

CAPITAL PROFILE REPORT

PROFILE NAME:	BLATCHFORD RENEWABLE ENERGY UTILITY DELIVERY - GROWTH	RECOMMENDED
PROFILE NUMBER:	CM-83-9000	PROFILE STAGE: Council Review
DEPARTMENT:	Integrated Infrastructure Services	PROFILE TYPE: Composite
LEAD BRANCH:	Blatchford Redevelopment Project	LEAD MANAGER: Tom Lumsden
PROGRAM NAME:		PARTNER MANAGER: Pascale Ladouceur
PARTNER:	Infrastructure Planning and Design	ESTIMATED START: January, 2027
BUDGET CYCLE:	2023-2026	ESTIMATED COMPLETION: December, 2030

Service Category:	Utilities	Major Initiative:	
GROWTH	RENEWAL	PREVIOUSLY APPROVED:	-
100		BUDGET REQUEST:	55,185
		TOTAL PROFILE BUDGET:	55,185

PROFILE DESCRIPTION

This composite program supports the development and delivery of the Blatchford District Energy Sharing System Infrastructure capital growth projects. The approach is consistent with Administration's implementation of the Project Development & Delivery Model (PDDM) as well as the Capital Governance Policy that was approved by Council.

The next phase of the development, for which funding is being requested through this capital profile, consists of the development of the Sewer Heat Exchange Energy Centre in the Blatchford Market Area. Construction start of the Sewer Heat Exchange Energy Centre is currently expected in 2027 with commissioning anticipated in 2029. The related planning, design and construction activities for these initiatives are integrated in the upcoming four year budget cycle in 2027-2030.

PROFILE BACKGROUND

Blatchford Renewable Energy (BRE) is a city-owned utility providing sustainable heating, cooling and hot water energy services to the residents and businesses in the Blatchford community. Since the utility was established in 2016, BRE has developed an ambient temperature District Energy Sharing System (DESS) to support City Council's overall vision for Blatchford. The utility's first Energy Centre is connected to a large geo-exchange field under the first stormwater pond in the community. The utility constructed this infrastructure in 2018/2019 and it was commissioned for operation during the third quarter of 2019. The utility has been operating successfully since 2020 when the first customer building was connected to the utility. Currently, 45 customer buildings are receiving sustainable heating and cooling energy services. The Utility is working to grow the necessary infrastructure for Energy Centres and Distribution Piping as well as customer connection equipment (ETS) as the Blatchford development grows.

PROFILE JUSTIFICATION

To continue the development of future Blatchford stages, profile # CM-83-9000 has been developed for the 2027-2030 Budget Cycle in the asking amount of \$55,185,028 to support the construction of Sewer Heat Exchange Energy Centre. The recommendation of this Business Case is that capital funding be allocated to commence work on the aforementioned plans and continue with the efforts necessary to achieve Council's Blatchford vision and assist in the delivery of a successful project. It will be unique in that Blatchford is envisioned to be a world leading sustainable development and will serve as microcosm of a sustainable lifestyle as referenced in The City Plan. To adhere with the Project Development and Delivery Model, the work within this profile will bring the project to Checkpoint 3. At this point, the projects will go to Council for approval as a standalone profile to advance the project. The construction of the Sewer Heat Exchange Energy Centre is necessary to align with the forecasted growth in the Blatchford development in order to provide sustainable heating and cooling energy,

STRATEGIC ALIGNMENT

The vision for the Blatchford community development including Utility is aligned with the major key planning documents of the City of Edmonton. It is connected and supports all four of City Council's strategic goals: Healthy City, Urban Places, Regional Prosperity and Climate Resilience. District Energy, represents a key strategy of Edmonton's Community Energy Transition Strategy. 36% of Greenhouse Gas Emissions Reductions are to come from Energy System Transformation. This includes both an emissions neutral electricity grid and a "City-wide decarbonized district energy network by 2050".

ALTERNATIVES CONSIDERED

Option 1: Status Quo - Sewer Heat Exchange Energy Center

This option includes the continuation of the design and construction activities of the Sewer Heat Exchange Energy Center, to be ready by 2026, in alignment with the utility master plan and the Blatchford vision.

