

AUG 2021

BLATCHFORD RENEWABLE ENERGY

2022 - 2025 Business Plan
Attachment 1 - IIS 00715

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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 geexchange 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.

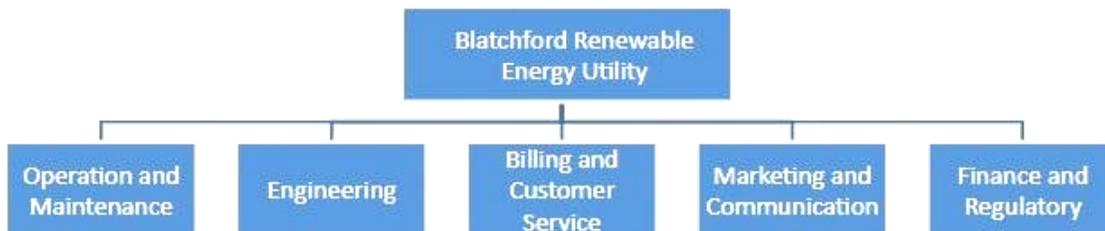


Energy Centre One harnesses earth's geothermal renewable energy for use in the community's District Energy Sharing System.



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 tCO ₂ e | 0.3 tCO ₂ e | 23 tCO ₂ e | 16 tCO ₂ e | 67 tCO ₂ e | 250 tCO ₂ e | 328 tCO ₂ e | 504 tCO ₂ e | |

| 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 |  |
| 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 |  |
| | 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 |  |

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 |
|---------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>CLIMATE RESILIENCE</p> | Climate Resilience | Edmonton is a city transitioning to a low-carbon future, has clean air and water and is adapting to a changing climate. |
|  <p>REGIONAL PROSPERITY</p> | Regional Prosperity | Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global level. |
|  <p>URBAN PLACES</p> | 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 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:

$$\begin{aligned} & \text{Total Long Term Debt} \\ & \text{divided by} \\ & \text{Net book value of Non-Contributed Assets} \\ & = \text{Debt to Net Assets Ratio} \end{aligned}$$

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 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