

BLATCHFORD RENEWABLE ENERGY UTILITY

2020 - 2023

Business Plan



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Key Utility Development Updates

Since the presentation of the first Blatchford Renewable Energy Utility Business Plan in June 2018, a number of activities have occurred to further the development of the utility. A summary of these key activities can be found below. Additional details on these activities is provided in this updated business plan.

- In December 2018, Bylaw 17943 for the new Blatchford Renewable Energy Utility was approved by City Council. The Bylaw establishes the utility around the District Energy Sharing System. The Bylaw also establishes the initial utility rates and fees for 2019. In order to set the rates, a rate setting study was conducted following the principles of the utility's fiscal policy C597.
- In December 2018, the first four year operating budget for the Blatchford Renewable Energy Utility was approved by Council. This budget puts in place the funding for further development of the utility as well as providing expected operating and maintenance costs.
- Also in December 2018, the four year capital budget was presented during budget deliberation. Council asked Administration to provide an update on the strategy, including an analysis of the range of financial options, to fund the nonrefundable cash infusion needed for the Blatchford Renewable Energy Utility. This report was provided to Utility Committee on March 22, 2019.
- In February 2019, NAIT and the City of Edmonton, alongside the Province of Alberta, announced NAIT's expansion into Blatchford. With this land sale, NAIT has acquired 32.79 acres in the community with the potential to add another eight acres in the future. NAIT's expansion will significantly impact the timeline and growth of the Blatchford Renewable Energy Utility.
- In June 2019, a capital budget ask to provide funding for the planning and design of the next stage of the development of the utility was presented to Council as part of the 2019 spring supplemental capital budget adjustment.
- Construction on the first geexchange field was completed and construction of Energy Centre #1 for the District Energy Sharing System is progressing on time and budget. The project nears completion in the third quarter of 2019 and initial commissioning activities have started.
- The utility is preparing for the start of operations later in 2019, when the first customers are expected to connect to the District Energy Sharing System. This preparation includes the operation, maintenance and engineering support, proper financial, regulatory and legal setup, the further development of marketing and communication support functions, and the establishment of billing and customer services.
- With the first Blatchford builder announcement in March 2019, the utility continues to work with the homebuilders to establish the connection requirements to the District Energy Sharing System as part of their design and construction activities.

Blatchford Renewable Energy Utility

BLATCHFORD

After operating as an airport for decades, City Council voted to implement a phased closure of the City Centre Airport in 2009, with the airport officially closing in 2013. A business case for the Blatchford community was approved by City Council in 2014 with the construction of the first phase commencing later that year. Construction activities to prepare the site for the first builders continued on site over the next few years, including the installation of the storm, sanitary, water services and distribution piping for the District Energy Sharing System. In 2018, construction of the first geoexchange field and Energy Centre #1 began, with the system expected to be commissioned during the third quarter of 2019. The recently announced first builders in the community are planning to start construction in 2019, with the first homes expected to connect to the District Energy Sharing system during the fourth quarter of this year.

The Blatchford development's vision is to be one of the world's largest sustainable communities and home to 30,000 residents; all living sustainably on 536 acres of land, minutes away from downtown, existing infrastructure, schools, retail and services. Blatchford will be comprised of two primarily residential spaces on the east and west side of the site, along with a town centre, a large central park with plenty of green space throughout the community, as well as a civic plaza that will function as a large gathering space for the community.

VISION

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 ENERGY STRATEGY

The Blatchford Energy Strategy is the product of a multi-year assessment and design process. The strategy is based on three key components: Energy Conservation, Energy Efficiency, and Renewable Energy generation.

Energy Conservation

Blatchford's energy conservation strategy will reduce the overall community energy demand by requiring the construction of high performance buildings. In addition to minimizing the demand for energy at the outset of development, the size of the renewable energy infrastructure and the investment required will be reduced.

Energy Efficiency

The second component of the Blatchford energy plan is a high-efficiency energy delivery system. This ambient (low) temperature District Energy Sharing System, will provide heating, cooling and domestic hot water for the Blatchford development. The District Energy Sharing System allows for energy

sharing between buildings, development phases and building types. In a neighbourhood the size of Blatchford with a large diversity of building types and densities, the sharing of energy can reduce overall energy consumption by 10 to 20 percent.

Renewable Energy

The third component of the Blatchford district energy strategy includes incorporating renewable energy as the primary source of thermal energy. This approach uses two different energy sources; geo-exchange and sewer heat exchange, to meet the thermal energy demands of the site, both now and at full build-out. In future, the electricity used for heating, cooling and domestic hot water production is planned to be offset with the addition of renewable electricity generation. As an example, energy could be provided through solar photovoltaic technology.

BLATCHFORD RENEWABLE ENERGY UTILITY

To help achieve the City's long term goal of 100% renewable energy and carbon neutrality for Blatchford, a new public, city owned utility has been established. The Blatchford Renewable Energy Utility will own and operate the District Energy Sharing System including certain mechanical equipment within the customer buildings. All buildings in Blatchford, with the exception of net-zero carbon buildings, must be connected to the District Energy Sharing Systems for all heating, cooling and domestic hot water services.

The first stage of the utility development of the District Energy Sharing System consists of: a ground heat exchanger borefield located under the future stormwater pond; Energy Centre # 1 located on the future Blatchford Plaza; and a Distribution Piping System which carries district energy water from the Energy Centre to Stage 1 of the Blatchford land development.

Customer apartment buildings will contain an Energy Transfer Station that provides thermal energy from the District Energy Sharing System for the buildings. Blatchford buildings will use renewable district energy for heating and cooling and, as such, buildings will not need to be equipped with traditional systems related to the production of thermal energy, such as furnaces, boilers, chillers or fireplaces. Blatchford buildings will not require ancillaries such as boiler venting or cooling towers. The Blatchford Renewable Energy Utility will own, operate and maintain the central mechanical systems in the Energy Transfer Station, reducing the operational burden on the builder and homeowner.

Some buildings in Blatchford may be exempted from the requirement to connect to the District Energy Sharing System if they are designed, built and certified to a net zero carbon standard, or better. Within the first stage of development, no builders applied for the exemption opportunity, however one builder aims to be net-zero while still connecting to the District Energy Sharing System.

