



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Corporate Assets & Strategic Planning Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	December 5, 2016
SUBJECT/REPORT NO:	Request for Expression of Interest – Renewable Energy from Organics - Market Evaluation (PW16113) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Frank Gazzola Superintendent, Energy Engineering 905 546-2424 Extension 7518 Geoff Lupton Director Energy Fleet and Traffic Public Works
SUBMITTED BY:	Dan McKinnon General Manager, Public Works
SIGNATURE:	

RECOMMENDATION

- (a) That staff be directed to undertake a Request for Expression of Interest process to determine interest and capability within the market to generate renewable energy initiatives from the City’s existing municipal organics program, while leveraging unique opportunities within the City such as, but not limited to utilizing unused anaerobic digester capacity at the Woodward Avenue Wastewater Treatment Plant;
- (b) That staff be directed to report to Council upon completion of the Request for Expression of Interest process the results of recommendation (a) of Report PW16113.
- (c) That the single source procurement, pursuant to Procurement Policy #11 – Non-competitive Procurements for consulting services related to undertaking a Request for Expression of Interest – Renewable Energy from Organics - Market Evaluation at the upset limit of \$85,000 and that the General Manager, Public Works Department be authorized to negotiate, enter into and execute a Contract and any ancillary documents required to give effect thereto with Deloitte LLP, in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

Over the last decade throughout North America there has been considerable advancement of both technology and creative business models for recovering resources once considered waste. These resources include organics from kitchen waste as well as fats, oils and greases originating from every day residential and commercial activities throughout modern cities.

In addition to a mature organics program for the processing of kitchen waste from the community, the City of Hamilton currently has unique opportunity in that there is unused digestion capacity at its Woodward Avenue Wastewater Treatment plant that can be reallocated in support of renewable energy from organics. The City's Organics Program (OP) and Central Composting Facility (CCF) are currently managed through operating contracts which are set to expire in the 2019 and 2020 time frame, requiring the City to determine best path forward for future management of its organic program.

The recommendations in this report are intended to allow the City to determine market interest in using these facilities and programs in combination so as to potentially achieve greater benefit to the City and possibly create new revenue streams, or reduce the City's operating costs relative to the existing organics program. The intent is to determine interest within the market place and to use the information gathered to inform the development of a comprehensive procurement process for a new operating arrangement going forward.

Staff is recommending the provision of a single source assignment to Deloitte LLP which recognizes their intimate knowledge of the City's program and facilities as a result of their work on the current Biosolids P3 Canada procurement, as well as their strong track record undertaking these types of assignments. Additionally, the impending requirement to undertake contract negotiations or new procurement for the OP and CCF implies some urgency to inform ourselves about this opportunity and as such securing the services of Deloitte LLP through a single source provides the agility to undertake this process in a timely manner.

Alternatives for Consideration – See Page 6

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The amount of \$ 85,000 to be funded from the Contractual Services account 510340-55916 of the Rate Budget.

Staffing: There are no staffing implications relative to the recommendations in this report

Legal: There are no Legal implications relative to the recommendations in this report

HISTORICAL BACKGROUND

The City of Hamilton's Source Separated Organics (SSO) is processed at the City-owned Central Composting Facility (CCF), located at 1579 Burlington Street. In

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Hamilton, approximately 30,000 tonnes of SSO are collected annually through the green bin program. With the inclusion of organics from Simcoe County and the Region of Halton, the total combined capacity is approximately 70,000 tonnes per year (tpy). The Region of Halton contract expires in April 2018 with an option to extend the contract to December 2020 while the County of Simcoe contract expires September 2018.

Bill 151, the Waste-Free Ontario Act, 2016, legislation is relatively new and contemplates having producers of various waste streams be fully responsible for the cost of managing these materials. Bill 151 potentially extends to the management of organics through an Organics Action Plan to further reduce the amount of organic waste going to landfill, and generally considers the possibility of disposal bans. Bill 151 could thus be implemented in a manner that generates additional organic waste in Ontario requiring processing rather than disposal.

The CCF is operated by AIM Environmental (AIM) on behalf of the City. The original Design, Build and Operate contract between the City and Maple Reinders Limited (Maple Reinders) included a fifteen (15) year operating contract which Maple Reinders subcontracted to AIM. This operating contract expires on December 31, 2020. As part of the on-going 2020 contract planning, City staff are reviewing possible options including renegotiating the current contract or issuing a new Request for Proposal (RFP). It is important in terms of timing, to align the Request for Expression of Interest described in this report with the 2020 contract planning process.

