The expansion of the distribution piping system closely follows the land development and is being designed using a flexible approach that ensures essential utility services will be provided to future residents, institutions, and businesses in Blatchford.

NAIT's land acquisition will advance their Campus Development Plan as they become part of the Blatchford community. As a requirement in the land sale agreement, the City will provide servicing to the NAIT parcels by 2023, including expanding the distribution system for connection to the District Energy Sharing System.

Following current projections, the planned and approved buildout of the distribution piping system will allow the connection of the District Energy Sharing System to 251,000 square meters of building space providing up to 33,000 kW of thermal energy.

The design of the next Energy Center — utilizing sewer heat recovery — is also moving ahead. The project is at conceptual design stages and design development concepts have been developed. This includes the eventual location of the Energy Center, the point of sewer access, the choice of pretreatment, along with energy transfer technology, which includes heat pump selection. The project is currently at Checkpoint 2, in accordance with the Project Development and Delivery Model (PDDM) utilized within the Integrated Infrastructure Services Department. The utility will carefully evaluate when the project and business case will be presented to City Council, which will also depend on the progress of the Blatchford Market area.

# Operational Plan

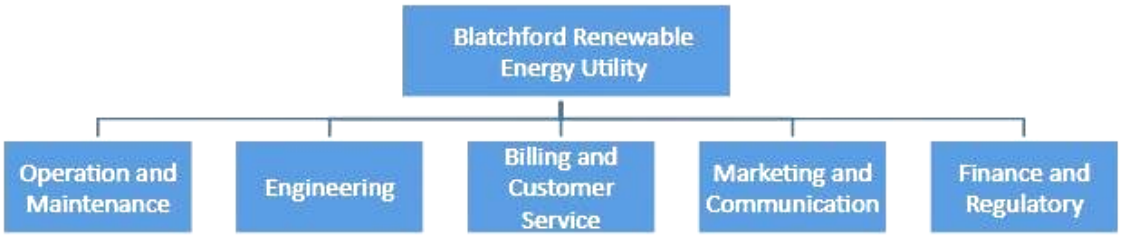
The utility's focus is on the provision of reliable services for customers in the first stages of the Blatchford community. At the same time, the utility will continue to plan future stages, with a focus on the Blatchford Market and the integration of sewer heat recovery into the overall renewable energy mix.

The utility is expecting to connect to 40 townhouse accounts by the end of 2021, as projected by the sales activities of the Blatchford land development team and the construction activities by the builders. The number of expected accounts will increase to 106 in 2022 and to 174, 240 and 305 in the years 2023 to 2025 respectively. By 2025, Blatchford Renewable Energy expects to provide thermal energy services to a connected floor space area of 130,000 square meters, all energy coming from the first Energy Center. Because the land development depends on market conditions and builder construction timelines, the current actuals showed a slower pace of account development than initially anticipated. Future development scenarios will also need to include the medium to long term impact of COVID-19 on the real estate market in Edmonton.

*Energy Centre One harnesses earth's geothermal renewable energy for use in the community's District Energy Sharing System.*

*Mechanical equipment in Energy Centre One.*

Operation of the District Energy Sharing System will continue to be managed internally by the utility in partnership with other City of Edmonton departments and EPCOR. A summary of individual operating units within the utility is presented below:




**Maintenance, Operation and Engineering:**

Operation and maintenance is provided by the City's Facilities Maintenance Services (FMS) section within the City Operations department. The utility has been working hand-in-hand with FMS to develop operating protocols and maintenance procedures. Operations and maintenance started after commissioning, and engineering and operational support will primarily be provided internally with some support from external technical consultants and contractors.

**Billing and Customer Service:**

The utility has entered into a service level agreement with EPCOR for billing and customer service support for Blatchford Renewable Energy's customers. EPCOR, along with the City's 311 services, is also involved in customer service functions as it relates to billing, technical and emergency communication and planning. Starting in 2022, the utility will be integrated into EPCOR's automated billing systems upgrade, which will improve the overall process as new customers are coming online.

**Finance, Legal and Regulatory:**

Financial, regulatory and legal support for the utility is provided by the Financial and Corporate Services department and the City's Legal Services Branch which has significant expertise in utility management. Both areas are heavily involved during the development of the bylaw, the fiscal policy, ongoing rate filing and operating and capital budget development for the utility.

**Marketing and Communication:**

Marketing and communication support is provided through the Communications and Engagement department. The Blatchford Marketing and Sales Team continues to be focused on strategic work to support land sales, sharing the story of the Blatchford land development and utility, and providing customer support to our residents and builders. A full-time utility communications resource has been added to the existing Blatchford marketing team so essential communication and customer services can continue as the utility grows.

*All homes in the community are receiving renewable heating, cooling and hot water services from Blatchford Renewable Energy.*

# Key Measures

Table 1 below provides an updated summary of Blatchford Renewable Energy's key performance measures and targets, including forecasts, actuals and projection, and their alignment with Council's strategic goals.

**Table 1:** Key Performance Measures of Blatchford Renewable Energy

| Utility Strategic Direction | Performance Measure | Forecasts/ Actual/ Projections | | | | | | | | Corporate Goal |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2020 | | 2021 | | 2022 | 2023 | 2024 | 2025 | |
| | | Forecast | Actuals | Forecast | Projected | Forecasts | | | | |
| **Goal: A Healthy Community Well Served** | | | | | | | | | | |
| Blatchford Renewable Energy strives to provide a high level of customer satisfaction by delivering timely and uninterrupted thermal energy. | Thermal Energy Provided by DESS (Cumulative) | 236 MWh | 14 MWh | 798 MWh | 685 MWh | 1,348 MWh | 4,339 MWh | 4,896 MWh | 5,562 MWh | CLIMATE RESILIENCE |
| | DESS Operational Uptime | 100% | 100% | 100 % | 100% | 100% | 100% | 100% | 100% | |
| **Goal: Environmental Stewardship** | | | | | | | | | | |
| Blatchford Renewable Energy is committed to staying true to the project vision by complying to the environmental regulations and goals in order to protect the environment and biodiversity. | Environmental Compliance | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | CLIMATE RESILIENCE |
| | Renewable Energy (Utility)[1] | 96% | 96% | 96% | 96% | 96% | 97% | 97% | 96% | |
| | Renewable Energy (Community)[2] | 48% | 51% | 48% | 49% | 51% | 54% | 55% | 54% | URBAN PLACES |
| | GHG reduction (Utility)[3] | 5 tCO2e | 0.3 tCO2e | 23 tCO2e | 16 tCO2e | 67 tCO2e | 250 tCO2e | 328 tCO2e | 504 tCO2e | |