BLATCHFORD DEVELOPMENT

The development and operation of the utility is closely connected to the work of the Blatchford Redevelopment Office. 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 the Blatchford Renewable Energy Utility is crucial to ensure planning and construction activities are aligned along with monitoring and updating the financial performance of both entities. As with any large land development project, a staging plan exists. However, the sequence and timing of the stages are subject to change depending on market conditions. The current operational, energy and financial model for the utility is based on the most recent development scenario for Blatchford and will need to be adjusted as necessary and hand-in-hand with the business case for the land development.

Business Plan Priorities

Strategic Plan

The strategic objectives of the Blatchford Renewable Energy Utility focus on the growth of the District Energy Sharing System and the integration of emerging technologies, such as renewable natural gas and Solar PV, 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 will be closely aligned with the pace of the land development and market uptake by the building community. The Blatchford Renewable Energy Utility will follow the Blatchford development schedule and will adjust accordingly as considerations change along the way. Overall a staged approach for the land development and utility is planned in Blatchford, which will also include periodic updates of the energy and financial model for the utility. Land development needs to be flexible to adjust to market demands and conditions. Recent announcements including the confirmation of funding for the Metro Line LRT extension into Blatchford and NAIT's purchase of a significant piece of land may impact the land development scenarios for the site. Any changes to the land development scenario would likely have an impact on the Blatchford Renewable Energy Utility's staging and infrastructure needs.

Following the current land development scenario, the overall potential locations and staging of future utility operated Energy Centers for the District Energy Sharing System is outlined in Figure 1. Each Energy Center will provide energy to defined stages of land development. The identified service area is outlined with potential commissioning of Energy Centres. At full build out, currently anticipated in the year 2047, the utility is expected to have more than 16,000 customers. Figure 1 identifies Energy Centers (EC) based on geothermal ground heat exchange technology, and the Sewer Heat Recovery Energy Centre (SHX) located in the Town Centre of Blatchford.



* Anticipated year for Commissioning

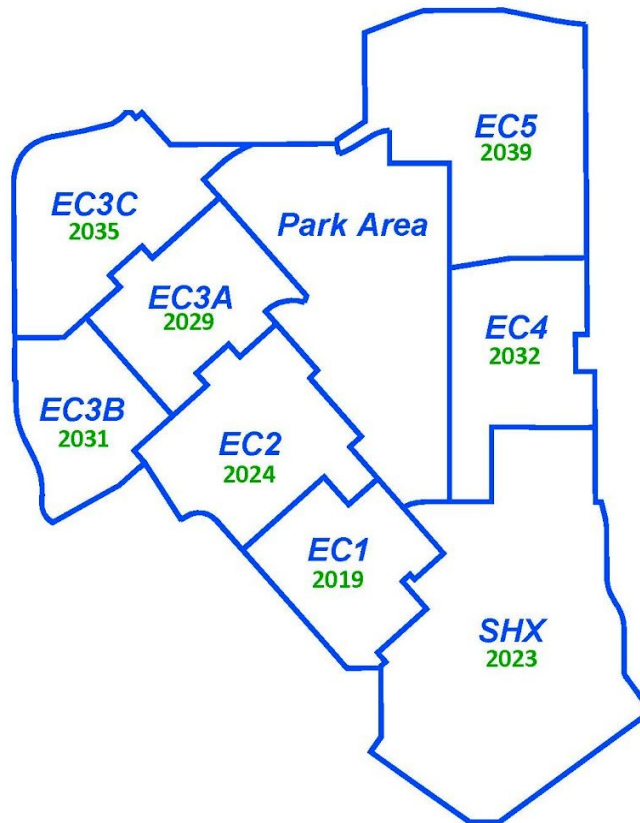


Figure 1: Map showing potential staging of Energy Centers for the full Blatchford Development (Years indicate potential commissioning date)

In its effort to continuously monitor emerging and alternative renewable energy technologies, in 2018 the utility investigated the prospect of providing renewable natural gas and Solar PV generation as an option to help achieve the development’s sustainability goals.

Renewable natural gas, or biomethane, is a biogas that has been upgraded to a quality similar to fossil fuel natural gas with a methane content equal or greater than 90%. Since biogas is generated from waste that would release its carbon content naturally, it is considered to be 100% renewable and carbon neutral. While utilizing renewable natural gas is currently feasible, the cost to purchase renewable natural gas is considerable at this time and would have adverse effects on the utility’s financial performance. The utility will continue to monitor the emerging renewable natural gas market in the province.

While the District Energy Sharing System provides heating, cooling and domestic hot water to residents and businesses in Blatchford, the main hurdle to fully achieve carbon neutrality by providing 100% renewable energy remains the provision of renewable electricity. The utility is currently exploring the potential for community generation, initially focussed on Solar PV installation, through the new provincial small-scale generation regulation. Discussions with the provincial government to further evaluate how this new regulation can be implemented in Blatchford are

ongoing. In addition, a funding application for a potential community-scale project in Blatchford has been prepared.

Achieving financial sustainability for the new utility depends on factors such as external capital injections, stable rate structure and other related utility fees. This relationship and importance will be outlined in more detail in a separate section in this Business Plan. The strategic vision from an operational perspective includes the partnership with an external utility service provider to operate and maintain the utility infrastructure, while the utility remains municipally owned. The utility is evaluating the timing and opportunities to engage an external partner, which will likely occur when the initial stage of operations has matured.

The Next Four-year Plan

During the next four years, the Blatchford Renewable Energy Utility's focus will remain on the construction and operation of the first stages of the District Energy Sharing System and further development of the operating and financial structure of the utility.

As shown in Figure 2, the first stage of the District Energy Sharing System construction consists of a ground heat exchanger borefield located under the future stormwater pond; Energy Centre # 1 located on the future Blatchford Plaza; and a Distribution Piping System which carries district energy water from the Energy Centre to Stage 1 of the Blatchford development.