Option 2: Alternative - Geo-Exchange Energy Center

This option would include an equivalently sized geo-exchange based Energy Center instead of the Sewer Heat Exchange Energy Center, utilizing existing space in the development, for commissioning in 2026.

Option 3: Initial construction of peaking Energy Center, in advance of the Sewer Heat Exchange Energy Center

This option would see a temporary delay of the construction of the Sewer Heat Exchange Energy Center, while providing the thermal energy required for the community through a previously planned peaking Energy Center (#4), which would be advanced sooner than in the planned order of development.

COST BENEFITS

The following tangible and intangible benefits were analyzed: Provision of reliable thermal energy, alignment with sustainability targets for Blatchford, operability, and reputational risks. The cost analysis were done based on capital costs, spend capital for full utility development, operating costs, present value of project costs for different land development scenarios. In addition the impact of greenhouse gas reductions and renewable energy generation were analyzed.

KEY RISKS & MITIGATING STRATEGY

A detailed risk matrix was developed taking into account environmental, economical/ financial, technology, operational, and development impact risks. No major risks were identified except a high financial risk for option 2. In the end this option was not further proposed, so no mitigation strategy was necessary.

RESOURCES

If approved by Council the development will follow the Project Development and Delivery Model . This ensures enhanced capital infrastructure project oversight. This process involved structured reviews of projects at Checkpoints #1-5 throughout the project life cycle.

CONCLUSIONS AND RECOMMENDATIONS

Based on the available information and data provided in this business case the recommendation is to advance option 3: Initial construction of peaking Energy Center, in advance of the Sewer Heat Exchange Energy Center. In comparison with the alternatives, option 3 results in the lowest initial capital costs and hence provides some financial relief in the utility long term funding gap, while fully providing the necessary generation capacity to grow the utility customer base. It also provides the best ability to adjust utility capacity to development and building construction. The impact on GHG reduction and renewables production is small and short lived.

CAPITAL PROFILE REPORT

PROFILE NAME: **Blatchford Renewable Energy Utility Delivery - Growth**
 PROFILE NUMBER: **CM-83-9000**
 BRANCH: **Blatchford Redevelopment Project**

RECOMMENDED
 PROFILE TYPE: **Composite**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET		Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
	Approved Budget	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-
	Current Approved Budget	-	-	-	-	-	-	-	-	-	-	-	-

BUDGET REQUEST	Budget Request	-	-	-	-	-	2,000	25,247	27,938	-	-	-	55,185
	Revised Funding Sources (if approved)												
	NRCan SREPs Grant - Fed	-	-	-	-	-	600	7,574	8,381	-	-	-	16,556
	Self Supporting-Tax Guaranteed	-	-	-	-	-	1,400	17,673	19,556	-	-	-	38,630
	Requested Funding Source	-	-	-	-	-	2,000	25,247	27,938	-	-	-	55,185

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	-	-	-	-	-	2,000	25,247	27,938	-	-	-	55,185
	Requested Funding Source												
	NRCan SREPs Grant - Fed	-	-	-	-	-	600	7,574	8,381	-	-	-	16,556
	Self Supporting-Tax Guaranteed	-	-	-	-	-	1,400	17,673	19,556	-	-	-	38,630
	Requested Funding Source	-	-	-	-	-	2,000	25,247	27,938	-	-	-	55,185

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
		Design	-	-	-	-	-	2,000	25,247	27,938	-	-	-
	Total	-	-	-	-	-	2,000	25,247	27,938	-	-	-	55,185

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL PROFILE REPORT

PROFILE NAME: **DISTRIBUTION PIPING SYSTEM**
 PROFILE NUMBER: **21-83-8384**
 DEPARTMENT: **Utilities**
 LEAD BRANCH: **Blatchford Renewable Energy Utility**
 PROGRAM NAME:
 PARTNER: **Infrastructure Delivery**
 BUDGET CYCLE: **2023-2026**

FUNDED

PROFILE STAGE:	Approved
PROFILE TYPE:	Standalone
LEAD MANAGER:	Tom Lumsden
PARTNER MANAGER:	Brian Latte
ESTIMATED START:	January, 2021
ESTIMATED COMPLETION:	December, 2026

Service Category:	Major Initiative:
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GROWTH	RENEWAL
100	

PREVIOUSLY APPROVED:	13,531
BUDGET REQUEST:	1,936
TOTAL PROFILE BUDGET:	15,467

PROFILE DESCRIPTION

To maintain consistency with similar utility infrastructure (i.e. Natural Gas), funding needs to be secured to allow for the extension of the Distribution Piping Network concurrently with the other development servicing. The estimated cost for the entire distribution piping network in Blatchford is \$80 Million over the full development horizon. This cost has been included in the financial model for Blatchford Renewable Energy, however there has been no funding approved to date of the installation of this piping.