| Utility Strategic Direction | Performance Measure | Forecasts/ Actual/ Projections | | | | | | | | Corporate Goal |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2020 | | 2021 | | 2022 | 2023 | 2024 | 2025 | |
| | | Forecast | Actuals | Forecast | Projected | Forecasts | | | | |
| **Goal: Operational Effectiveness** | | | | | | | | | | |
| Blatchford Renewable Energy is committed to providing a culture of innovation and a strong sense of purpose through a commitment to people, and optimizing systems and resources. | Total floor area connected to the DESS (Cumulative) | 3,300 $m^2$ | 1,570 $m^2$ | 15,000 $m^2$ | 7,020 $m^2$ | 20,000 $m^2$ | 58,000 $m^2$ | 120,000 $m^2$ | 130,000 $m^2$ | URBAN PLACES |
| **Goal: Fiscal Sustainability** | | | | | | | | | | |
| Blatchford Renewable Energy strives to become financially sustainable and is committed to be fair and equitable. | Positive net income | no | no | no | no | no | no | no | $4M | REGIONAL PROSPERITY |
| | Debt to net asset ratio[4] | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | |
| | Positive Cash position | no | no | no | no | no | no | no | $2M | URBAN PLACES |

[1] Renewable Energy (Utility): Percent of renewable energy used for utility-owned and operated equipment
[2] Renewable Energy (Community): Percent of renewable energy for the whole community
[3] GHG Reduction (Utility): Tonnes of carbon dioxide equivalent reduced from utility operation
[4] Debt to net asset ratio: business case assumption is Utility does not take on its own debt until 2026

| Symbol | Corporate Goal | Description |
|---|---|---|
| CLIMATE RESILIENCE | Climate Resilience | Edmonton is a city transitioning to a low-carbon future, has clean air and water and is adapting to a changing climate. |
| REGIONAL PROSPERITY | Regional Prosperity | Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global level. |
| URBAN PLACES | Urban Places | Edmonton neighbourhoods are more vibrant as density increases, where people and businesses thrive and where housing and mobility options are plentiful. |

# Risk Identification

Table 2 below identifies the operational risks associated with the design and construction of the District Energy Sharing System and the development of Blatchford Renewable Energy. The likelihood score is from 1-Rare to 5-Almost Certain. The Impact score is from 1-Minor to 5-Worst Case.

**Table 2:** Risk Matrix for Blatchford Renewable Energy

| Risk Factor | Risk Description | Likelihood (1 to 5) | Impact (1 to 5) | Risk Score | Mitigation Strategy | Risk Owner |
|---|---|---|---|---|---|---|
| Financial | Desire for external investment for the Utility. Impact on rate structure and uptake in customers is critical for long term viability. | 3 Possibly | 3 Major | 9 Medium | Communicate and lobby government for external funding, update financial model forecast frequently and engage with Council for any changes. | Utility Leadership |
| Economic | Direct Utility impact on pace of development and uptake of land parcels by builders. | 2 Unlikely | 3 Major | 6 Low | Ensure close collaboration and monitoring of land development and building industry. | Utility Leadership |
| Change in Utility Model | Direction could impact the original vision and delivery of the project. | 2 Unlikely | 3 Major | 6 Low | Accelerate, slow down or adjust activities, depending on the situation. | Utility Leadership |
| Project Management | By following Blatchford's vision of sustainability, technical and financial risks are encountered. | 2 Unlikely | 1 Minor | 2 Low | Allow longer schedule for Planning and Engineering of sustainable design. Use Project Develop Deliver Model (PDDM). | Utility Leadership |

# Financial and Regulatory Impacts

This Business Plan adheres to the principles as established by the Blatchford District Energy Utility Fiscal Policy C597, shown in Appendix 1 of this plan. The Fiscal Policy establishes the framework for how the utility will set its rates, finance capital, and manage its cash position. The utility continues to work towards achieving the long term financial indicators as set out in the Fiscal Policy (i.e. Positive Net Income, Positive Cash Position, Debt Financing of Capital). Continued efforts will be made to minimize rate increases, identify operational efficiencies, and prioritize capital projects.

A summary of the three financial indicators, as established in the Fiscal Policy, as well as the projected timelines and key milestones for Blatchford Renewable Energy to achieve long term financial sustainability is provided in Appendix 2. Included in Appendix 2 is the desire for a $93 million non-refundable cash infusion to pay for the initial stages of infrastructure development and to enable the following two key principles to be achieved:

- Ensure that the Blatchford utility becomes financially sustainable in the long run without any ongoing subsidy; and
- Ensure Blatchford utility customers pay, at most, a comparable fee to what they would elsewhere in the City through their energy utility bills and annual maintenance costs.

## KEY FINANCIAL AND REGULATORY UPDATES

The first 2019-2022 Utility Business Plan identified the following regulatory and financial priorities in the first four years as the utility continues to develop and moves towards longer term financial sustainability:

1) Establish the regulatory framework and customer rates based upon a cost of service methodology that ensures Blatchford Renewable Energy customers pay at most a comparable energy fee to what they would elsewhere in the City of Edmonton through their energy utility bills and annual maintenance costs;
2) Obtain a non-refundable cash infusion in order to fund the initial stages of the utility infrastructure development;
3) Obtain short-term bridge financing to be used as working capital for the day-to-day operations of the utility as it continues to mature and begins to generate positive net income and a positive cash position as the number of residents and utility customers increase.

