

Dufferin Renewable Natural Gas Facility Grant Funding and Related Lease Agreement with Enbridge at 35 Vanley Crescent

Date: June 5, 2018

To: Executive Committee

From: General Manager, Solid Waste Management Services and Director, Real Estate Services

Wards: All

SUMMARY

Throughout 2017 and 2018, Solid Waste Management Services has been working to develop Renewable Natural Gas opportunities to harness biogas/landfill gas produced at City waste facilities and turn it into Renewable Natural Gas. Further to City Council's authorization, City Staff successfully negotiated an agreement with Enbridge Gas Distribution Inc. ("Enbridge") to construct and operate the City's first Renewable Natural Gas Facility at the Dufferin Organics Processing Facility at 35 Vanley Crescent. Once complete, this facility will help to reduce the City's greenhouse gas (GHG) emissions, produce fuel for our solid waste fleet, and generate additional non-tax/non-rate based revenues through the sale of Renewable Natural Gas.

To support the funding for this initiative, the City applied to the Municipal GHG ("Greenhouse Gas") Challenge Fund, a program issued by the Province of Ontario as part of its Climate Change Action Plan to support municipal initiatives that reduce greenhouse gas emissions in an effort to transition to a low-carbon economy. Through the Municipal GHG Challenge Fund, City staff secured a total of \$52 million towards various greenhouse gas mitigation projects. Of that, \$10 million was granted towards the capital cost of the Dufferin Renewable Natural Gas project.

This report seeks authority to apply the grant funding from the Municipal GHG Challenge Fund to the Solid Waste Management Services capital budget and to make all the necessary adjustments in the 2018-2027 Capital Budget. This funding will be used to pay down the capital costs of the proposed Renewable Natural Gas facility.

In addition, as part of the Biogas Services Agreement with Enbridge, Enbridge has requested a lease agreement (the "Lease") for an area of approximately 2,930 square meters (the "Leased Area") in order to construct, operate and maintain the Facility for the duration of the agreement.

Enbridge has also requested a permanent easement (the "Easement") for a subsurface area of approximately 700 square meters (the "Easement Area") in order to establish the necessary pipe infrastructure to transport the renewable natural gas from the Facility to the distribution network operated by Enbridge.

Both the lease area and easement area are within property limits of the Solid Waste Management Services waste site.

RECOMMENDATIONS

The General Manager, Solid Waste Management Services and the Director, Real Estate Services, recommend that:

1. City Council authorize the General Manager, Solid Waste Management Services, to accept into its capital budget the previously authorized Municipal GHG Challenge Fund grant, totalling \$10 million, and deposit such funds in account CSW017-02-25.
2. City Council authorize the General Manager, Solid Waste Management Services, to administer the funds available in CSW017-02-25 to pay for the capital costs of the Renewable Natural Gas Project at the Dufferin Solid Waste Management Services Facility, located at 35 Vanley Crescent, beginning in 2018 and following the terms and schedules of the Ontario Transfer Payment Agreement.
3. City Council amend the 2018 Capital Budget and 2019 to 2027 Capital Plan for Solid Waste Management Services by increasing the total project cost in 2018 to \$16.317 million for the Biogas Utilization project at the Dufferin Solid Waste Management Services Facility (CSW017-02) with annual cash flows of \$9.900 million in 2018; \$0.211 million in 2019; \$0.521 million in 2020 and \$421.1 million in each year from 2021 to 2032. Funding includes the \$10 million in grant funding from the Municipal GHG Challenge Fund and \$6.317 million from the Waste Management Reserve Fund to be offset by future revenues from the project.
4. City Council authorize the Lease with Enbridge for nominal consideration for a term of fifteen (15) years, substantially based on the terms and conditions set out in Attachment A hereof and on any other or amended terms and conditions as may be determined as appropriate by the Deputy City Manager, Internal Corporate Services and in a form acceptable to the City Solicitor.
5. City Council authorize the Easement with Enbridge for nominal consideration, substantially based on the terms and conditions set out in Attachment A hereof and on any other or amended terms and conditions as may be determined as appropriate by the Deputy City Manager, Internal Corporate Services and in a form acceptable to the City Solicitor.
6. City Council authorize the Deputy City Manager, Internal Corporate Services or her designate administer and manage the Lease and the Easement, including the provision of any consents, approvals, waivers, notices, and notices of termination, provided that

the Deputy City Manager, Internal Corporate Services may, at any time, refer consideration of such matters to City Council for its determination and direction.