The Utility's first Energy Center, connected to the first geoexchange field under the future storm water pond, has been in operation since late 2019 and is now serving the first 20 customers in the first stage of the Blatchford land development. With full development of stage 1 in Blatchford the Utility is expected to connect 27,000 square meter of space and provide 2,000 kW of thermal energy services. The first Energy Center will also be able to provide energy to the second stage of land development in Blatchford, which is currently prepared for construction. In stage 2 of the land development the Utility is expected to further connect 36,000 square meter of space and provide 2,200 kW of thermal energy services at full stage 2 development.

In 2018 The Northern Alberta Institute of Technology (NAIT) and the City agreed on a land sale for 13.27 hectares of land within the Blatchford Community. This will allow NAIT to advance their Campus Development Plan and become part of the Blatchford community. As a requirement in the land sale agreement the City will have to provide development to the NAIT parcels in Blatchford by 2023.

This Capital Budget adjustment is necessary for the design and delivery of the Distribution Piping System for the current development stage, including the NAIT development. It will further allow for the expansion of the utility pipe network and to follow the growth in the development, representing a prudent and flexible approach to ensure that essential utility services will be provided to future residents, institutions, and businesses in the Blatchford Community.

The following table provides an overview of the timing and costs of the next stages in Distribution Piping System development in Blatchford:

Stage 1 Residential Development
 2021 \$1,600,000
 2022 \$0
 2023 \$0
 Total \$1,600,000

Stage 2 Residential Development
 2021 \$1,000,000
 2022 \$ 250,000
 2023 \$0
 Total \$1,250,000

NAIT Development
 2021 \$0
 2022 \$4,600,000
 2023 \$1,200,000
 Total \$5,800,000

Summary
 2021 \$2,600,000
 2022 \$4,850,000
 2023 \$1,200,000
 Grand Total \$8,650,000

PROFILE BACKGROUND

The Distribution Piping System transfers energy by connecting the District Energy Centers to the individual properties in Blatchford. It consists of a two water pipe system, supply and return, which runs under the road network in Blatchford and connects to each property line. Blatchford Renewable Energy will own and operate the Distribution Piping System. This Capital Budget adjustment is necessary for the design and delivery of the Distribution Piping System for the current development stages, including the NAIT development. At full build out of Blatchford all the Distribution Piping System will be connected under the Blatchford lands and will supply sustainable heating and cooling energy to the residents and businesses in the community.

PROFILE JUSTIFICATION

The design and construction of the Distribution Piping System as part of the Blatchford District Energy Sharing System is needed to transfer energy from the generation point to the utility customers. The network of pipes are connecting the Energy Center in the community to the individual parcels and customers. The implementation of the District Energy Sharing System was manifested in the business case approved by Council in December of 2016.

STRATEGIC ALIGNMENT

Blatchford Renewable Energy was established to help achieve the City's long-term goal of 100 percent renewable energy and carbon neutrality for the Blatchford development. This new City-owned utility owns and operates an innovative District Energy Sharing System in the community.

The establishment and growth of Blatchford Renewable Energy supports City Council's objective of Edmonton becoming a climate resilient City, and aligns with the objectives and actions outlined in the City Plan and the currently updated Community Energy Transition Strategy.

ALTERNATIVES CONSIDERED

With the establishment of the District Energy Sharing System and Blatchford Renewable Energy (through Utility Bylaw 17943) by City Council and the construction of the first Energy Center in the community, Blatchford Renewable Energy is now connecting the first customers. To allow the growth of the Utility to connect future residents and businesses the design and construction of the Distribution Piping is necessary. The alternative would be to not connect these customers to the District Energy Sharing System, which would be contradictory to the Utility Bylaw.