In December 2018, City Council approved the Blatchford Utility 2019 Annual Rate Filing which established the regulatory framework and customer rates for the initial year of operation of the Blatchford utility. For 2019, a "pegged approach" was used to set customer rates under which Blatchford utility customer bills were pegged to what typical utility bills would be elsewhere in the City of Edmonton in 2019 for heating, cooling, and hot water.

In December 2019, City Council approved the Blatchford Utility 2020 Annual Rate Filing, whereby a "levelized approach" was then used to update customer rates for 2020 based on escalating 2019 approved rates by 2.7 percent, consistent with the rate setting methodology reflected in the business case presented to City Council on March 16, 2016 for the development of the District Energy Sharing System at Blatchford. Under the levelized approach, customer rates in the business case were increased by 2.7 percent on average each year over the initial 50 years to ensure stable and consistent rate increases, with rates set to under-recover costs in the early years of the utility's operation when the customer base is small and to gradually recover past costs in the later years when the customer base is fully established.

During the review of the 2020 Annual Rate Filing on November 1, 2019, the Utility Committee requested that Administration review the Fiscal Policy to provide more flexibility in setting customer rates going forward to create more flexibility by refining when to use the pegged rate or a smooth increase. Administration brought forward a report at the October 2, 2020 Utility Committee meeting that recommended specific Rate Setting Principles be incorporated into the Fiscal Policy to further clarify the

longer term approach of how customer rates are being set to recover the forecast cost of providing service and the intent of comparing these rates against market to ensure they remain competitive. The 2021 Annual Rate Filing was presented at the December 4, 2020 Utility Committee meeting with the proposed rates for 2021 continuing to be based on the levelized approach (i.e. whereby the proposed 2021 rates were established by escalating the approved 2020 rates by 2.7 percent). City Council approved the 2021 rates on December 9, 2020.

Table 3 summarizes the approved 2019-2022 Capital Budget for Blatchford Renewable Energy, incorporating amendments as part of the 2019 and 2020 Supplemental Capital Budget Adjustments. Included in the 2019-2022 Budget is a $9.5 million short term borrowing from the City of Edmonton in 2019 in order to provide working capital to fund the day-to-day operations and debt servicing costs of the utility in the initial stages of development from 2019 to 2022.

The total originally approved 2019-2022 Capital Budget of $11.715 million includes $6.743 million for the completion of the geoexchange borefield and Energy Centre One ($19.442 million in total; construction completion and commissioning achieved during the third quarter of 2019) as well as an additional $4.972 million for the planning and design for the Sewer Heat Recovery Energy Centre, which is the next stage of development of Blatchford Renewable Energy.

The construction of the Sewer Heat Recovery Energy Centre is currently forecasted to occur in 2022 and 2023. Administration will be bringing an updated cost estimate when the project design has progressed to a checkpoint three level, in accordance with the Project Development and Delivery Model (PDDM).

Administration brought forward an additional capital budget request in the amount of $5.0 million in December 2020 for the design and construction of the Energy Transfer Stations. Energy Transfer Stations within apartment buildings will distribute the energy from the District Energy Sharing System into the building units. The utility will design and construct the Energy Transfer Stations and will own, operate and maintain them. The full cost for designing and construction of the Energy Transfer Stations will be recovered from builders. By designing and constructing the Energy Transfer Stations, the utility ensures that proper mechanical systems are in place leading to the highest operational and financial efficiencies for the operation and maintenance of the District Energy Sharing System. In December 2020 City Council approved capital budget amounts of $1.5 million in 2022 and $3.5 million in 2023 for the design and construction of the Energy Transfer Stations.

During the 2021 spring capital budget adjustment Council approved a capital budget

adjustment of $8.65 million over three years (2021 to 2023) to advance the design and delivery of the distribution piping system for the District Energy Sharing System for the current land development stages and the NAIT development in the Blatchford community. Following current projections, this planned buildout will allow the connection of the District Energy Sharing System to 251,000 square meters of building space providing up to 33,000 kW of thermal energy. The expansion of the distribution piping system follows the growth in the land development, representing a prudent and flexible approach to ensure that essential utility services will be provided to future residents, institutions, and businesses in Blatchford.

**Table 3:** 2019-2022 Capital Budget for Blatchford Renewable Energy

| Prior Years | 2019 Approved | 2020 Approved | 2021 Approved | 2022 Approved | 2019-2022 Total |
|---|---|---|---|---|---|
| $12,699 | $7,236 | $2,821 | $4,258 | $6,350 | $20,665 |

Table 4 summarizes the 2019-2022 operating revenues and expenditures for Blatchford Renewable Energy as approved in the 2019 Operating Budget and updated in the 2020 and 2021 Annual Rate Filings.

**Table 4**: 2019-2022 Operating Revenues and Expenditures for Blatchford Renewable Energy

| | 2019 Actual | 2020 Approved | 2020 Actual | 2021 Approved | 2021 Forecast | 2022 Forecast |
|---|---|---|---|---|---|---|
| **Revenues and Fees** | | | | | | |
| Rate Revenue | | $24 | | $34 | $11 | $83 |
| Infrastructure Fees | $7 | $75 | $30 | $104 | $56 | $207 |
| **Total Revenues** | $7 | $99 | $30 | $138 | $67 | $290 |
| **Expenditures and Transfers** | | | | | | |
| Personnel | $316 | $337 | $355 | $344 | $373 | $351 |
| Material, Goods and Supplies | $2 | $242 | $72 | $111 | $3 | $112 |
| External Services | $437 | $569 | $227 | $591 | $529 | $705 |
| Shared Services | $73 | $62 | $2 | $77 | $63 | $75 |
| Utilities and Other Charges | $25 | $45 | $70 | $82 | $65 | $88 |
| **Total Expenditures and Transfers** | $853 | $1,255 | $726 | $1,205 | $1,033 | $1,331 |
| **Net Operating Requirement** | **($846)** | **($1,156)** | **($696)** | **($1,067)** | **($966)** | **($1,042)** |

Reduced revenue generation for the utility is the result of delayed home builder construction activities. These lower revenues were partially offset by lower than budgeted operating costs through reduced spending on facility maintenance and operating contracts. However, as the utility is still in its infancy, operating systems and processes are being put in place in preparation of full operation. The utility hired a

full-time marketing resource in 2021 in order to continue to provide essential communication and customer services as the utility grows.