FINANCIAL IMPACT

Capital Impact:

The capital cost of the Dufferin Renewable Natural Gas facility is currently not in the 2018 approved Solid Waste Management Services budget as the business approach to developing this facility at the time of budgeting contemplated a later construction date and an annual future payment over the lifespan of the equipment (estimated at 15 years). With the receipt of the \$10 million from the Municipal GHG Challenge Fund, a change to the Council approved budget is required to allow for the monies to be added to the budget and then spent against this budget.

The total capital cost of the Dufferin RNG facility will be \$16.317 million. This cost will be covered by the \$10 million received from the Municipal GHG Challenge Fund and an annual repayment of the remaining capital (approximately \$0.421 million annually) over the duration of the operating agreement. The annual capital repayment cash flows will be included in future Solid Waste Management Services budget submissions. In addition, a future revenue stream from the sale of Renewable Natural Gas will be used to cover the annual cost of capital potentially resulting in a net zero capital impact for the duration of the agreement.

Operating Impact:

Operating expenditures are comprised of an estimated operating service fee paid to the operator (Enbridge) at an estimated rate of \$1.139 million per year for the duration of the operating agreement.

The first operating expenditure is anticipated to be in the third quarter of 2019 and therefore the 2019 Operating Budget submission will include the appropriate funding provision.

The net operating impact of this project could represent a net savings to the City. Initial estimates show that, on an annual basis, the cost of operating the facility will be offset by revenue generated from selling Renewable Natural Gas created at the facility:

Table 1 - Operating Cost, Potential Revenue, and Potential Net Operating Savings per Year

Operating Cost per year (\$ millions)	1.139
Potential revenue per year **	4.500
Potential net operating savings per year	(3.361)

** Note that the potential annual revenue is a preliminary estimate that is the subject of on-going study and review. Any preliminary operating savings will be reflected as required in future year budget processes.

Lease and the Easement:

Under the Biogas Service Agreement with Enbridge, the Lease and the Easement are required for Enbridge to perform its function to construct, maintain and operate the Facility, on behalf and for the benefit of City of Toronto. All potential revenue that would accrue from the Lease (nominal fee of \$2 per annum) and the Easement (nominal fee of \$2) to be paid by Enbridge, would in turn become service charges paid to Enbridge by City of Toronto and therefore considered to be offset. There is therefore no net financial impact related to the nominal Lease and Easement. The nominal Lease and Easement are not regarded as assistance to Enbridge; rather, they are components of the joint City-Enbridge project which provides an associated benefit to the City.

The Interim Chief Financial Officer has reviewed this staff report and agrees with the financial impact information.

DECISION HISTORY

At its meeting of July 4, 5, 6, and 7, 2017, City Council adopted Item PE19.4 "Transform TO: Climate Action for a Healthy, Equitable and Prosperous Toronto - Report 2 - The Pathway to a Low Carbon Future" which, among other things, authorized the City Manager to enter into various Transfer Payment Agreements to receive grant monies through the Municipal GHG Challenge Fund, including the funding for this project.

The City Council Document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PE19.4>

At its meeting of June 7, 8, and 9, 2016, City Council adopted Item PW13.8 "Authority to Enter into Renewable Natural Gas Projects", which authorized the General Manager, Solid Waste Management Services to enter into Renewable Natural Gas Projects and agreements based on the environmental and financial business cases presented, administer and manage such projects, and investigate options for funding the projects through any green energy funding opportunities.

The City Council Decision document can be viewed at:
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW13.8>

COMMENTS

City staff successfully negotiated an agreement with Enbridge Gas Distribution Inc. to deliver the City's first Renewable Natural Gas project at the Dufferin Solid Waste Management Services Facility. The lease and easement are needed as part of implementation of the Biogas Services Agreement.