COST BENEFITS

The construction of the Distribution Piping System will allow the potential connection of approximately 250,000 square meter of development space to the District Energy Sharing System and provide about 32,000 kw of thermal energy, reducing significantly greenhouse gas emissions. These connections will in turn generate revenue for the Utility in terms of fees and ongoing rate revenue, which forms a key part of the Utility's financial model.

KEY RISKS & MITIGATING STRATEGY

The key risk for this capital profile is the proper design and construction of the Distribution Piping System as part of the District Energy Sharing System in Blatchford. This risk is mitigated by professional project management oversight by qualified City of Edmonton project managers.

RESOURCES

The work to design and construct the Distribution Piping System will be conducted by qualified consultants and contractors and will be managed by Blatchford Renewable Energy staff. No additional resource impact is anticipated.

CONCLUSIONS AND RECOMMENDATIONS

This Capital Profile is needed for the design & construction of the Distribution Piping System as part of the District Energy Sharing System for the current development stages in Blatchford, including NAIT. It allows the potential connection of 250,000 m2 of development space & provides about 32,000 kw of thermal energy, significantly reducing greenhouse gas emissions. These connections will generate revenue for Blatchford Renewable Energy, which forms a key part of the Utility's financial model.

The recommendation is to approve the profile a total of \$ 8.65M over 2021, 2022 & 2023, for \$2.6M, \$4.85M, and \$1.2M respectively.

The work to design & construct the Distribution Piping System will be conducted by qualified consultants & contractors & will be managed by the Blatchford Branch.

CAPITAL PROFILE REPORT

PROFILE NAME: **Distribution Piping System**
 PROFILE NUMBER: **21-83-8384**
 BRANCH: **Blatchford Renewable Energy Utility**

FUNDED
 PROFILE TYPE: **Standalone**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total	
APPROVED BUDGET	Approved Budget												
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-	
	2021 Cap Capital Budget Adj (one-off)	7,450	1,200	-	-	-	-	-	-	-	-	8,650	
	2021 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	
	2022 Cap Budget Request for Next Cycle	-	1,220	1,220	1,220	1,220	-	-	-	-	-	4,881	
	2022 Cap Carry Forward	-5,804	5,804	-	-	-	-	-	-	-	-	-	
Current Approved Budget	1,646	8,224	1,220	1,220	1,220	-	-	-	-	-	-	13,531	
Approved Funding Sources	Self Supporting-Tax Guaranteed	1,646	8,224	1,220	1,220	1,220	-	-	-	-	-	-	13,531
	Current Approved Funding Sources	1,646	8,224	1,220	1,220	1,220	-	-	-	-	-	-	13,531

BUDGET REQUEST	Budget Request	-	-	-	-	-	-	1,936	-	-	-	-	1,936
	Revised Funding Sources (if approved)												
	NRCan SREPs Grant - Fed	-	2,467	366	366	366	-	581	-	-	-	-	4,146
	Self Supporting-Tax Guaranteed	-	-2,467	-366	-366	-366	-	1,355	-	-	-	-	-2,210
Requested Funding Source	-	-	-	-	-	-	-	1,936	-	-	-	-	1,936

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	1,646	8,224	1,220	1,220	1,220	-	1,936	-	-	-	-	15,467
	Requested Funding Source												
	NRCan SREPs Grant - Fed	-	2,467	366	366	366	-	581	-	-	-	-	4,146
	Self Supporting-Tax Guaranteed	1,646	5,757	854	854	854	-	1,355	-	-	-	-	11,321
Requested Funding Source	1,646	8,224	1,220	1,220	1,220	-	1,936	-	-	-	-	15,467	

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
	Construction	1,646	8,224	1,220	1,220	1,220	-	1,936	-	-	-	-	15,467
	Total	1,646	8,224	1,220	1,220	1,220	-	1,936	-	-	-	-	15,467

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PROFILE NAME:	BLATCHFORD RENEWABLE ENERGY UTILITY P&D - GROWTH	FUNDED
PROFILE NUMBER:	CM-83-8383	PROFILE STAGE: Approved
DEPARTMENT:	Utilities	PROFILE TYPE: Composite
LEAD BRANCH:	Blatchford Renewable Energy Utility	LEAD MANAGER: Brian Latte
PROGRAM NAME:		PARTNER MANAGER: Tom Lumsden
PARTNER:	Infrastructure Planning and Design	ESTIMATED START: January, 2019
BUDGET CYCLE:	2019-2022	ESTIMATED COMPLETION: December, 2021