# Conclusion

This Business Plan iteration for Blatchford Renewable Energy provides an updated overview from the strategic and operational level for the utility. Several key milestones have been achieved. The utility has successfully provided thermal energy services for the first residents in Blatchford. Future utility infrastructure is being planned and designed and the utility's Master Plan will continue to be updated to reflect the development as it proceeds.

The utility's strategic objectives remain: growing the District Energy Sharing System and integrating emerging technologies into the utility's operation to reach steady reliable operation, financial sustainability, and achieve Council's vision for a carbon neutral community powered entirely by renewable energy. The growth of the new utility is, and will continue to be, closely connected to the land development activities in Blatchford.

Following this business plan update, the utility will prepare the annual rate filing and budget submissions for Council's consideration during the fourth quarter of 2021.

# Appendices

# Appendix 1: Blatchford Renewable Energy Utility Fiscal Policy

# Council Policy
## Blatchford District Energy Utility Fiscal Policy

| | |
|---|---|
| **Program Impacted** | Financial Management<br>The City of Edmonton's resilient financial position enables both current and long-term service delivery and growth. |
| **Number** | C597A |
| **Date of Approval** | *TBD* |
| **Approval History** | April 10, 2018 |
| **Next Scheduled Review** | *TBC upon approval* [Must not exceed 3 years from date of approval] |

**Statements**

1. The Utility is to be operated in a manner that balances the best possible service at the lowest cost (public utility) while employing private sector approaches to rate setting.
2. Similar to private utilities, the Utility will account for the cost of service under a full cost accounting approach. 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.
3. Through a phased approach, the Utility will generate positive net income, cash flow and a rate of return sufficient to cover current year expenses, working capital requirements, and to facilitate the funding for capital infrastructure and rehabilitation and replacement of its capital assets.
4. The Utility is to contribute towards achieving the City's Energy Transition Strategy.

**The purpose of this policy is to:**

1. Ensure that the Blatchford District Energy Utility is operated in a manner that reflects City Council's overall vision and philosophical objectives for the Utility.
2. Ensure that there is a consistent approach year over year for the financial planning, budgeting, and rate setting for the City managed Utility.
3. Ensure that the Utility is financially sustainable over the long term.

**Rate Setting Principles**

1. Customer rates will be understandable, practical and cost-effective to implement.
2. Customer rates will fairly apportion the cost of providing service among customers.
3. Customer rates will be stable and predictable from year to year.
4. Customer rates will provide revenue stability for the Blatchford Renewable Energy Utility.
5. Customer rates will promote the efficient use of energy.
6. Customer rates will be based on the forecast cost of providing service.
    a. In the initial years of operation as the customer base continues to grow, a levelized approach may be used to establish rates and recover the forecast costs of providing service over a longer-term basis.
    b. The under-recovery of costs under the levelized approach in the early years of the Utility's operations will be accumulated in a regulatory deferral account to be recovered in later years when the customer base is more fully established.
7. Customer rates based on the forecast cost of providing service will be assessed annually to ensure they remain competitive with other longer-term heating and cooling options.
    a. The Utility will strive for customers to pay at most a comparable fee to what they would elsewhere in the City of Edmonton through their energy utility bills and maintenance costs.
    b. The assessment will take into account the longer-term nature of utility infrastructure being used to provide services to customers, and market fluctuations that may occur annually in the commodity price of gas and electricity relative to the stable cost of providing thermal energy from the Blatchford District Energy Sharing System.

**Financial Indicators**

Financial indicators are measures that provide financial information about the sustainability of the Utility. Taken collectively, these indicators allow for periodic assessment on whether the Utility is moving towards or away from financial sustainability.

1. **Rate Sufficient to Meet Expenditures and Cash Flow (Positive Net Income and Positive Cash Position)**
    a. The Utility will generate positive net income, cash flow and a rate of return sufficient to cover current year expenses, working capital requirements, and to facilitate the funding for capital infrastructure and rehabilitation and replacement of its capital assets.
    b. The management of the Utility's cash position is the responsibility of Administration, taking into consideration current borrowing rates and current and future cash requirements.
    c. Where the Utility's cash position is insufficient to meet cash flow requirements, the Utility will borrow from the City of Edmonton on a short term basis, with the interest being paid by the Utility

at an interest rate that compensates the City of Edmonton reflecting the Fund Balance where the cash was drawn.

Indicator Targets:

i. Positive Net Income
ii. The target combined Cash Position of the Utility is the Pay As You Go funding required as identified in the Capital Plan.
iii. Stable consistent rate increases.

**2. Debt Financing of Capital**

a. The Utility will not utilize Debt to finance current operating expenditures.
b. Debt will be considered for Capital Expenditures for:
   i. projects with long-term benefits;
   ii. major rehabilitation or upgrade of existing assets; and
   iii. emerging requirements to support corporate priorities and strategic plans.
c. The Utility will follow the City of Edmonton's process for debt issuance, including the term of the debt and will be consolidated with City debt in determining the City's position relative to the legislated debt limits.

Indicator Target:

The Debt to Net Assets Ratio is a measure of the extent that capital investment is financed through debt, presented on a combined basis and calculated as follows:

Total Long Term Debt
divided by
Net book value of Non-Contributed Assets
= Debt to Net Assets Ratio

The target for the Debt to Net Assets Ratio may vary between 50% and 70%, taking into consideration borrowing rates. Incremental targets, by year, are as follows:

2030 - 98% 2040 - 85% 2050 - 70% 2060 - 60%

**Financial Planning**

Budget and financial planning follow the general principles of budget, long range planning, and management of capital assets as established by the City of Edmonton and in accordance with Public Sector Accounting Standards defined by the Public Sector Accounting Board.

