

## COUNCIL REPORT

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**TO:** CITY MANAGER **DATE:** 2020 February 04

**FROM:** DIRECTOR ENGINEERING **FILE:** 33200-02

**SUBJECT:** APPLICATION FOR INVESTING IN CANADA INFRASTRUCTURE  
PROGRAM – WASTE-TO-ENERGY DISTRICT ENERGY PROJECT

**PURPOSE:** To obtain Council approval for a joint application with Metro Vancouver for grant funding through the Investing in Canada Infrastructure Program – Green Infrastructure: Environmental Quality for the Waste-to-Energy Facility District Energy Project

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**RECOMMENDATION:**

1. **THAT** Council approve a joint application with Metro Vancouver for grant funding through the *Investing in Canada Infrastructure Program – Green Infrastructure: Environmental Quality* for the Waste-to-Energy Facility District Energy Project.

**REPORT****INTRODUCTION**

On 2019 July 29 Council provided approval for Staff to work with Metro Vancouver on the feasibility of a Waste-to-Energy District Energy Project that would have the potential to offset community GHG emissions and enhance energy efficiency. Heat from Metro Vancouver's Waste-to-Energy Facility could be captured and piped via hot water to local residents and businesses.

On 2019 September 25 the governments of Canada and British Columbia committed up to \$150 million for the second intake of the Investing in Canada Infrastructure Program - British Columbia - Green Infrastructure - Environmental Quality. Project eligibility is very well suited to the Waste-to-Energy District Energy Project as key outcomes must be at least one of the following:

- Increased capacity to treat and/or manage wastewater and/or stormwater
- Increased access to potable water
- Increased capacity to reduce and/or remediate soil and/or air pollutants

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Funding is available for up to 73.33% of eligible project costs (40% Government of Canada, 33.33% Province of British Columbia). If supported by Council, a grant application will be jointly submitted by the City and Metro Vancouver for the Waste-to-Energy District Energy Project.

## **POLICY SECTION**

The Waste-to-Energy District Energy Project is aligned with the City of Burnaby's Corporate Strategic Plan by supporting the following goals and sub-goals of the Plan.

### **Goals**

- A Connected Community
  - Partnership –  
Work collaboratively with businesses, educational institutions, associations, other communities and governments
- A Healthy Community
  - Healthy environment –  
Enhance our environmental health, resilience and sustainability
- A Dynamic Community
  - Economic opportunity –  
Foster an environment that attracts new and supports existing jobs, businesses and industries
  - Community development –  
Manage change by balancing economic development with environmental protection and maintaining a sense of belonging
  - City facilities and infrastructure –  
Build and maintain infrastructure that meets the needs of our growing community
- A Thriving Organization
  - Financial viability –  
Maintain a financially sustainable City for the provision, renewal and enhancement of City services, facilities and assets
  - Reliable services, technology and information –  
Protect the integrity and security of City information, services and assets
  - Technology and innovation –  
Support technology development and innovation to empower staff and to advance community objectives

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## DISCUSSION

The Metro Vancouver Waste-to-Energy Facility processes municipal solid waste to produce steam, which powers a turbine generator to produce electricity. A district energy system would use a heat exchange system to convert steam to hot water, and then transport the hot water through an underground energy distribution network to users. The energy would be used for domestic heat, hot water, and potentially cooling. The energy could also be used for non-residential uses such as community facilities including swimming pools and ice rinks as well as industrial uses. The district energy system would offset natural gas use reducing greenhouse gas emissions, and is more efficient than generating electricity from the Waste-to-Energy Facility because energy losses associated with converting steam to electricity are avoided with district energy systems.

Metro Vancouver is engaging a consultant to conduct a technical, environmental, and economic assessment of a potential district energy project using heat from the Waste-to-Energy Facility. Greenhouse gas emission reductions for a district energy project could be up to 70,000 tonnes of CO<sub>2</sub>e per year, depending on the size of the project. The system would include an energy centre located at or near the Waste-to-Energy Facility as well as the heat distribution network delivering hot water to energy users.

Since Burnaby is the host city for the Waste-to-Energy Facility, Metro Vancouver has invited Burnaby to participate in a joint funding application for the study. Funding of the project, if approved, would be shared by the Government of Canada, the Province of BC and Metro Vancouver.

## RECOMMENDATION

It is recommended that Council approve a joint application with Metro Vancouver for grant funding through the Investing in Canada Infrastructure Program – Green Infrastructure: Environmental Quality for the Waste-to-Energy Facility District Energy Project.



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DIRECTOR ENGINEERING

JL/ac

Copied to: Director Corporate Services  
Director Planning and Building