Service Category: Utilities	Major Initiative: Blatchford - City Centre Airport Lands
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GROWTH	RENEWAL	PREVIOUSLY APPROVED:	4,727
100		BUDGET REQUEST:	4,707
		TOTAL PROFILE BUDGET:	9,433

PROFILE DESCRIPTION

This composite program supports preliminary planning and design work on the Blatchford District Energy System Infrastructure capital projects prior to budget approval. This approach is consistent with Administration's implementation of the Project Development & Delivery Model (PDDM), as well as the Capital Governance Policy that was approved by Council. Funding in the profile will be used to support project development (concept, preliminary planning and schematic design). This composite profile will develop projects that may move to delivery in the current budget cycle and into the start of the next budget cycle.

PROFILE BACKGROUND

The Blatchford redevelopment started in 2008 when Edmonton City Council asked Administration to prepare a report on the possibilities and challenges with the City Centre Airport. A phased closure and redevelopment of the City Centre Airport was approved by Council in a multi-faceted motion in July 2009 after extensive discussions, public consultations, and expert analysis 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 in 2015. In 2017, construction activities continued, including the installation of the storm, sanitary, water services and distribution piping for the District Energy Sharing System. The first phase of the builder selection process, in support of the first stage of development, also commenced in 2017 and will continue in 2018.

In 2016, the Integrated Infrastructure Services (IIS) Transformation program developed the Project Development and Delivery Model (PDDM) which has been endorsed by Council through the approval of the Capital Governance Policy (C591).

PROFILE JUSTIFICATION

To adhere with the PDDM, planning and design work should be completed on projects prior to the project's budget being approved in its entirety by Council. This composite profile will fund that work so Administration can provide Council with better information regarding the scope, schedule and budget prior to funding the entire project, reducing the risk of cost overruns, schedule issues, and other unanticipated issues.

Working in close coordination with the currently proposed Blatchford Land development scenario, the Blatchford Renewable Energy Utility is responsible for the development of additional renewable energy sources and their associated infrastructure to keep up with the energy demands. In order to meet this requirement, funding for the design phase of the next stage of development of the Utility being requested through this Business Case is of the utmost importance for the success of this project.

STRATEGIC ALIGNMENT

Blatchford District Energy contributes to the following 10-year strategic goals specifically:

- Transform Edmonton's Urban Form
- Preserve and Sustain Edmonton's Environment
- Improve Edmonton's Livability
- Ensure Edmonton's Financial Sustainability
- Diversify Edmonton's Economy

ALTERNATIVES CONSIDERED

The Blatchford Energy Strategy was an outcome of a multi-year effort to find the best available technologies able to meet Council's vision for the community. Throughout the development, various technologies on how to provide sustainable energy to residents and businesses in Blatchford were evaluated. The ambient-loop temperature District Energy Sharing System was deemed the preferred and technically option for meeting the heating, cooling and domestic hot water energy needs and a critical part of the strategy to achieve Council's vision of a 100 per cent renewable and carbon neutral community.

COST BENEFITS

The planning and design composite profiles provide better information to make capital investment decisions:

- Early investment in design to support detailed business cases.
- Structured process to evaluate readiness, scope and prioritization.
- Increased confidence around budget and schedule estimates.
- There is the opportunity to make major changes in project scope if there are problems identified during the early planning and design phases.

KEY RISKS & MITIGATING STRATEGY

One key risk of the PDDM approach surrounds what would occur should a capital project not be approved after spending resources on planning and design. Current mitigation is the ongoing reporting to City Council regarding capital priorities, while future mitigation could be the improvement to the long term capital planning process. This will ensure that projects being advanced through the planning and design composite are Council and City priorities in line with corporate strategies, goals, and objectives.

Blatchford District Energy Utility maintains a risk register to monitor project risks.

RESOURCES

The planning, design and delivery of the next DESS Stages are managed within the Integrated Infrastructure Services Department and will be according to the Project Development and Delivery Mechanism (PDDM).

CONCLUSIONS AND RECOMMENDATIONS

Capital funds are required to advance the planning and design of capital growth projects in order to adhere with the Project Development and Delivery Model, and improve project schedule and budget estimates through increased level of design to ensure realistic expectations are set prior to project tendering and construction. Approval of this capital profile is required to fund planning and design work in adherence to the PDDM process.