The Utility will prepare a 4-year Business Plan, to be presented annually to the Utility Committee, prior to the preparation of the multi-year operating and capital budgets or supplemental budget adjustments.

The Utility Committee shall recommend annually to City Council the customer rates for the upcoming year, based on review of an annual rate filing prepared by the Utility subsequent to the preparation and presentation of the 4-year Business Plan.

**Definitions**

**Cash Flow** - the ability of the Utility to meet its financial obligations as payments are due.

**Capital Assets** - assets of the Utility meeting the requirements defined under Public Sector Accounting Standard PS3150.

**Capital Investment Outlook** - a 10-year forecast of capital required to ensure that appropriate infrastructure are in place to meet service needs, including the replacement of Contributed Assets.

**Capital Plan** - a 4-year plan for funding capital infrastructure approved by City Council.

**Contributed Assets** - capital assets of the Utility for which funding was provided from non-rate sources. Examples may include infrastructure constructed by the Blatchford Development, partnership funding, grants, etc.

**Debt to Net Assets Ratio** - is a measure of the extent to which the net book value of non-contributed assets is being financed by debt.

**Financial Indicators** - a set of financial measures that provide signals on the financial health of the Utility.

**Financial Sustainability** - financial sustainability is achieved when all targets set for the Financial Indicators (as recommended by the Utility Committee and approved by City Council) are attained.

**Full Cost Accounting** - shall include cost allocation from services provided by City Administration and may include administration costs, and other shared services such as Communication, Human Resources, Information Technology, Law, Corporate Procurement and Supply Services, Financial Services, Fleet and Facility Maintenance, and general corporate overhead.

**Investment in Utility Financed Assets** - Net Book Value of Utility Financed Assets minus associated outstanding debt used to pay for the assets.

**Net Book Value** - acquisition costs of original costs of capital assets minus their accumulated depreciation.

**Pay As You Go** - the amount of cash required to implement the Capital Plan; annual amount to be funded from operating revenues.

**Rate Revenue** - revenue generated through monthly customer rates.

**Regulated Activities** - are activities that are core to the services provided by the Utility. Examples include, the provision of energy for heating and cooling and domestic hot water.

**Utility** - refers to the Blatchford District Energy Utility, a self-funded operation that provides energy services for heating, cooling and domestic hot water to customers on a fee for service basis at rates regulated by City Council.

**Utility Financed Assets** - assets of the Utility for which funding has been provided from rates either through debt or Pay As You Go funding.

# Appendix 2: Key Financial Indicators

(as established in the Blatchford Utility Fiscal Policy)

| BLATCHFORD DISTRICT ENERGY SHARING SYSTEM<br>KEY FINANCIAL INDICATORS - SCENARIO B | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **2017 - 2021** | **2022 - 2026** | **2027 - 2031** | **2032 - 2036** | **2037 - 2041** | **2042 - 2046** | **2047 - 2066** | **At Year 50** |
| **# of Customers** | 392 | 3,362 | 7,653 | 11,836 | 14,997 | 16,643 | 16,643 | 16,643 |
| **Stages of Utility Buildout *** | EC1 | EC2 & SHX | EC 3A, 3B, 4 | EC 3C & 4 | EC5 | EC5 | Renewal | Full Buildout |
| **Capital Investment** | | | | | | | | |
| Cash Infusion | $32M | $61M | - | - | - | - | - | $93M |
| Contributed by Developer | $3M | $33M | $48M | $31M | $22M | $10M | - | $147M |
| Non-Contributed | - | $4M | $83M | $19M | $40M | $47M | $227M | $420M |
| **Total Capital** | $35M | $98M | $131M | $50M | $62M | $57M | $227M | $660M |
| **Financial Indicators** | | | | | | | | |
| **1. Positive Net Income** | No | **Positive in 2025 ($4M)** | Yes | Yes | Yes | Yes | Yes | $4M |
| **2. Positive Cash Position** | No | **Positive in 2025 ($2M)** | Yes | Yes | Yes | Yes | Yes | $12M |
| **3. Debt Financing of Capital (50% - 70%)** | n/a | n/a | 100% - 98% | 98% - 92% | 92% - 84% | 84% - 74% | **74% - 56%** | 56% |

