

Blatchford Renewable Energy

Spring Capital Budget Adjustment

Recommendation

That Utility Committee recommend to the May 31, 2021, City Council meeting:

That adjustments to the Blatchford Renewable Energy 2019-2022 Capital Budget, as outlined in Attachment 1 of the April 30, 2021, Integrated Infrastructure Services report IIS00496, and Capital Profile 21-83-8384, Distribution Piping System, as set out in Attachment 2 of the April 30, 2021, Integrated Infrastructure Services report IIS00496, be approved.

Executive Summary

This report recommends adjustments to the Blatchford Renewable Energy 2019-2022 capital budget to manage the design and delivery of the distribution piping system for the District Energy Sharing System for the current land development stages (stage one and two) and the Northern Alberta Institute of Technology (NAIT) development in the Blatchford community.

Report

The Blatchford Renewable Energy utility 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 builds, operates and owns an innovative District Energy Sharing System in the community based on the Council approved business case (March 15, 2016, Sustainable Development report CR_2977).

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, which has the goal reducing Edmonton's greenhouse gas emissions to levels consistent with limiting the long-term rise in the average global temperature.

The utility's first Energy Center, connected to a geoexchange field under the stormwater management facility, has been in operation since late 2019 and is now serving the first customers in the current stage of the Blatchford land development. A pipe network under the neighbourhood roads, called the distribution piping system, connects the Energy Center to the individual properties. This network of pipes serves

the same function as a natural gas pipe system in traditional neighbourhoods. The distribution piping system for the first phase of development was provided by the Blatchford Redevelopment Office as the utility had not yet been created and the underground servicing was underway.

To maintain consistency with similar utility infrastructure, funding needs to be secured to allow for the extension of the distribution piping network to happen at the same time as the land development servicing. The estimated cost for the entire distribution piping network in Blatchford is \$80 million over the full development horizon of 20 to 25 years. This cost has been included in the financial model for Blatchford Renewable Energy; however, there has been no funding approved to date for the installation of this piping.

Blatchford Renewable Energy is expected to connect 27,000 square meters of building space and provide 2,000 kW of thermal energy services to the buildings in the first stage of the community. The first Energy Center will also be able to provide energy to the second stage of land development in Blatchford, which is under construction this year. At full development of stage two land, the utility is expected to further connect 36,000 square meters of space and provide 2,200 kW of thermal energy services.

In 2019, the Northern Alberta Institute of Technology (NAIT) purchased 13.27 hectares of land within Blatchford. This land acquisition will allow NAIT to advance their Campus Development Plan as they become part of the Blatchford community. As a requirement in the land sale agreement, the City has to provide servicing to the NAIT parcels in Blatchford by 2023 which is linked to revenue for the Blatchford Redevelopment Office.

This Capital Budget adjustment is necessary for the design and delivery of the distribution piping system for the second stage of land development and for the NAIT development, based on the land sale requirement. It will also allow Blatchford Renewable Energy to compensate the Blatchford Redevelopment Office for the installation of piping in stage one of the land development. The expansion of the utility piping network will follow the growth in the land development, representing a prudent and flexible approach to ensure that essential utility services will be provided to future residents, institutions, and businesses in Blatchford.

Table 1 provides an overview of the planned timing and costs of the next stages in distribution piping system development in Blatchford:

Table 1: Timing and Costs of Distribution Piping Development

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

Stage Two Residential Development	\$1,000,000	\$250,000	\$0	\$1,250,000
NAIT Development	\$0	\$4,600,000	\$1,200,000	\$5,800,000
Total	\$2,600,000	\$4,850,000	\$1,200,000	\$8,650,000

Budget/Financial Implications

As shown in Attachment 1, Blatchford Renewable Energy's 2019-2022 approved capital budget is \$16.715 million. It includes \$6.743 million for the completion of the geoechange borefield and Energy Centre One (\$19.442 million in total) and \$4.972 million for the preliminary planning and schematic design of the Sewer Heat Recovery Energy Centre, both of which are funded with Self Supporting Tax Guaranteed debt. The 2019-2022 capital budget also includes \$5.0 million for the design and delivery of the Energy Transfer Stations in the majority of buildings in Blatchford, which is being fully funded by the home builders.

Administration is recommending approval of capital profile 21-83-8384 (Attachment 2) in the amount of \$8.650 million to manage the design and delivery of the distribution piping system for the first land development stages, including the NAIT parcels in Blatchford, with funding from Self Supporting Tax Guaranteed debt. This would result in an increase in the approved Blatchford Renewable Energy 2019-2022 capital budget from \$16.715 million to \$25.365 million as shown in Attachment 1.