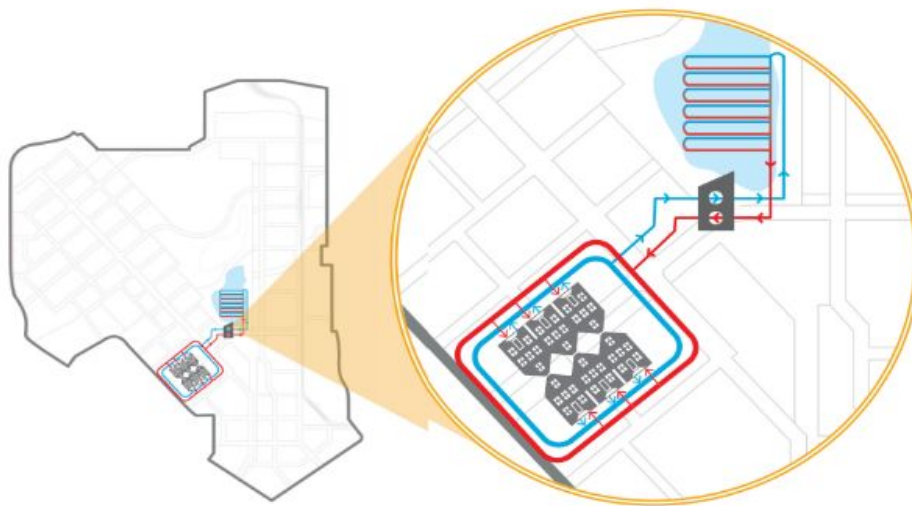


Figure 2: Map showing the Ground Heat Exchanger Borefield, Energy Centre #1 and the Distribution Piping System that will form part of the first stage of District Energy Sharing System

Construction of the first stage of the District Energy Sharing System started in April 2018 with construction completion and commissioning expected by the third quarter of 2019. Additional Energy Centre stages are planned in conjunction with the land development stages. The first stage of the District Energy Sharing System can supply energy for additional stages of residential and commercial development in Blatchford. Special attention has been given to the planning and development of the Sewer Heat Recovery Energy Centre in the Town Centre. Construction of the Sewer Heat Recovery Energy Centre is currently expected to begin in 2022 with commissioning anticipated in 2023. The

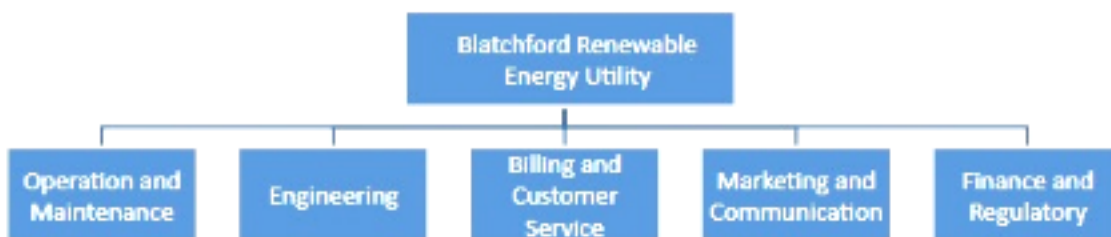
next Energy Centre #2, also based on geoexchange technology, will be dependent on the current overall development scenario for Blatchford, but is currently expected to be commissioned in 2024. The related planning, design and construction activities for these initiatives has been integrated in the next four year operating and capital budget cycle.

In 2018, the financial and operational governance structure of the new Blatchford Renewable Energy Utility was established. In April 2018, City Council approved the Fiscal Policy of the Blatchford Renewable Energy Utility. The policy provides the financial background required for the utility, and establishes the key parameters for its long term financial sustainability. The first four year Business Plan was adopted in June 2018, followed by the approval of the initial rates and the Utility Bylaw 17943 in December. Also in December, Council approved the first four year operating budget for the new Blatchford Renewable Energy Utility. This updated business plan will be followed by the updated rate setting study, the review of the existing Bylaw and the update to operating and capital budget for the utility later in 2019.

Operational Plan

Guided by the sales activities of the Blatchford land development team, the utility is expecting to connect to 10 fee-simple townhouse accounts by the end of 2019. The number of expected accounts will increase to 53 in 2020 and 122 in 2023, which represents supplying energy to approximately 1,400 customer units. This represents a slower pace of account development than initially anticipated, which was adjusted as is standard in the land development industry to align with current sales, market conditions and and builder plans.

Initial operation of the first stage of the District Energy Sharing System, with a relatively small number of connections and accounts, will be managed internally by the utility in partnership with other City of Edmonton Departments, external contractors and technical experts. A summary of individual operating units within the utility is presented below:



Maintenance, Operation and Engineering:

Initial operation and maintenance will be provided by the City’s Facilities Maintenance Services (FMS) section within the City Operations Department. The utility is working hand-in-hand with FMS to establish operating protocols and maintenance procedures. The operation will start after commissioning, which is expected during the third quarter of 2019. The first building connections to the District Energy Sharing System are expected to come online later in 2019. Engineering support will be provided internally with support from external technical consultants and contractors.

Billing and Customer Service:

The utility is working on a service level agreement with EPCOR for billing and customer service support for the Blatchford Renewable Energy Utility. As EPCOR is overhauling their company-wide billing software, the services in 2019 and 2020 will be provided through manual service, with the expectation that the utility bills will be integrated with their new system in 2021. This manual service level is possible as the number of utility accounts in the initial years are low. EPCOR, in cooperation 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.

Finance, Legal and Regulatory:

Financial, regulatory and legal support for the utility is provided by the Financial and Corporate Services Department and the Office of the City Manager with has significant expertise in utility management. Both departments were heavily involved during the development of the bylaw, the fiscal policy, rate filing and initial operating and capital budgets for the utility.

Marketing and Communication:

With the completion of the first stage of the District Energy Sharing System on the horizon and in preparation for the first builders to start construction, the utility is ramping up its marketing and communication efforts. A full-time temporary utility marketing resource will complement the existing Blatchford marketing team. The team will work to establish relationships with builders and customers, provide a web presence and fulfill other marketing and communication needs.





External Partnerships



While developing the first stage of operation, the utility will continue to evaluate potential external operators of the District Energy Sharing System for future engagement in the project.