*** Definitions:**
"EC" - Energy Centre
"SHX" - Sewer Heat Exchange

# Blatchford Renewable Energy
# 2022 Rate Filing
# Index of MFR Schedules

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Summary of Total System Revenue Requirement**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|---|---|
| | **Revenue Requirement** | | | | | | | |
| 1 | Operating Costs | S. 5-1 | 853.16 | 1,255.71 | 726.21 | 1,205.27 | 1,033.62 | 1,217.96 |
| 2 | | | | | | | | |
| 3 | Depreciation | | - | - | - | - | - | - |
| 4 | | | | | | | | |
| 5 | Revenue Offsets | | - | - | - | - | - | - |
| 6 | | | | | | | | |
| 7 | Return on Rate Base | | - | - | - | - | - | - |
| 8 | | | | | | | | |
| **9** | **Total System Revenue Requirement** | | **853.16** | **1,255.71** | **726.21** | **1,205.27** | **1,033.62** | **1,217.96** |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | **Revenue** | | | | | | | |
| 13 | Revenue on Proposed Rates | | $ - | $ 24.10 | $ 29.48 | $ 34.21 | $ 14.25 | $ 51.03 |
| 14 | | | | | | | | |
| 15 | Infrastructure Fee | | $ 7.00 | $ 75.30 | $ - | $ 104.24 | $ 57.51 | $ 121.82 |
| 16 | | | | | | | | |
| 17 | **Total Revenue** | | **$ 7.00** | **$ 99.40** | **$ 29.48** | **$ 138.45** | **$ 71.76** | **$ 172.85** |
| 18 | | | | | | | | |
| 19 | **Revenue Surplus/(shortfall)** | | (846.16) | (1,156.31) | (696.73) | (1,066.82) | (961.86) | (1,045.11) |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Summary of Operating Costs**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Utilities & Other | S.6-1 | $ 15.74 | $ 38.01 | $ 69.35 | $ 74.89 | $ 65.39 | $ 80.44 | |
| 2 | | | | | | | | | |
| 3 | Operations and Maintenance Cc | S. 7-1 | 581.73 | 820.85 | 445.30 | 797.00 | 451.74 | 825.52 | |
| 4 | | | | | | | | | |
| 5 | Administration Costs | S. 8-1 | 223.92 | 312.34 | 208.82 | 225.12 | 447.52 | 228.42 | |
| 6 | | | | | | | | | |
| 7 | Customer Billing Services Costs | S. 9-1 | 24.68 | 22.15 | 0.90 | 31.55 | 6.00 | 8.41 | |
| 8 | | | | | | | | | |
| 9 | Corporate Administration Costs | S. 10-1 | 7.09 | 62.36 | 1.85 | 76.71 | 62.96 | 75.16 | |
| 10 | | | | | | | | | |
| 11 | Franchise Fees and Property Taxes | | - | - | - | - | - | - | |
| 12 | | | | | | | | | |
| 13 | **Total Operating Costs** | | **$ 853.16** | **$ 1,255.71** | **$ 726.21** | **$ 1,205.27** | **$ 1,033.62** | **$ 1,217.96** | |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Utilities & Other Costs**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Utilities | | $ 15.74 | $ 38.01 | $ 69.35 | $ 74.89 | $ 65.39 | $ 80.44 | |
| 2 | | | | | | | | | |
| 3 | Other | | - | - | - | - | - | - | |
| 4 | | | | | | | | | |
| 5 | **Total Utilities** | | **$ 15.74** | **$ 38.01** | **$ 69.35** | **$ 74.89** | **$ 65.39** | **$ 80.44** | S. 5-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Operations and Maintenance Costs by Function**
**($000s)**

| Line No. | | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Energy Centers & Main Distribution System** | | | | | | | | |
| 2 | Operation & Maintenance | | - | 197.82 | 72.00 | 178.40 | 75.00 | 168.16 | |
| 3 | | | - | - | | - | - | - | |
| 4 | Subtotal | | - | 197.82 | 72.00 | 178.40 | 75.00 | 168.16 | |
| 5 | | | | | | | | | |
| 6 | **Customer Connection and Meters** | | | | | | | | |
| 7 | Operation & Maintenance | | - | 18.52 | - | 22.10 | - | 32.57 | |
| 8 | | | - | - | | - | - | - | |
| 9 | Subtotal | | - | 18.52 | - | 22.10 | - | 32.57 | |
| 10 | | | | | | | | | |
| 11 | **Quality Assurance** | | - | - | | - | - | - | |
| 12 | | | | | | | | | |
| 13 | **Operations Support Services** | | | | | | | | |
| 14 | Personnel | | 329.88 | 337.52 | 354.63 | 344.27 | 373.61 | 367.25 | |
| 15 | Training and Development | | 9.03 | 6.83 | 1.43 | 6.97 | - | 7.35 | |
| 16 | Equipment Rental | | 2.51 | 25.56 | 0.05 | 5.98 | 3.05 | 6.10 | |
| 17 | Technical Consultants | | 240.31 | 234.60 | 17.19 | 239.29 | 0.08 | 244.08 | |
| 18 | Less: Recovery of Costs | | - | - | | - | - | - | |
| 19 | Subtotal | | 581.73 | 604.51 | 373.30 | 596.51 | 376.74 | 624.78 | |
| 20 | | | | | | | | | |
| 21 | **Total Operations and Maintenance Costs** | | **$ 581.73** | **$ 820.85** | **$ 445.30** | **$ 797.00** | **$ 451.74** | **$ 825.52** | S. 5-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Administration Costs by Function**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Marketing, Education and Communication | | $ 69.36 | $ 121.73 | $ 59.87 | $ 120.25 | $ 71.32 | $ 122.66 | |
| 2 | Consultants | | 154.56 | 190.61 | 148.95 | 104.87 | 376.20 | 105.76 | |
| 3 | | | - | - | | - | - | - | |
| 4 | Subtotal | | 223.92 | 312.34 | 208.82 | 225.12 | 447.52 | 228.42 | |
| 5 | | | | | | | | | |
| 6 | Less: | | | | | | | | |
| 7 | Allocations to Other Business Units | | - | - | | - | - | - | |
| 8 | Capital Overhead Recoveries | | - | - | | - | - | - | |
| 9 | | | - | - | | - | - | - | |
| 10 | | | | | | | | | |
| 11 | **Total Administration Costs** | | **$ 223.92** | **$ 312.34** | **$ 208.82** | **$ 225.12** | **$ 447.52** | **$ 228.42** | S. 5-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Customer Billing Costs**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Monthly Billing Charges | | $ - | $ 22.15 | $ 0.90 | $ 31.55 | $ 6.00 | $ 5.32 | |
| 2 | Annual Billing Automation Charge | | $ - | $ - | $ - | $ - | $ - | $ 3.10 | |
| 3 | One-time Set-up Charges | | $24.68 | $ - | $ - | $ - | $ - | $ - | |
| 4 | Bad Debts | | - | - | | - | - | - | |
| 5 | Write-offs and Adjustments | | - | - | | - | - | - | |
| 6 | | | | | | | | | |
| 7 | **Total Customer Billing Costs** | | **$ 24.68** | **$ 22.15** | **$ 0.90** | **$ 31.55** | **$ 6.00** | **$ 8.41** | S. 5-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Corporate Administration Costs**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Shared Corporate Service Costs | | $ 1.26 | $ 49.25 | $ 0.40 | $ 53.23 | $ 53.23 | $ 51.24 | |
| 2 | Asset Usage Fees | | - | 7.50 | - | 16.74 | 3.00 | 17.08 | |
| 3 | Other - Transportation and Insurance | | 5.83 | 5.62 | 1.45 | 6.73 | 6.73 | 6.85 | |
| 4 | Subtotal | | 7.09 | 62.36 | 1.85 | 76.71 | 62.96 | 75.16 | |
| 5 | | | | | | | | | |
| 6 | Less: Allocation to Other Business Units | | | | | | | | |
| 7 | Shared Corporate Service Costs | | - | - | | - | - | - | |
| 8 | Asset Usage Fees | | - | - | | - | - | - | |
| 9 | Subtotal | | - | - | - | - | - | - | |
| 10 | | | | | | | | | |
| 11 | **Total Corporate Administration Costs** | | **$ 7.09** | **$ 62.36** | **$ 1.85** | **$ 76.71** | **$ 62.96** | **$ 75.16** | S. 5-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Rate Base**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|
| 1 | Prior Year Property, Plant and Equipment | S. 15-2 | $ - | $ - | $ 19,462.36 | $ 19,514.95 | |
| 2 | Prior Year Accumulated Depreciation | | - | - | - | - | |
| 3 | Prior Year Net Property | | - | - | 19,462.36 | 19,514.95 | |
| 4 | | | | | | | |
| 5 | Current Year Property, Plant and Equipment | S. 15-2 | - | 19,462.36 | 19,514.95 | 19,514.95 | |
| 6 | Current Year Accumulated Depreciation | | - | - | - | - | |
| 7 | Current Year Net Property | | - | 19,462.36 | 19,514.95 | 19,514.95 | |
| 8 | | | | | | | |
| 9 | Mid-Year Net Property | | - | 9,731.18 | 19,488.66 | 19,514.95 | |
| 10 | | | | | | | |
| 11 | Materials and Supplies | | - | - | - | - | |
| 12 | | | | | | | |
| 13 | Working Capital | | - | - | - | - | |
| 14 | | | | | | | |
| 15 | Gross Mid-Year Rate Base | | - | 9,731.18 | 19,488.66 | 19,514.95 | |
| 16 | | | | | | | |
| 17 | Mid-Year Net Contributions | S. 15-6 | - | (9,731.18) | (19,488.66) | (19,514.95) | |
| 18 | | | | | | | |
| 19 | **Net Mid-Year Rate Base** | | **$ -** | **$ -** | **$ -** | **$ -** | |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Property, Plant & Equipment**
**($000s)**