The wastewater treatment plant (WWTP) local at 700 Woodward Avenue contains preliminary, primary and secondary treatment processes, including biogas generation via concrete anaerobic digesters, and provides final dewatering prior to sending bio-solids for land application. The WWTP is currently engaged in a P3 Canada procurement process for a new on-site bio-solids processing program and received proposals that are currently being evaluated. As a result of recent initiatives at the WWTP, there is currently unused digester capacity within the solids handling section of the plant. This may offer an opportunity for further revenue generation, by repurposing these digesters for processing organics as to produce more methane, which in turn could lead to more production of renewable natural gas for sale to the market place.

The Province of Ontario has expressed its intention to introduce a renewable content requirement for natural gas and provide support to encourage the use of cleaner, renewable natural gas in industrial, transportation and buildings sectors. The Province's goal is to ensure the lowest possible carbon content to help reduce building and transportation emissions. Methane released from sources like landfills, municipal green bin collection, agricultural residues, livestock manure, food and beverage manufacturing waste, sewage treatment plants and forestry waste can be renewed and directly substituted for conventional natural gas. Renewable natural gas is a low-carbon fuel that does not add new carbon to the atmosphere. It is fully interchangeable with conventional natural gas and uses the same infrastructure.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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With the advent of a Cap and Trade program planned to be initiated in January 2017 and with other measures to be implemented over time, the opportunity for an increase in value of a Renewable Natural Gas market could manifest into a new revenue stream for the City.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

It is being recommended that Procurement Policy 11- Sole Source be applied resulting in competitive procurement being waived for the consulting services related to developing and issuing the Request of Expression of Interest, attending associated meetings and all subsequent reports and recommendations.

RELEVANT CONSULTATION

A number of internal stakeholders were consulted during the assessment of this project. These included staff from Public Works – Operations (Waste), Hamilton Water, Energy, Fleet and Traffic (Energy), Procurement, and the General Manager’s Office.

Discussions regarding the City’s existing biogas system have taken place with Union Gas and Enbridge who have both expressed a commercial interest in the current biogas production.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

It is unclear how the market might respond to the City making available its organics program as well as access and control of its central composting and digester facilities however staff believe it is prudent to engage the market to gain deeper insight to the opportunities that may currently exist.

Evolution of technology, creative and emerging business models, strong indications from both the provincial and federal levels of government of a desire to be more aggressive with carbon reduction and the coincidental timing of contract renewals for City programs suggest this type of investigation is timely and may prove very beneficial in light of the City’s financial challenges.

Following the Request for Expression of Interest process as per the recommendations in this report allows staff to present a path for the City to learn and become informed of other possible market opportunities. The carbon market is rapidly changing with the advent of Cap and Trade and the Ontario Government’s Climate Change Action Plan. With government’s and industries demonstrating interest in developing renewable natural gas and other low carbon initiatives, they provide an opportunity for the City to take the initial steps with an open mind to new opportunities that may develop

This Request of Expression of Interest is intended to provide two deliverables including a satisfactory understanding of interest within the marketplace relative to this opportunity as well as to inform the development of a comprehensive procurement process should interest be robust.

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ALTERNATIVES FOR CONSIDERATION

The alternatives that can be considered are as follows:

- (a) Not proceed with Request for Expression of Interest: This alternative would mean that staff would be required to enter in a procurement phase for management of its current organics program without the clear knowledge how the current market can bring innovation as it relates to generating renewable energy from organics while leveraging unique opportunities within the City. This may result in the City not obtaining maximum benefit in future investments.
- (b) Not proceed with Sole Source to Deloitte. This alternative would mean staff would be required to tender the required services through RFP which would add 3-4 months to the process and jeopardize the timing of the associated decision on how best to proceed with the existing City organics program. In addition, it is expected that the knowledge gained by Deloitte in developing the City business case and procurement strategies for the City's Biosolids Management Project (P3), will result in more efficient delivery of these services and it is anticipated that hourly rates from the previous assignment will be used ensuring the lowest price possible for the associated service is obtained.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.

Clean and Green

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

APPENDICES AND SCHEDULES ATTACHED

None