TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JUNE 19, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER & ANNA LISA BARBON, CPA, CGA MANAGING DIRECTOR, CORPORATE SERVICES & CITY TREASURER, CHIEF FINANCIAL OFFICER**
SUBJECT:	**MUNICIPAL GREENHOUSE GAS (GHG) CHALLENGE FUND APPLICATIONS FOR ROUND TWO**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer and Managing Director, Corporate Services & City Treasurer, Chief Financial Officer,

a) Information about the Province of Ontario's Municipal GHG Challenge Fund Round Two **BE RECEIVED**;

b) Applications for the following two projects **BE ENDORSED** for submission to the Municipal GHG Challenge Fund:

   i. Curbside collection of residential source-separated organics; and
   ii. Passive cooling at Museum London; and

c) Civic Administration **BE DIRECTED** to report back to the Civic Works Committee on the outcome of the Municipal GHG Challenge Fund Round Two applications including, where applicable, final business cases or other financial or environmental benefit details prior to final approval of projects.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

The relevant reports that can be found at www.london.ca under City Hall (Meetings) is:

- Report to the April 4th 2018 Civic Works Committee Meeting, Outcome of Ontario Municipal Greenhouse Gas (GHG) Challenge Fund Applications (Agenda Item #2.4)

- Report to the October 24th 2017 Civic Works Committee Meeting, Municipal Greenhouse Gas (GHG) Challenge Fund Applications (Agenda Item #15)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of climate change mitigation, climate change adaptation, related environmental issues and the need for a more sustainable city in its 2015-2019 – Strategic Plan for the City of London (2015 – 2019 Strategic Plan). Specifically, the Community Energy Action Plan (CEAP), addresses all four Areas of Focus of the Strategic Plan, at one level or another, as follows:

Strengthening Our Community
- Healthy, safe, and accessible city

Building a Sustainable City
- Convenient and connected mobility choices
- Strong and healthy environment

Growing our Economy
- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to provide Committee and Council with information about the Province of Ontario's Round Two of its Municipal GHG Challenge Fund, and to seek a Council resolution to support the applications that City staff plan to submit to this funding program.

CONTEXT

The City of London does not have direct control over greenhouse gas (GHG) emissions in London, but the City of London does have direct control over energy use at its facilities as well as a lot of influence over the management of residential organic solid waste. Diverting organic materials from landfills avoids the creation of methane – a potent greenhouse gas with a global warming potential 25 times higher than carbon dioxide.

The second round of the Municipal GHG Challenge Fund, announced in April 2018, is one of the programs funded by revenue from Ontario's Cap & Trade program in support of Ontario's Climate Change Action Plan. This fund is administered by the Ontario Ministry of Environment and Climate Change (MOECC).

DISCUSSION

Overview of the Municipal GHG Challenge Fund Round Two

The Province has allocated $35 million to this second round of funding, of which at least 30 percent has been set aside for small, rural, and northern municipalities. This leaves about $24 million for larger municipalities in Southern Ontario.

Any kind of municipal project that reduces GHG emissions is eligible for funding including the buildings, energy supply, transportation, water, waste, and organics sectors.

For this round of funding, municipalities may only submit up to two applications and may request up to $2 million per project. The Municipal GHG Challenge Fund will contribute up to 100 percent of eligible costs, but a higher score will be given to applicants that leverage funds for up to 50 percent of eligible costs.

Applications to the Municipal GHG Challenge Fund are due July 13, 2018. Successful applicants will be notified by December 2018, with funding agreements required to be completed and executed by March 22, 2019. Projects are also required, at a minimum, to have commenced by July 2019 and completed by July 2022.

Municipal GHG Challenge Fund Evaluation Criteria

Given the likely high competition for funding, understanding the evaluation criteria is key. The MOECC will be evaluating applications based on the following criteria:

- **Project Focus (10%)** - Higher scores will be given to projects that aim to replace fossil fuels with clean, renewable energy and achieve net zero (or better) emissions for buildings, transportation systems, and/or infrastructure.

- **GHG Emissions Reduction Assessment (40%)** - Higher scores will be given to projects that result in significant and cost-effective GHG reductions.

- **Project Co-benefits (10%)** - Higher scores will be given to projects that result in positive co-benefits, including:
    - Economic Benefits
    - Social Benefits
    - Environmental Benefits (other than GHG reduction)
    - Behavioural Change Benefits
    - Innovation, Science and Technology Benefits
    - Benefits to low-income and vulnerable communities

- **Alignment with Municipal GHG Emissions Planning (10%)** - Higher scores will be given to projects that align with a municipality's GHG emissions planning and to municipalities that have a comprehensive GHG reduction plan that meets or exceeds the province's 2020, 2030 and 2050 targets. City staff interpret this as meaning projects that have already been identified within London's Community Energy Action Plan, and/or Council-approved plans that include projects that will influence GHG reductions such as waste management.

- **Work Plan and Budget (30%)** - Higher scores will be given to projects that have a detailed, feasible work plan to achieve the project outcomes. A higher score will also be given to applicants that leverage funds for up to 50% of eligible costs (e.g., through municipal funding, federal government, private sector, etc.)