Key Measures

Table 1 below provides an updated summary of the Blatchford Renewable Energy Utility’s key performance measure and their alignment with Council’s strategic goals for 2019 to 2028 :

Table 1: Key Performance Measures of the Blatchford Renewable Energy Utility

Utility Strategic Direction	Performance Measures	Forecasted Targets					Corporate Goals
		2019	2020	2021	2022	2023	
Goal: A Healthy Community Well Served							
Blatchford Renewable Energy Utility strives to provide a high level of customer satisfaction by delivering timely and uninterrupted thermal energy.	Thermal Energy Provided by DESS	154 MWh	845 MWh	4,710 MWh	8,184 MWh	11,368 MWh	 CLIMATE RESILIENCE
	DESS Operational Uptime	100%	100%	100%	100%	100%	
Goal: Environmental Stewardship							
Blatchford Renewable Energy Utility is committed to staying true to the project vision by complying to the environmental regulations and abiding by ENVISO goals in order to protect the environment and biodiversity.	Compliance with environmental permits and regulations	100%	100%	100%	100%	100%	 CLIMATE RESILIENCE
	Renewable Energy (Utility) ¹	86%	86%	100%	100%	100%	
	Renewable Energy (Community) ²	42%	42%	50%	50%	56%	 URBAN PLACES
	GHG reduction (Utility) ³	10 tCO2e	54 tCO2e	416 tCO2e	769 tCO2e	1,093 tCO2e	
Goal: Operational Effectiveness							
Blatchford Renewable Energy Utility is committed to providing a culture of innovation and a strong sense of purpose through a commitment to people, and optimizing systems and resources.	Cumulative utility customers	10	53	489	959	1,409	 URBAN PLACES




Utility Strategic Direction	Performance Measures	Forecasted Targets					Corporate Goals
		2019	2020	2021	2022	2023	
Goal: Fiscal Sustainability							
Blatchford Renewable Energy Utility strives to become financially sustainable and is committed to be fair and equitable.	Positive net income	no	no	no	no	no	 
	Debt to net asset ratio ⁴	0%	0%	0%	0%	0%	
	Positive Cash position	no	no	no	no	no	

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: Utility is not anticipated to take on its own debt until 2026

Symbol	Corporate Goal	Description
	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	Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global level.
	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 the Blatchford Renewable Energy Utility. 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 the Blatchford Renewable Energy Utility

Risk Factor	Risk Description	Likelihood (1 to 5)	Impact (1 to 5)	Risk Score	Mitigation Strategy	Risk Owner
Financial	Substantial external investment is needed 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.	3 Possibly	3 Major	9 Medium	Ensure close collaboration and monitoring of land development and building industry.	Utility Leadership
Political Influences	Direction could impact the original vision and delivery of the project.	2 Unlikely	3 Major	6 Low	Communication to Council. Accelerate, slow down or adjust activities, depending on the situation.	Utility Leadership
Project Management	By following Blatchford vision of sustainability, technical and financial risks are encountered.	3 Possible	1 Minor	3 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 the Blatchford Renewable Energy Utility to achieve long term financial sustainability is provided in Appendix 2. Included in Appendix 2 is the requirement 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 2019-2022 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 the Blatchford Renewable Energy Utility customers pay 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 both the Blatchford Utility 2019-2022 Budget and the 2019 Annual Rate Filing. The 2019 Annual Rate Filing establishes the regulatory framework and customer rates for the initial year of operation of the Blatchford utility. Customer rates in 2019 have been set at a comparable fee to elsewhere in the City of Edmonton and based on a cost of service methodology. Given the small number of utility customers in 2019, customer rates are lower than what is required for the Blatchford utility to recover its full revenue requirement, or full cost of providing the service. Therefore, a regulatory deferral account has been implemented beginning in 2019 to accumulate the differences between the revenue collected and the revenue requirement based on cost of service until such time as sufficient customers come on line to generate customer revenues that recover the revenue requirement to operate the utility.

The Blatchford utility 2019-2022 Budget approved in December 2018 included \$1.431 million for the completion of Energy Centre #1 (\$19.442 million in total) as well as a \$9.0 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. In June 2019, as part of the Supplemental Capital Budget Adjustment presented to City Council, Administration requested approval for an additional \$4.972 million of capital for the preliminary planning and schematic design of the next stage of development of the Blatchford utility.

At the March 22, 2019 Utility Committee meeting, an update was provided by Administration on the strategy and financial options for addressing the non-refundable cash infusion required to fund the initial stages of infrastructure development for the Blatchford utility. This update included the current status of the Expression of Interest submitted by the City of Edmonton under the Green Infrastructure Fund as well as the one-time additional Gas Tax Funding included in the 2019-20 Federal budget. In response to a motion at the March 22, 2019 meeting, Administration will be providing a further sensitivity analysis to the Utility Committee in the fall of 2019 of the financial impact on the utility depending on the variability of gas and electricity commodity prices, the pace of development of the Blatchford land development and build out of the Blatchford utility, and other potential key variables.

BLATCHFORD UTILITY 2019-2022 BUDGET (values \$000)

The following Tables 3 and 4 summarize the Approved 2019-2022 Capital and Operating Budgets for the Blatchford Renewable Energy Utility, incorporating the requested approval for an additional \$4.972 million of capital expenditures as part of the June 2019 Supplemental Capital Budget Adjustment. These capital, revenue and expenditure amounts will be updated in the fall of 2019 when the 2020 annual rate filing and any associated supplemental capital and operating budget adjustments are brought forward for Council approval.

Table 3: 2019-2022 Capital Budget for the Blatchford Renewable Energy Utility (\$000) (Adjusted for Proposed \$4.972 Million of Capital in the June 2019 SCBA)

Prior Years	2019 Approved	2020 Proposed	2021 Proposed	2022 Proposed	2019-2022 Total
\$17,900	\$1,924	\$2,821	\$1,658	\$0	\$6,403



Table 4: 2019-2022 Operating Budget for the Blatchford Renewable Energy Utility

	2019 Approved	2020 Approved	2021 Approved	2022 Approved
Revenues and Fees				
Rate Revenue	\$77	\$161	\$206	\$325
Infrastructure Fees	\$459	\$0	\$239	\$422
Total Revenues	\$536	\$161	\$445	\$747
Expenditures and Transfers				
Personnel	\$276	\$281	\$287	\$293
Material, Goods and Supplies	\$188	\$304	\$414	\$451
External Services	\$776	\$788	\$470	\$501
Interest	\$660	\$748	\$866	\$946
Shared Services	\$72	\$74	\$75	\$77
Utilities and Other Charges	\$301	\$42	\$50	\$681
Amortization	\$113	\$453	\$472	\$486
Total Expenditures and Transfers	\$2,115	\$2,690	\$2,634	\$2,8221
Net Operating Requirement	(\$1,579)	(\$2,529)	(\$2,189)	(\$2,075)
Full Time Equivalent	3.0	3.0	3.0	3.0

Conclusion

The next Business Plan iteration for the new Blatchford Renewable Utility provides an updated overview of the strategic development of the new utility, with a focus on the initial four years of its operation. Several key milestones have been achieved from the utility to prepare for its operation and the first utility customers coming online later in 2019. The strategic objectives of the utility are the growth of the District Energy Sharing System and the integration of 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, Administration will prepare the annual rate filing and budget submissions for Council's consideration during the fourth quarter of 2019.