CHANGES TO APPROVED PROFILE

2021 Spring SCBA (#21-25 Admin/BM): As per the 2020 carryforward exercise, \$20,363.27 in self-supporting tax will be transferred from CM-83-8383 (Blatchford Renewable Energy Utility) to 17-02-2107 (Blatchford District Energy System) to fund the 2020 overspend.

CAPITAL PROFILE REPORT

PROFILE NAME: **Blatchford Renewable Energy Utility P&D - Growth**
 PROFILE NUMBER: **CM-83-8383**
 BRANCH: **Blatchford Renewable Energy Utility**

FUNDED
 PROFILE TYPE: **Composite**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
APPROVED BUDGET	Approved Budget											
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-
	2019 Cap Capital Budget Adj (one-off)	4,972	-	-	-	-	-	-	-	-	-	4,972
	2019 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2020 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2021 Cap Administrative	-245	-	-	-	-	-	-	-	-	-	-245
	2021 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2022 Cap Carry Forward	-3,028	3,028	-	-	-	-	-	-	-	-	-
Current Approved Budget	1,699	3,028	-	-	-	-	-	-	-	-	-	4,727
Approved Funding Sources	Self Supporting-Tax Guaranteed	1,699	3,028	-	-	-	-	-	-	-	-	4,727
	Current Approved Funding Sources	1,699	3,028	-	-	-	-	-	-	-	-	4,727

BUDGET REQUEST	Budget Request	-	-	-	-	4,707	-	-	-	-	-	-	4,707
	Revised Funding Sources (if approved)												
	NRCan SREPs Grant - Fed	-	419	-	-	1,412	-	-	-	-	-	-	1,830
	Self Supporting-Tax Guaranteed	-	-419	-	-	3,295	-	-	-	-	-	-	2,876
Requested Funding Source	-	-	-	-	4,707	-	-	-	-	-	-	4,707	

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	1,699	3,028	-	-	4,707	-	-	-	-	-	-	9,433
	Requested Funding Source												
	NRCan SREPs Grant - Fed	-	419	-	-	1,412	-	-	-	-	-	-	1,830
	Self Supporting-Tax Guaranteed	1,699	2,609	-	-	3,295	-	-	-	-	-	-	7,603
Requested Funding Source	1,699	3,028	-	-	4,707	-	-	-	-	-	-	9,433	

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
	Design	1,699	3,028	-	-	4,707	-	-	-	-	-	-	9,433
	Total	1,699	3,028	-	-	4,707	-	-	-	-	-	-	9,433

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL PROFILE REPORT

PROFILE NAME: **BLATCHFORD DISTRICT ENERGY SYSTEM [DES]**
 PROFILE NUMBER: **17-02-2107**
 DEPARTMENT: **Integrated Infrastructure Services**
 LEAD BRANCH: **Blatchford Redevelopment Project**
 PROGRAM NAME:
 PARTNER:
 BUDGET CYCLE: **2023-2026**

FUNDED

PROFILE STAGE: **Approved**
 PROFILE TYPE: **Standalone**
 LEAD MANAGER: **Tom Lumsden**
 PARTNER MANAGER:
 ESTIMATED START: **January, 2017**
 ESTIMATED COMPLETION: **December, 2024**

Service Category: **Utilities** Major Initiative: **Blatchford - City Centre Airport Lands**

GROWTH	RENEWAL	PREVIOUSLY APPROVED:	22,868
100		BUDGET REQUEST:	-
		TOTAL PROFILE BUDGET:	22,868

PROFILE DESCRIPTION

District Energy system for the Blatchford Redevelopment including preliminary and detailed engineering, construction of infrastructure related to the geo-exchange field, the energy centre and the distribution piping required to be installed with Stage 1 construction.

PROFILE BACKGROUND

Blatchford will be a world-leading mixed-use community for up to 30,000 people. As set out in Council's vision, this walkable, transit-oriented, family-friendly and sustainable community will be built over 20–25 years, with the first stage starting in 2017.