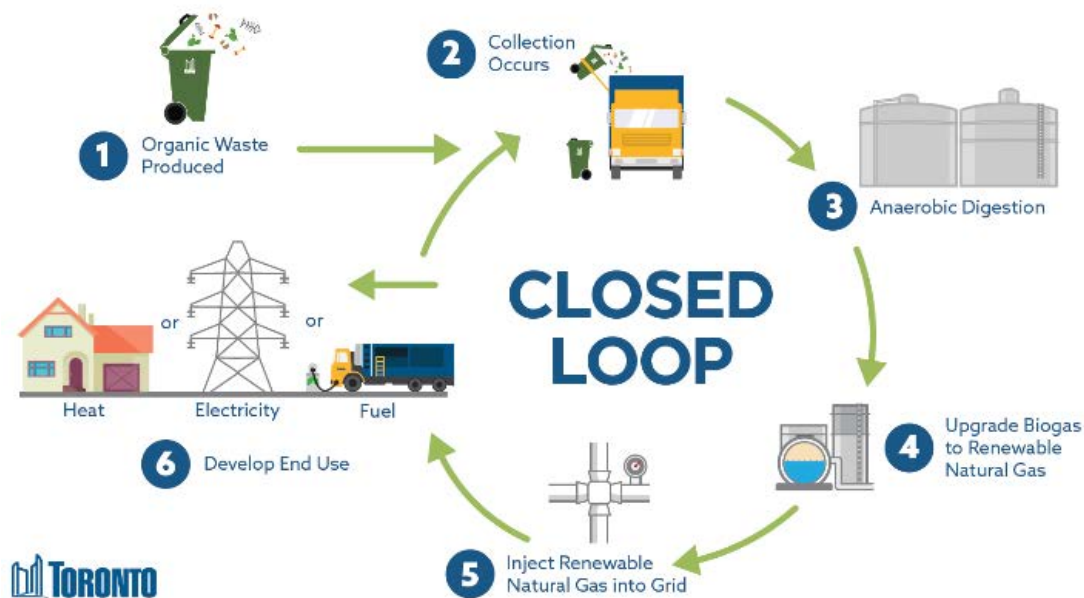
Through the Biogas Service Agreement, Enbridge Gas Distribution Inc. will convert approximately 5.7 million cubic metres of raw biogas produced by the Dufferin Organics Processing Facility into approximately 5.3 million cubic metres of Renewable Natural Gas. Enbridge Gas Distribution Inc. will be responsible for the design, construction and commissioning of a biomethanization station (cleanup/conditioning facility) and an injection station. The Renewable Natural Gas will be injected into the natural gas grid. Once in the grid, the City will be able to use the Renewable Natural Gas in any capacity that traditional fossil based natural gas can be used. The first cubic metre of Renewable Natural Gas is expected to be produced by the second quarter of 2019.

City staff were also able to secure a total of \$52 million from the Municipal GHG Challenge Fund. Of that, \$10 million was granted towards supporting the Dufferin Renewable Natural Gas project. The Municipal GHG Challenge Fund is part of Ontario's Climate Change Action Plan to fight climate change, reduce greenhouse gas emissions and transition to a low-carbon economy.

If the Renewable Natural Gas is used to displace diesel from our collection trucks the project will effectively displace approximately 7,976 tonnes of carbon dioxide equivalent every year, resulting in a net reduction of 119,000 tonnes of carbon dioxide over the life of the project.

In addition, the project supports the City's move toward a circular economy by using a closed-loop approach where organics collection trucks are ultimately powered by the waste product they collect (Figure 1). In addition, this project represents a path to low-carbon fuel for the City and will play an important role in helping us reach our goal of reducing greenhouse gas emissions by 80 per cent by 2050.

Figure 1: Renewable Natural Gas Diagram



Under the Biogas Service Agreement with Enbridge, the Lease and the Easement areas are required for Enbridge to perform its function to construct, maintain and operate the Facility, on behalf and for the benefit of City of Toronto, and to establish the necessary pipe infrastructure to transport the renewable natural gas from the Facility to the distribution network operated by Enbridge. The Lease Area is approximately 2,930 square meters, and the Easement Area is approximately 700 square meters.

Both the lease area and easement area are within the property limits of the Solid Waste Management Services waste site. All potential revenue that would accrue from the Lease and the Easement to be paid by Enbridge, would in turn become service charges paid to Enbridge by City of Toronto and therefore considered to be offset. The nominal Lease and Easement areas are not regarded as assistance to Enbridge; rather, they are components of the joint City-Enbridge project which provides an associated benefit to the City.

CONTACT

Carlyle Khan, Director, Infrastructure Development & Asset Management, Solid Waste Management Services, Email: Carlyle.Khan@toronto.ca Telephone: 416-392-5488

David Jollimore, Director, Real Estate Services, Email: David.Jollimore@toronto.ca Telephone: 416-392-8217

SIGNATURE

Jim McKay
General Manager
Solid Waste Management Services

David Jollimore
Director
Real Estate Services

ATTACHMENTS

Attachment "A" - Major Terms and Conditions - Lease Agreement and Easement Agreement
Attachment "B" - Location of the Leased Area and Easement Area
Attachment "C" - Sketch of the Leased Area and Easement Area