Appendix 1: Blatchford Renewable Energy Utility Fiscal Policy

POLICY NUMBER: C597

REFERENCE:

ADOPTED BY:

City Council

SUPERSEDES:

New

PREPARED BY:

Integrated Infrastructure Services

DATE:

March 22, 2018

TITLE:

BLATCHFORD DISTRICT ENERGY UTILITY FISCAL POLICY

Policy 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.



1. DEFINITIONS

- 1.1 **Cash Flow** - the ability of the Utility to meet its financial obligations as payments are due.
- 1.2 **Capital Assets** - assets of the Utility meeting the requirements defined under Public Sector Accounting Standard PS3150.
- 1.3 **Capital Investment Outlook** - a 10-year forecast of capital required to ensure that appropriate infrastructure is in place to meet service needs, including the replacement of Contributed Assets.
- 1.4 **Capital Plan** - a 4-year plan for funding capital infrastructure approved by City Council.
- 1.5 **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.
- 1.6 **Debt to Net Assets Ratio** - a measure of the extent to which the net book value of non-contributed assets is being financed by debt.
- 1.7 **Financial Indicators** - a set of financial measures that provide signals on the financial health of the Utility.
- 1.8 **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.
- 1.9 **Full Cost Accounting** - shall include cost allocation from services provided by City Administration and may include administration costs, and other shared services such as Communications, Human Resources, Information Technology, Law, Corporate Procurement and Supply Services, Financial Services, Fleet and Facility Maintenance, and general corporate overhead.
- 1.10 **Investment in Utility Financed Assets** - Net Book Value of Utility Financed Assets minus associated outstanding debt used to pay for the assets.
- 1.11 **Net Book Value** - acquisition costs of original costs of capital assets minus their accumulated depreciation
- 1.12 **Pay As You Go** - the amount of cash required to implement the Capital Plan; annual amount to be funded from operating revenues.
- 1.13 **Rate Revenue** - revenue generated through monthly customer rates.
- 1.14 **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.

- 1.15 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.
- 1.16 Utility Financed Assets** - assets of the Utility for which funding has been provided from rates either through debt or Pay As You Go funding.

Following are financial indicators and additional general policy statements to guide the financial management of the utility.

2. 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.

2.1 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.

2.2 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:
 - a. projects with long-term benefits;
 - b. major rehabilitation or upgrade of existing assets; and
 - c. 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%

3.0 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.



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

Appendix 3: Blatchford Renewable Energy Utility Bylaw 17943

A copy of the City Council approved Blatchford Renewable Energy Utility Bylaw 17943 is attached with this report.

THE CITY OF EDMONTON
BYLAW 17943
BLATCHFORD RENEWABLE ENERGY UTILITY

Edmonton City Council enacts:

PART I - INTERPRETATION

PURPOSE	1	The purpose of this bylaw is to: (a) regulate connections between building mechanical systems and the DESS; (b) regulate the access to DESS; (c) prevent damage or misuse of the DESS; and (d) prescribe fees and charges related to the DESS.
DEFINITIONS	2 (1)	Unless otherwise specified, words used in this bylaw have the same meaning as defined in the Municipal Government Act including its regulations.



(2) In this bylaw:

(a) **“building”** means any structure used or intended for supporting or sheltering a use or occupancy, such as residential, commercial, institutional, and industrial buildings;

(b) **“building mechanical system”** means a mechanical system, including an internal space heating, space cooling and heating of domestic hot water distribution system for a building;

(c) **“building mechanical system report”** means a design report for a building prepared in accordance with the requirements outlined in the DESS service requirements or as otherwise approved by the City Manager;

(d) **“City”** means the The City of Edmonton;

(e) **“City Manager”** means the chief administrative officer of the City or delegate;

(f) **“customer”** means a person who owns or occupies a building who is being provided with the service or who has filed an application for service;

(g) **“delivery point”** means the energy metering point for a building determined by the City Manager based on the type of building and in accordance with the DESS service requirements;

(h) **“District Energy Sharing System” or “DESS”** means the material, machinery, equipment and fixtures forming part of the energy supply system used for the purpose of heating or cooling the fluid that flows through the distribution system and the service connections and all equipment including the pressure vessels, conduits, pipes, valves, lines, pumps, heat

exchangers, energy transfer stations, and energy meters together with all fluid, ancillary appliances and fittings necessary to provide energy to buildings in the service area and all additions thereto and replacements thereof as such system is expanded, reduced or modified from time to time;

(i) “**DESS service requirements**” means the district energy sharing system service requirements as determined by the City Manager;

(j) “**distribution system**” means the system of pipes, fluids, fittings and ancillary components used for distributing fluids for the purposes of providing energy to buildings in the service area including all communication conduit associated with the piping system and the system connecting the distribution system to the service connection including all additions thereto and replacements thereof;

(k) “**energy**” means thermal energy provided through fluids provided by the DESS;

(l) “**energy meter**” means an assembly consisting of a flow meter, two temperature sensors, and a calculator that measures the amount of energy consumed by a customer;

(m) “**energy transfer station**” means equipment used to transfer energy between the delivery point and the building mechanical system in a building, and includes pipes for the supply and return of water, valves, controls, energy meters, heat pumps, pumps, heat exchangers, backup heat sources, storage tanks, and ancillary equipment located inside the energy transfer station mechanical room;

(n) “**owner**” means the person registered under the Land Titles Act as owner in fee simple, a lessee, or any person who exercises the power and authority of ownership;

(o) “**premises**” means a parcel of land and any buildings situated on that land;

(p) “**rates**” means, collectively, the, fixed monthly charge and variable consumption charge specified in Schedule B - Fees and Charges for services;

(q) “**service area**” means the area within the municipal boundaries of the City of Edmonton as delineated in Schedule A - Service Area;

(r) “**service**” means the delivery of energy from and through the DESS to a delivery point and through an energy meter for use in a building, and any service provided in connection with the DESS, including but not limited to providing a service connection, re-activating existing service connections, transferring an existing account, changing the type of service provided, or making alterations to existing service connections, energy transfer stations, and energy meters;

(s) “**service connection**” means that portion of the DESS extending from the distribution system to the delivery point as outlined in the DESS service requirements.