PROFILE JUSTIFICATION

On June 10, 2014 City Council approved the Blatchford Concept Plan Implementation report and Business Case report which described the proposed approach to achieve the Council defined vision for the project and the objectives of the Area Redevelopment Plan. The detailed financial analysis for the recommended scenario (5A) was also approved, along with Council's first motion to have administration provide a Capital Profile and funding strategy for Council's consideration. This Capital Profile describes the initial investment required to support the inclusion of a district energy system that uses 100% renewable energy.

STRATEGIC ALIGNMENT

Blatchford contributes to The Way Ahead by increasing density; to The Way We Grow by being healthy and livable; to The Way We Move by enhancing use of transit, walking and bikes; and to The Way We Green by being a sustainable community.

ALTERNATIVES CONSIDERED

The Business Case report provided to Executive Committee and City Council also includes an analysis of an option that would provide 70% renewable and 30% non-renewable energy to the Blatchford Redevelopment project. An RFP process is currently underway which will determine the eventual operator and business model for a Blatchford Renewable Energy Utility.

COST BENEFITS

Project cost estimates include all infrastructure required to construct the first phase of the 100% renewable energy utility, District Energy system on the Blatchford project site to create a self-contained, technically feasible energy system for the entire redevelopment area.

KEY RISKS & MITIGATING STRATEGY

Key risks include a sustained regional economic slowdown, residential market competition, cost escalation and interest rate risk. Considerable time will be required to develop the contractual arrangements should City Council decide to have the DES constructed and operated by a private entity.

RESOURCES

The Blatchford Redevelopment team will determine the recommended governance and business model. If an external business model is adopted, the initial investment could be sold to the external party.

CONCLUSIONS AND RECOMMENDATIONS

It is recommended that funding be allocated for the implementation of the first phase of the 100% renewable District Energy system for the redevelopment project.

CHANGES TO APPROVED PROFILE

2021 Spring SCBA (#21-25 Admin/BM): As per the 2020 carryforward exercise, \$20,363.27 in self-supporting tax will be transferred from CM-83-8383 (Blatchford Renewable Energy Utility) to 17-02-2107 (Blatchford District Energy System) to fund the 2020 overspend.

CAPITAL PROFILE REPORT

PROFILE NAME: **Blatchford District Energy System [DES]**

FUNDED

PROFILE NUMBER: **17-02-2107**

PROFILE TYPE: **Standalone**

BRANCH: **Blatchford Redevelopment Project**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
APPROVED BUDGET	Approved Budget											
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-
	2016 Cap Council	19,442	-	-	-	-	-	-	-	-	-	19,442
	2017 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2018 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2019 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2020 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2021 Cap Administrative	245	-	-	-	-	-	-	-	-	-	245
	2021 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2022 Cap Budget Request for Next Cycle	-	2,698	483	-	-	-	-	-	-	-	3,181
	2022 Cap Carry Forward	-63	63	-	-	-	-	-	-	-	-	-
Current Approved Budget	19,624	2,760	483	-	-	-	-	-	-	-	22,868	
Approved Funding Sources												
Self Supporting-Tax Guaranteed	19,624	2,760	483	-	-	-	-	-	-	-	22,868	
Current Approved Funding Sources	19,624	2,760	483	-	-	-	-	-	-	-	22,868	

BUDGET REQUEST	Budget Request	-	-	-	-	-	-	-	-	-	-	-
	Revised Funding Sources (if approved)											
	NRCan SREPs Grant - Fed	-	846	109	-	-	-	-	-	-	-	954
	Self Supporting-Tax Guaranteed	-	-846	-109	-	-	-	-	-	-	-	-954
Requested Funding Source	-	-	-	-	-	-	-	-	-	-	-	

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	19,624	2,760	483	-	-	-	-	-	-	-	22,868
	Requested Funding Source											
	NRCan SREPs Grant - Fed	-	846	109	-	-	-	-	-	-	-	954
	Self Supporting-Tax Guaranteed	19,624	1,915	375	-	-	-	-	-	-	-	21,914
Requested Funding Source	19,624	2,760	483	-	-	-	-	-	-	-	22,868	

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

	Activity Type	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
REVISED BUDGET (IF APPROVED)	Construction	18,225	2,760	483	-	-	-	-	-	-	-	-	21,469
	Design	1,399	-	-	-	-	-	-	-	-	-	-	1,399
	Total	19,624	2,760	483	-	-	-	-	-	-	-	-	22,868

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-