Proposed Submissions to the Municipal GHG Challenge Fund

The following is a high-level summary of the two applications that City staff propose to submit to the Municipal GHG Challenge Fund.

1. **Curbside Collection of Residential Source-Separated Organics**

   Achieving 60 percent waste diversion will not be possible without some form of curbside residential organics management program. City staff will be bringing a report recommending a variety of options for programs (including organics management options) to implement in order to achieve 60 percent waste diversion by 2022 later this summer for Committee and Council consideration and direction.

   Should Committee and Council approve implementing a curbside, source separated organics management program (i.e., Green Bin) as part of the 60 percent Waste Diversion Action Plan, receptacles (carts and kitchen catchers) will need to be purchased for those households that receive curbside service along with additional collection vehicles to deliver the service. This project submission to the Municipal GHG Challenge Fund will involve the purchase of receptacles required to facilitate household participation.

   City staff also looked at the possibility of submitting an application with respect to mixed waste processing followed by the separation of an organic fraction. It was determined that there was very limited opportunity within the Municipal GHG Challenge Fund because mixed waste processing systems are capital intensive on the facility side, not the collection side. Should Council decide on building a mixed waste processing facility in the future, it would be very unlikely that the decision to do so could be made before March 22, 2019 due to the many complexities associated with a project of this nature including uncertainties with MOECC regulatory approvals and requirements and technology costs.

   Should Committee and Council decide on a different method to recover organics and divert them from landfill than a Green Bin type system, then this application, if successful, would not be executed. Council would have until March 2019 to make a final decision.

If the City be successful in its application, City staff would then issue a Request for Proposals to supply and deliver the receptacles required to implement a curbside collected, source separated organics management program.

2. **Passive cooling at Museum London** – This application relates to an energy efficiency and GHG reduction opportunity identified at Museum London. The facility has a chilled water type cooling system for its air conditioning needs. Due in part to the specific indoor air temperature and humidity requirement standards associated with museums and art galleries, the chillers which form part of the cooling system at the Museum need to be used year round. With the addition of a supplementary heat exchanger, the reconfiguration of piping and the addition of corresponding automation controls, the Museum's cooling system could take better advantage of outdoor conditions when the air temperature drops below 5ºC. Taking advantage of low outdoor air temperatures to naturally cool the chilled water for the cooling system would significantly curtail the use of the chillers in the winter and thereby reduce the electricity consumption at the Museum.

The following table provides an overview of the estimated project cost, funding request, annual GHG emission reductions, and requested funding cost per tonne of GHG emissions over the project's lifespan. These estimates may be refined with updated information by City staff prior to submission of the applications by July 13, 2018.

Project	**Estimated Project Cost**	**Proposed Funding Request**	**Municipal GHG Challenge Fund Criteria**		
			Assumed Project Lifespan (years)	**GHG Emission Reduction (tonnes per year)**	**Estimated Funding Cost-Effectiveness ($/tonne)**
1. Curbside collection of residential source-separated organics	$12 million	$2 million	40	7,500[1] to 11,000[2]	$5 - $7
2. Passive cooling at Museum London	$300,000	$300,000	30	90	$100

Notes:

1 – The Municipal GHG Challenge Fund requires the use of the new Draft Quantification Protocol for Aerobic Composting (January 2018) for estimating year-by-year GHG emission offsets based on avoided methane generation from diverted organics.

2 - Previous estimates used by City staff for waste management planning were done using Environment Canada's GHG Calculator for Waste Management, which uses a broader lifecycle-based approach that uses a longer timeframe for estimating methane emission reductions as well as other lifecycle considerations such as soil carbon sequestration. Both approaches are valid to calculate GHG reductions as they serve two different purposes – quantifying annual emission offsets versus comparative lifecycle assessment of waste management options.

It is important to note that applications submitted are not legally binding. Proponents have the option of withdrawing applications should projects no longer become viable. Project funding, if approved, will be provided through a Transfer Payment Agreement between the Province and the City of London, which will set out the terms and conditions governing the grant that may include:

- project budget;
- project management;
- project activities;
- communication strategies for monitoring and reporting requirements, including progress reporting, GHG reporting, audits and financial reports;

- milestone and performance measures;
- mode and schedule of payment; and,
- contract termination and corrective action.

Where applicable, the Transfer Payment Agreement may also require the City to develop formal agreements and/or memorandums of understanding with any project partners to whom funding may be flowed for the purpose of meeting project objectives or addressing obligations.

It is also important to note that these applications may not be successful given the expected high competition for this funding.

Next Steps

As noted above, applications are due by July 13, 2018. Solid Waste Management and Facilities will be taking the lead in the preparation of the two applications. Environmental Programs will be providing support for the two applications, primarily for the quantification of GHG emission reductions as well as demonstrating alignment within London's Community Energy Action Plan.

ACKNOWLEDGEMENTS

This report was prepared by Jamie Skimming, Manager of Air Quality with assistance from Steve MacDonald, Manager of Facilities Planning, Energy, and Assets.

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