RULES FOR INTERPRETATION

3 The marginal notes and headings in this bylaw are for reference purpose only.

PART II - ESTABLISHMENT OF DESS

THE DESS

4 The District Energy Sharing System will provide the generation, storage, transmission, and distribution of energy for space heating, space cooling and the heating of domestic hot water for buildings within the service area.



OWNERSHIP OF DESS	5	Ownership of the DESS, including any expansion or extension of the DESS, is to remain vested in the City and is not to pass to any owner, or other person who has an interest in a building, and, despite any attachment or annexation to a building or other real property, the distribution system, service connections, energy transfer stations, and energy meters are not to become part of a building or other real property.
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PART III - DESS SERVICE AREA

MANDATORY USE OF DESS	6	The owner of a premises within the service area shall ensure that service connections to the DESS are installed for each building in accordance with the DESS service requirements.
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PERMISSIVE USE OF DESS	7 (1)	An owner of a premises located outside the service area, but within the municipal boundaries of the City of Edmonton, may apply to the City Manager for service.
	(2)	The City Manager may approve an application to service a premises outside the service area if: <ul style="list-style-type: none"> (a) the City Manager is of the opinion that; <ul style="list-style-type: none"> (i) the DESS is capable of servicing the premises that is the subject of the application; and (ii) servicing the premises is necessary or desirable; and (b) the owner enters into an agreement with the City, undertaking, among other matters, to pay for all or a portion of the capital cost of extending the DESS outside the service area to service the premises in an amount, at a time and upon terms and conditions acceptable to the City Manager.

EXEMPTION FROM DESS	8	Despite section 6, the City Manager may exempt a building or group of buildings from being required to connect to the DESS, if it can be established to the satisfaction of the City Manager that the building or group of buildings will be built to at least a net-zero carbon standard.
DESS SERVICE	9	The City will provide service to customers through the DESS as outlined in this Bylaw.
UNAUTHORIZED SALE, SUPPLY OR USE	10 (1)	No person shall sell or supply energy supplied to it by the City to other persons or use energy supplied to it by the City for any purpose other than as specified in this Bylaw and the DESS service requirements unless the sale or supply has been approved by the City Manager.
	(2)	Any person who contravenes section 10(1) must pay any costs incurred to remedy the unauthorized sale, supply or use.

PART IV - CONNECTIONS FOR DESS SERVICE

SERVICE CONNECTIONS	11	Each building will have the number of service connections and energy meters and, if applicable, energy transfer stations specified in the DESS service requirements unless additional service connections, energy transfer stations or energy meters are authorized by the City Manager pursuant to section 16.
INSTALLATION OF ENERGY TRANSFER STATIONS AND ENERGY METERS BY CITY	12	The City will supply and install the energy transfer station or energy meter for each building provided that the building and building mechanical system meets the requirements of the DESS service requirements and infrastructure fees set out in Schedule B- Fees and Charges have been paid.



**DESS SERVICE
CONNECTION
INSTALLATION BY
CUSTOMER**

- 13 (1) The owner of a premises within the service area shall install each service connection by extending the piping and communication conduit from the boundary of the parcel of land to the energy transfer station (if applicable) and the energy meter in accordance with the DESS service requirements.
- (2) Service connections will be installed using routes which are most suitable for the City.
- (3) The service connection will be owned by the City upon completion to the satisfaction of the City Manager.
- (4) The owner of a premises within the service area shall furnish and maintain, at no cost to the City, the necessary space, housing, fencing, barriers, and foundations for the protection of the service connection to be installed within the premises which may include a dedicated room in accordance with the requirements of the DESS service requirements and based on building type, for the exclusive use of the City to install the energy transfer station or energy meter.
- (5) The owner of a premises within the service area shall design and install the building mechanical system in accordance with the DESS service requirements.
- (6) The City may take steps to make buildings and building mechanical systems within the service area compliant with the DESS service requirements, including without limitation, furnishing and maintaining the necessary protection for the service connection and charge the owner of the premises for all costs incurred by the City in doing so.

CUSTOMER REQUESTED DESS SERVICE REQUIREMENT VARIATIONS	14	<p>At the request of an owner of a premises, the City may install, or permit the installation of, a service connection, an energy transfer station or energy meter in a manner that is in variance with the requirements outlined in the DESS service requirements, if</p> <ul style="list-style-type: none"> (a) the owner of the premises pays for any additional costs to install the service connection, energy transfer station or energy meter as requested; and (b) the City Manager is satisfied that approving the request will not have an adverse effect on the operations of the DESS or create any other undesirable consequences.
APPROVAL OF LOCATIONS - GENERAL	15	<p>The location of each of the:</p> <ul style="list-style-type: none"> (a) energy transfer station; (b) distribution system components; and (c) delivery points; <p>is subject to approval by the City Manager.</p>
ADDITIONAL DESS SERVICE CONNECTIONS, ENERGY TRANSFER STATIONS, AND ENERGY METERS	16	<p>The City may install, or approve the installation of, one or more additional service connections, energy transfer stations or energy meters for a building, if</p> <ul style="list-style-type: none"> (a) the additional installation is requested by a customer; (b) the customer pays the infrastructure fees as outlined in Schedule B - Fees and Charges and any additional costs incurred by the City for the installation; and (c) the City Manager is satisfied that the requested installations will not have an adverse effect on the operations of the DESS.