At the March 15, 2016, City Council meeting, the business case for developing the Blatchford Renewable Energy utility was reviewed (Sustainable Development report CR_2977). The business case and assumptions were subsequently updated as part of the Blatchford Utility Fiscal Policy presented to City Council on April 10, 2018 (Integrated Infrastructure Services report CR_5452). Attachment 2 of report CR_5452 provided a breakdown of the \$660 million capital investment projected for Blatchford Renewable Energy over a 50 year period as included in the updated business case. Of the \$660 million, \$420 million would be paid for by the utility through customer rates and infrastructure fees, and \$147 million of utility infrastructure would be contributed by builders. Non-refundable cash infusions, in the amount of \$93 million, would also be required over the initial 10 years of utility development to fund the first stages of construction, including Energy Centres One and Two and the Sewer Heat Recovery Energy Centre.

The Blatchford Utility 2019-2022 Budget approved by Council includes a \$9.5 million short term borrowing from the City of Edmonton in 2019 in order to provide working capital to pay for the day to day operations and debt servicing costs of the utility in the initial stages of development from 2019 to 2022. This \$9.5 million bridge financing will be repaid by the utility in future years subsequent to 2022 as it moves towards financial sustainability and begins to generate positive net income and cash flows.

Based on the assumptions included in the Blatchford Utility Fiscal Policy, Blatchford Renewable Energy is projected to generate positive net income and cash flows beginning in 2025. However, this is dependent in part on receipt of the \$93 million of non-refundable cash infusions to fund the initial stages of the development of the utility. If the non-refundable cash infusions are not secured, an alternative funding source will need to be identified to cover the total debt servicing costs incurred by the utility associated with the initial \$19.442 million borrowing for Energy Centre #1, the \$4.972 million borrowing for preliminary planning and schematic design of the Sewer Heat Recovery Energy Centre, and for any subsequent borrowings for the next stages of infrastructure investment (up to \$93 million). As discussed at the March 22, 2019, Utility Committee meeting, in Financial and Corporate Services report CR_6640, these potential alternative funding sources include increased Blatchford utility customer fees and charges, Blatchford land development retained earnings, tax levy for Self Supporting Tax Guaranteed debt, or partnership with other utility providers

The Blatchford Renewable Energy 2019-2022 operating budget is updated annually as part of the annual rate filing reviewed and approved by Utility Committee and Council in the fall of each year to establish new customer rates for the following year. Any impact to the approved 2019-2022 operating budget resulting from interest expense associated with the \$8.650 million of capital expenditures for the distribution piping system will be incorporated into the Blatchford Renewable Energy 2022 rate filing and operating budget adjustment in the fall of 2021.

Public Engagement

Key stakeholders and the general public were engaged in the Blatchford development, including the concept of Blatchford Renewable Energy. Regular updates are provided to City Council's Energy Transition Climate Resilience Committee.

Corporate Outcomes and Performance Management

Corporate Outcome: Edmonton is an environmentally sustainable and resilient city.			
Outcome	Measure	Result	Target
Edmonton is an environmentally sustainable and resilient city.	Community greenhouse gas emissions (million tonnes of carbon dioxide equivalents)	18.73 (2018)	11.0 by 2035 (35 percent below 2005 levels by 2035)
Corporate Outcome: The City of Edmonton has a resilient financial position.			
Outcome	Measure	Result	Target

The City of Edmonton has a resilient financial position.	Customer rates generate sufficient revenue to recover the annual cost (revenue requirement) to operate the Utility and begin to recover the under-recovery of costs under the levelized approach in the early years.	Operating loss: 2019 actual = \$(0.8) million 2020 actual = \$(1.4) million	Operating profit projected to begin in 2025
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Risk Assessment

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations
Financial	Blatchford Utility is financially not sustainable. Substantial external investment is needed.	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.	Adjustment of capital and operating costs based on adjusted development scenario.
Project Management	Operation of the Utility is impacted.	2 - Unlikely	1 - Minor	2 - Low	Ensure rigorous and planning steps are followed in developing the Utility and prepare for Operation.	

Attachments

1. Blatchford Renewable Energy 2019-2022 Capital Budget Adjustment
2. Capital Profile 21-83-8384 Distribution Piping System

Others Reviewing this Report

- M. Persson, Chief Financial Officer and Deputy City Manager, Financial and Corporate Services
- C. Owen, Deputy City Manager, Communications and Engagement
- K. Fallis-Howell, Acting City Solicitor