| Line No. | | Cross Reference | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|
| 1 | Previous year balance | | $ - | $ - | $ 19,462.36 | $ 19,514.95 | S. 15-1 |
| 2 | | | | | | | |
| 3 | Additions to Property, Plant & Equipment | | | | | | |
| 4 | BREU Funded | S. 15-4 | - | 19,462.36 | 52.59 | - | |
| 5 | Developer Additions | | - | | - | - | |
| 6 | | | - | 19,462.36 | 52.59 | - | |
| 7 | | | | | | | |
| 8 | Retirements and Adjustments | | - | | - | - | |
| 9 | | | | | | | |
| 10 | **Current year balance** | | **$ -** | **$ 19,462.36** | **$ 19,514.95** | **$ 19,514.95** | S. 15-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Construction Work in Progress**
**($000s)**

| Line No. | | Cross Reference | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|
| 1 | Previous year balance | | $ - | $ 18,744.23 | $ 91.18 | $ 3,491.18 | |
| 2 | | | | | | | |
| 3 | Capital Expenditures | | | | | | |
| 4 | Energy Center 1 | | 18,744.23 | 718.13 | 52.59 | - | |
| 5 | Sewer Heat Exchange | | - | 91.18 | 800.00 | 810.00 | |
| 6 | Distribution Piping System | | - | - | 2,600.00 | 4,850.00 | |
| 7 | Energy Transfer Stations | | - | - | - | 1,500.00 | |
| 8 | | | | | | | |
| 9 | Less: Capital Additions Energy Center 1 | | - | (19,462.36) | (52.59) | - | S. 15-2 |
| 10 | Less: Capital Additions Sewer Heat Exchange | | - | - | - | - | |
| 11 | Less: Capital Additions Distribution Piping System | | - | - | - | - | |
| 12 | Less: Capital Additions Energy Transfer Stations | | - | - | - | - | |
| 11 | **Current year balance** | | $ 18,744.23 | $ 91.18 | $ 3,491.18 | $ 10,651.18 | |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Contributions in Aid of Construction**
**($000s)**

| Line No. | Description | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|
| 1 | Prior Year Gross Contributions | $ - | | $ (19,462.36) | $ (19,514.95) | |
| 2 | | | | | | |
| 3 | City Contributions | - | (19,462.36) | (52.59) | - | |
| 4 | Customer Contributions | - | | - | - | |
| 5 | Developer Contributions | - | | - | - | |
| 6 | Retirements, Transfers & Disposals | | | | | |
| 7 | | | | | | |
| 8 | **Current Year Gross Contributions** | - | (19,462.36) | (19,514.95) | (19,514.95) | |
| 9 | | | | | | |
| 10 | Prior Year Accumulated Amortization | - | - | - | - | |
| 11 | | | | | | |
| 12 | Gross Amortization | - | - | - | - | |
| 13 | Retirements, Transfers & Disposals | | | | | |
| 14 | | | | | | |
| 15 | **Current Year Accumulated Amortization** | - | - | - | - | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | **Mid Year Net Contributions** | **$ -** | **$ (9,731.18)** | **$ (19,488.66)** | **$ (19,514.95)** | S. 15-1 |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Customers and Consumption**
**($000s)**