EASEMENT & UTILITY RIGHT OF WAY	17	The owner of a premises within the service area is deemed to have granted to the City, without cost to the City, such easements or rights-of-way over, upon or under the premises as the City reasonably requires for the construction, installation, maintenance, repair, and operation of the DESS, including service connections, energy transfer stations and energy meters, and the performance of all other obligations required to be performed by the City.
RIGHT OF ENTRY	18	<p>(1) The City’s employees, agents and other representatives shall have the right to enter a premises within the service area at all reasonable times for the purpose of construction, installation, maintenance, repair, and operation of the service connections, energy transfer stations, energy meters, and ancillary equipment.</p> <p>(2) No person shall prevent or hinder the City's entry to premises.</p> <p>(3) For any service connections, energy transfer stations or energy meters that are situated within a customer's premises, the City may require that customer to provide to it a key for the purpose of gaining access.</p> <p>(4) The City will endeavor to provide reasonable notice to the customer when the City requires entry to the customer’s premises for planned maintenance or repairs.</p>
MAINTENANCE BY CITY	19	<p>(1) The City will maintain the service connections, energy transfer stations, and energy meters.</p> <p>(2) The City will provide water treatment services for building mechanical system fluids that pass through the energy transfer station.</p>
MAINTENANCE BY CUSTOMER	20	Customers must maintain and repair building mechanical systems for their premises in accordance with the DESS service requirements, including:

		<ul style="list-style-type: none"> (a) taking necessary measures to prevent loss of fluid from the building mechanical system, (b) prevent contamination of the fluid within the building mechanical system, and (c) undertaking maintenance of the building mechanical system.
RESPONSIBILITY BEFORE AND AFTER DELIVERY POINT	21	<p>Customers are responsible for all expense, risk and liability for any loss or damage caused by or resulting from:</p> <ul style="list-style-type: none"> (a) the use or presence of energy, being delivered from the DESS to a customer's premises, before and after it passes the delivery point; and (b) the failure of a customer to maintain its building mechanical system in accordance with the DESS service requirements.
TAMPERING WITH DESS	22	No person shall tamper, interfere with, damage, or destroy any part of the DESS.
DAMAGE	23	Customers must advise the City immediately of any damage to a service connection, energy transfer station, energy meter, or any other component of the DESS.
NO OBSTRUCTION	24	No person shall construct any structure which obstructs access to a service connection, energy transfer station, energy meter or any other part of the DESS or that could interfere with the proper and safe operation of the DESS.
REMOVAL OF SERVICE CONNECTION, ENERGY TRANSFER STATIONS AND ENERGY METERS	25	The City may remove a service connection, energy transfer station, energy meter and all other associated utility infrastructure from a premises if the service to that premises is discontinued or terminated for any reason.

MEASUREMENT	26 (1)	The quantity of energy delivered to a premises will be metered using the energy meter installed by the City.
	(2)	The amount of energy registered by the energy meter during each billing period will be converted to kilowatts and rounded to the nearest one-tenth of a kilowatt.
RESPONSIBILITY FOR SERVICE CONNECTION, ENERGY TRANSFER STATION AND ENERGY METER	27 (1)	Each customer is responsible for all expense, risk and liability arising from any measures required to be taken by the City to ensure that the service connection, energy transfer station, energy meters or related equipment on the customer's premises.
	(2)	Each customer must take care of and protect all service connections, energy transfer stations, energy meters and related equipment on its premises.
	(3)	Each customer is responsible for any damage to service connections, energy transfer stations, energy meters and related equipment on the customer's premises caused by the customer failing to take care and protect the equipment in accordance with the DESS service requirements.
NO UNAUTHORIZED CHANGES	28 (1)	No person shall install, connect, move, disconnect or otherwise tamper with service connections, energy transfer stations, energy meters or related equipment except as permitted by the City Manager.
	(2)	Customers must pay the City for costs incurred by the City to remedy any unauthorized changes on the customer's premises.

PART V - BUILDING MECHANICAL SYSTEM

SPECIFICATIONS	29	<p>The owner of a premises within the service area will:</p> <ul style="list-style-type: none">(a) design each building mechanical system in accordance with the DESS service requirements for connection to the DESS; and(b) submit to the City;<ul style="list-style-type: none">(i) description and design of mechanical systems including schematics, schedules, details and fixture types and service connection,(ii) schematic and complete drawings of major mechanical systems, structures and applicable DESS compliance components.(iii) ground and parkade floor plans showing location of service connection, energy transfer station (if applicable), and energy meter.(iv) DESS service connection routing and specifications;(v) building mechanical system report; and(vi) any other information as the City may reasonably require to confirm compliance with DESS service requirements; <p>prior to the construction of any buildings on the premises.</p>
CHANGES TO BUILDING MECHANICAL SYSTEM	30	<p>The owner of a premises shall make any changes to the building mechanical system report and implement any additions, repairs or alterations to any portion of a building mechanical system as the City Manager deems necessary to conform to DESS service requirements.</p>

PART VI - FEES, CHARGES & OTHER COSTS

APPLICATION FEES	31	Each person who submits an application shall pay the applicable application fee as determined by the City Manager.
WAIVER OF APPLICATION FEE	32	The City may waive the application fee for a customer if services to a customer are reactivated after they were discontinued at the discretion of the City Manager.
INFRASTRUCTURE FEE	33	The owner of a premises shall pay the infrastructure fee as outlined in Schedule B - Fees and Charges for each service connection for the premises within 30 days of a building permit being issued.
RATES PAYABLE	34	Each customer shall pay the rates for service as outlined in Schedule B - Fees and Charges.
ELECTRICITY COSTS	35	Each customer is responsible for the cost of electricity used by an energy transfer station installed on its premises.
ENERGY TRANSFER STATION EQUIPMENT CHARGE	36	The owner of premises shall be responsible for payment of the costs incurred by the City for installation of energy transfer stations and associated equipment in an amount determined by the City Manager.
TAX ROLL	37	Unpaid fees, charges and costs that are owing by an owner may be added to the tax roll for that parcel in accordance with the Municipal Government Act.

PART VII - INTERRUPTION OF DESS SERVICE

REGULAR SUPPLY	38	The City will use reasonable efforts to provide the constant delivery of energy through the DESS.
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RIGHT TO RESTRICT 39 The City may require some or all customers, at times determined by the City to discontinue, interrupt or reduce to a specified degree or quantity, the use of energy for any of the following purposes or reasons:

- (a) in the event of a temporary or permanent shortage of energy, whether actual or perceived by the City;
- (b) in the event of a breakdown or failure of the DESS;
- (c) to comply with any legal requirements;
- (d) to make repairs or improvements to any part of the DESS;
- (e) in the event of fire, flood, explosion or other emergency to safeguard persons or property against the possibility of injury or damage; or
- (f) for any other reason that the City considers necessary.

NOTICE 40 The City will, to the extent practicable, give notice of any service limitations to customers.

