

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.

2023 Spring SCBA (#23-14, 3.5-3): Adjust funding source to allocate NRCan grant funding to previously approved capital expenditures (30% of project costs) and reduce self-supported tax guaranteed debt (the original financing source).

CAPITAL PROFILE REPORT

Profile Page 2

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

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

BRANCH: **Blatchford Redevelopment Project**

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	-	-	-	-	-	-	-	-	-	-	-
	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	-	-	-	-	-	-	-	-	-
	2023 Cap Council	-	-	-	-	-	-	-	-	-	-	-
	Current Approved Budget	19,624	2,760	483	-	-	-	-	-	-	-	22,868
APPROVED BUDGET	Approved Funding Sources											
	NRCan SREPs Grant - Fed	-	846	109	-	-	-	-	-	-	-	954
	Self Supporting-Tax Guaranteed	19,624	1,915	375	-	-	-	-	-	-	-	21,914
	Current Approved Funding Sources	19,624	2,760	483	-	-	-	-	-	-	-	22,868

BUDGET REQUEST	Budget Request	-	-	-	-	-	-	-	-	-	-	-
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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)

	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
REVISED BUDGET (IF APPROVED)	Activity Type											
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL PROFILE REPORT

Profile Page 1

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:	9,433
100		BUDGET REQUEST:	-
		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.

2023 Spring SCBA (#23-14, 3.3-2): Increase existing capital profile for the planning and design of the Sewer Heat Exchange by \$4.7M with 30% of costs funded through the NRCan grant and 70% through self supported tax guaranteed debt.

2023 Spring SCBA (#23-14, 3.5.-2): Adjust funding source to allocate NRCan grant funding to previously approved capital expenditures (30% of project costs) and reduce self-supported tax guaranteed debt (the original financing source).

CAPITAL PROFILE REPORT

Profile Page 3

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	-	-	-	-	-	-	-	-	-
	2023 Cap Council	-	-	-	4,707	-	-	-	-	-	-	4,707
	Current Approved Budget	1,699	3,028	-	-	4,707	-	-	-	-	-	9,433
	Approved Funding Sources											
	NRCan SREPs Grant - Fed	-	419	-	1,412	-	-	-	-	-	-	1,830
	Self Supporting-Tax Guaranteed	1,699	2,609	-	3,295	-	-	-	-	-	-	7,603
	Current Approved Funding Sources	1,699	3,028	-	-	4,707	-	-	-	-	-	9,433

BUDGET REQUEST	Budget Request	-	-	-	-	-	-	-	-	-	-	-
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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)

	Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	Beyond 2031	Total
REVISED BUDGET (IF APPROVED)	Activity Type											
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-