| Line No. | Description | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing | Cross Reference |
|---|---|---|---|---|---|---|---|---|
| 1 | **TOTAL CUSTOMERS - YEAR END** | | | | | | | |
| 2 | Townhouses | - | 60 | 8 | 74 | 40 | 105 | |
| 3 | Apartments | - | 202 | - | - | - | - | |
| 4 | Other | - | - | - | 1 | - | 1 | |
| 5 | | | | | | | | |
| 6 | **Total Customers - Year End** | **-** | **262** | **8** | **75** | **40** | **106** | |
| 7 | | | | | | | | |
| 8 | **TOTAL CONSUMPTION (MWh)** | | | | | | | |
| 9 | | | | | | | | |
| 10 | Townhouses | - | 203 | 14 | 312 | 131 | 453 | |
| 11 | Apartments | - | 596 | - | - | - | - | |
| 12 | Other | - | - | - | 2 | - | 3 | |
| 13 | Subtotal | - | 799 | 14 | 313 | 131 | 456 | |
| 14 | | - | - | | - | - | - | |
| 15 | | | | | | | | |
| 16 | **Total Consumption (kWh)** | **-** | **799** | **14** | **313** | **131** | **456** | |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Revenue on Proposed Rates**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Approved Budget | 2020 Actual | 2021 Approved Budget | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|---|---|
| 1 | **Total Revenue on Proposed Rates** | | | | | | | |
| 2 | Townhouses | | $ 7.00 | $ 99.40 | $ 29.48 | $ 138.27 | $ 71.76 | $ 170.63 |
| 3 | Apartments | | - | - | - | - | - | - |
| 4 | Other | | - | - | - | 0.18 | - | 2.22 |
| 5 | **Total Revenue on Proposed Rates** | | **$ 7.00** | **$ 99.40** | **$ 29.48** | **$ 138.45** | **$ 71.76** | **$ 172.85** |
| 6 | | | | | | | | |
| 7 | **Rate Revenue on Proposed Rates** | | | | | | | |
| 8 | Townhouses | | | 24.10 | 29.48 | 34.03 | 14.25 | 50.65 |
| 9 | Apartments | | | - | - | - | - | - |
| 10 | Other | | | - | - | 0.18 | - | 0.38 |
| 11 | **Rate Revenue on Proposed Rates** | | **$ -** | **$ 24.10** | **$ 29.48** | **$ 34.21** | **$ 14.25** | **$ 51.03** |
| 12 | | | | | | | | |
| 13 | **Infrastructure Fee** | | | | | | | |
| 14 | Townhouses | | 7.00 | 75.30 | - | 104.24 | 57.51 | 119.98 |
| 15 | Apartments | | | - | | - | - | - |
| 16 | Other | | | - | - | - | - | 1.85 |
| 17 | **Total Infrastructure Fee** | | **$ 7.00** | **$ 75.30** | **$ -** | **$ 104.24** | **$ 57.51** | **$ 121.82** |

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Proposed End Use Customer Rates and Fees**

| Line No. | Description | 2019 Approved | 2020 Approved | 2021 Approved | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|
| 1 | **Fixed Charge ($/day)** | | | | |
| 2 | Townhouses | $1.43 | $1.47 | $1.51 | **$1.55** |
| 3 | Apartments | $1.12 | $1.15 | $1.18 | **$1.21** |
| 4 | | | | | |
| 5 | | | | | |
| 6 | **Variable Charge ($/kWh)** | | | | |
| 7 | Townhouse & Apartments | $0.0248 | $0.0255 | $0.0262 | **$0.0269** |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | **Infrastructure Fee ($/connection)** | | | | |
| 12 | Residential - Townhouses & Apartments | $ 1,750 | $1,750 | $1,797 | **$1,846** |
| 13 | Commercial | $ 20.00 | $20.00 | $20.54 | **$21.09** |

**Note: Approval is being sought for End Use Customer Rates and Fees for 2022 only.**

**Blatchford Renewable Energy**
**2022 Rate Filing**
**Interest on Financing**
**($000s)**

| Line No. | Description | Cross Reference | 2019 Actual | 2020 Actual | 2021 Current Forecast | 2022 Proposed Rate Filing |
|---|---|---|---|---|---|---|
| 1 | **Deferral Account Opening Balance** | | - | (854.62) | (1,578.41) | (2,591.75) |
| 2 | | | | | | |
| 3 | Current Year Surplus/shortfall | S. 3-1' | (846.16) | (696.73) | (961.86) | (1,045.11) |
| 4 | | | | | | |
| 5 | **Deferral Account Closing Balance** | | (846.16) | (1,551.34) | (2,540.27) | (3,636.86) |
| 6 | | | | | | |
| 7 | Interest Costs | | (8.46) | (27.07) | (51.48) | (85.64) |
| 8 | | | | | | |
| 9 | **Deferral Account Closing Balance Including Interest Costs** | | **(854.62)** | **(1,578.41)** | **(2,591.75)** | **(3,722.50)** |
| 10 | | | | | | |
| 11 | Interest Rate on Financing | | 2.00% | 2.25% | 2.50% | 2.75% |

NOV 2021

# BLATCHFORD RENEWABLE ENERGY

## 2022 Rate Schedules for Thermal Energy

Effective January 1, 2022 to December 31, 2022

Attachment 3.0_Appendix 4.0

Blatchford Renewable Energy

Edmonton

# Blatchford Renewable Energy (BRE)
# Rate BRE 1 - Residential Service

For Thermal Energy Service for all customers throughout the Service Area served by Blatchford Renewable Energy.

## Rate

| Rate Component | | 2022 Rate |
|---|---|---|
| **Fixed Charge ($/day)** | | |
| | Townhouses | 1.55 |
| | Apartments | 1.21 |
| | | |
| **Variable Charge ($/kWh)** | | 0.0269 |

The minimum charge is the Fixed Charge.

## Application

**Price Adjustments**
Rate BRE 1 may be adjusted by applicable riders or rate adjustments, from time to time, as approved by Edmonton City Council.

**Bylaw 17943 shall apply to customers taking service under Rate BRE 1.**