SUSPENSION OR TERMINATION OF SERVICE 41 The City may suspend or terminate service to a premises if, in the opinion of the City,

- (a) the building management system is not compliant with the DESS service requirements;
- (b) the service connection, energy transfer station, or energy meter are not in compliance with the DESS service requirements or as otherwise approved by the City Manager;
- (c) the customer has failed to ensure that there is an adequate supply of electricity required to operate the building mechanical system, and the proper operation of the energy transfer station or energy meter have been negatively affected;
- (d) the premises contains contamination which could adversely affect the DESS, or the health or safety of the City’s workers or which may cause the City to assume liability for cleanup



and other costs associated with the contamination;

- (e) the premises contains defective pipe, appliances, or mechanical systems;
- (f) the building mechanical system has a defect which causes the loss of fluid from the building mechanical system, energy transfer station, or service connection at the premises;
- (g) the customer uses energy in such a manner as in the City's opinion:
 - (i) may lead to a dangerous situation; or
 - (ii) may cause undue or abnormal fluctuations in the temperature of energy in the DESS;
- (h) the customer fails to make modifications or additions to the customer's equipment which have been required by the City to prevent the danger or to control the undue or abnormal fluctuations; or
- (i) providing service to the premises may have an adverse effect on the DESS as a result of the building mechanical system, service connection, energy transfer station or energy meter on the premises.

PART VIII - ENFORCEMENT

OFFENSE	42	A person who contravenes this bylaw is guilty of an offence.
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CONTINUING OFFENCE	43	In the case of an offence that is of a continuing nature, a contravention constitutes a separate offence in respect of each day, or part of a day, on which it continues and a person guilty of such an offence is liable to a fine in an amount not less than that established by this bylaw for each such day.
VICARIOUS LIABILITY	44	For the purposes of this bylaw, an act or omission by an employee or agent of a person is deemed also to be an act or omission of the person if the act or omission occurred in the course of the employee’s employment with the person, or in the course of the agent’s exercising the powers or performing the duties on behalf of the person under their agency relationship.
CORPORATIONS AND PARTNERSHIPS	45 (1)	When a corporation commits an offence under this bylaw, every principal, director, manager, employee or agent of the corporation who authorized the act or omission that constitutes the offence or assented to or acquiesced or participated in the act or omission that constitutes the offence is guilty of the offence whether or not the corporation has been prosecuted for the offence.
	(2)	If a partner in a partnership is guilty of an offence under this bylaw, each partner in that partnership who authorized the act or omission that constitutes the offence or assented to or acquiesced or participated in the act or omission that constitutes the offence is guilty of the offence.

FINES AND PENALTIES	46 (1)	A person who is guilty of an offence is liable to a fine in an amount not less than that established in this section, and not exceeding the limits under the Municipal Government Act, RSA 2000, c M-26, as amended, and to imprisonment for not more than six months for non-payment of a fine.
	(2)	A fine in the amount of \$1,000 is established for use on municipal tags and violation tickets if a voluntary payment option is offered.
MUNICIPAL TAG	47	If a municipal tag is issued in respect of an offence the municipal tag must specify the fine amount established in this bylaw for the offence.
PAYMENT IN LIEU OF PROSECUTION	48	A person who commits an offence may, if a municipal tag is issued in respect of the offence, pay the fine amount established by this bylaw for the offence and if the amount is paid on or before the required date, the person will not be prosecuted for the offence.
VIOLATION TICKET	49	If a violation ticket is issued in respect of an offence, the violation ticket may: (a) specify the fine amount established by this bylaw for the offence; or (b) require the person charged to appear in court without the alternative of making a voluntary payment.
VOLUNTARY PAYMENT	50	A person who commits an offence may: <ul style="list-style-type: none"> (a) if a violation ticket is issued in respect of the offence; and (b) if the violation ticket specifies the fine amount established by this bylaw for the offence; <p>make a voluntary payment equal to the specified fine.</p>

PART IX - GENERAL

POWERS OF THE CITY MANAGER

51

Without restricting any other power, duty or function granted by this bylaw the City Manager may:

- (a) determine the requirements for the DESS, the manner in which the DESS will operate and the DESS service requirements;
- (b) determine the requirements that will apply to premises that have applied for an exemption to connect to the DESS, including any ongoing requirements that may be required to maintain the exemption;
- (c) carry out any inspections to determine compliance with this bylaw or any other requirements granted to the City Manager through this Bylaw;
- (d) establish systems and develop procedures for billing and administration of accounts as may be required by this bylaw;
- (e) establish forms for the purpose of this bylaw;
- (f) issue permits and approvals with such terms and conditions as are deemed appropriate;
- (g) establish the criteria to be met for a permit or approval to be issued pursuant to this bylaw;
- (h) establish the amount payable for an application, permit, plan examination, or inspection required under this bylaw;
- (i) establish the amount payable for any search, certificate, document or other service related to the administration of this bylaw;
- (j) waive or vary any fee, charge or costs payable

pursuant to this bylaw; and

- (k) delegate any powers, duties or functions under this bylaw.

PERMIT CANCELLATION	52	The City Manager may revoke, suspend, refuse to issue, vary or impose conditions on any permit or approval if, in the opinion of the City Manager it is in the public interest to do so.
PROOF OF PERMIT	53	The onus of proving a permit or approval has been issued in relation to any activity otherwise regulated restricted or prohibited by this bylaw is on the person alleging the existence of such a permit on a balance of probabilities.
CERTIFIED COPY OF RECORD	54	A copy of a record of the City certified by the City Manager as a true copy of the original shall be admitted in evidence as prima facie proof of the facts stated in the record without proof of the appointment or signature of the person signing it.

READ a first time this 4th day of December 2018;
READ a second time this 4th day of December 2018;
READ a third time this 4th day of December 2018;
SIGNED AND PASSED this 4th day of December 2018.

THE CITY OF EDMONTON

.....

MAYOR

.....

CITY CLERK



SCHEDULE A - BOUNDARIES OF SERVICE AREA



**SCHEDULE B
FEES AND CHARGES**

Description of Fee or Charge	Rate
Infrastructure Fee (Residential)	\$1,750.00 per unit
Infrastructure Fee (Commercial)	\$20 per square meter
Fixed Monthly Charge (Townhouses)	\$ 1.43 per unit per day
Fixed Monthly Charge (Apartments)	\$ 1.12 per unit per day
Variable Rate (Heating and Cooling)	\$ 0.0248 per kWh

Townhouses - Blatchford Row Housing, Row Housing, Stacked Row Housing, Blatchford Accessory Suites and Blatchford Lane Suites as provided in Edmonton Zoning Bylaw 12800.

Apartments - Apartment Housing, and Mixed Use Apartment Housing as provided in Edmonton Zoning Bylaw 12800.