

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MARCH 19, 2018
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	ONTARIO MUNICIPAL GREENHOUSE GAS (GHG) CHALLENGE FUND TRANSFER PAYMENT AGREEMENT FOR PHASE 1 - FUEL SWITCHING PROJECT - DIESEL TO COMPRESSED NATURAL GAS (CNG) TRANSITION

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions be taken with respect to the Province of Ontario's Municipal GHG Challenge Fund:

- a) the attached proposed by-law (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held March 27, 2018 to:
 - i) authorize and approve the Transfer Payment Agreement, attached as Schedule 1 to the by-law, to be entered into between The Corporation of the City of London and Her Majesty the Queen in Right of Ontario, as represented by the Minister of Environment and Climate Change for the Province of Ontario, for funding of a fuel switching project to transition from diesel to compressed natural gas for London under the Ontario Municipal GHG Challenge Fund;
 - ii) authorize the Mayor and the City Clerk to execute the Agreement authorized and approved in i), above; and
 - iii) delegate authority to the Managing Director of Environmental & Engineering Services and City Engineer and Managing Director, Corporate Services & City Treasurer, or their designate, to execute any reports required as a condition of the Agreement authorized and approved in i), above;
- b) the Civic Administration **BE AUTHORIZED** to increase the 2016-2019 Multi-Year Capital Budget by \$1,382,625 to reflect the approved Ontario Municipal GHG Challenge Fund contribution of \$691,312 and equal City of London contribution of \$691,313 as set out in the Source of Financing attached (Appendix B); and
- c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this program.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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The relevant reports that can be found at www.london.ca under City Hall (Meetings) are:

- Report to the October 24th 2017 Civic Works Committee (CWC) Meeting, Municipal Greenhouse Gas (GHG) Challenge Fund Applications (Agenda Item #15)
- Report to the August 29th 2017 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #11)

2015-19 STRATEGIC PLAN

Municipal Council has recognized the importance of climate change mitigation, 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) and the Corporate Energy Conservation and Demand Management (CDM) Plan address all four Areas of Focus, 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

DISCUSSION

PURPOSE

The purpose of this report is to obtain the approvals required for the execution of the Transfer Payment Agreement document with the Province of Ontario to receive funding under the Ontario Municipal GHG Challenge Fund ('GHG Challenge Fund'). The report also requests approval to increase the capital budget to reflect the additional funding to be received through the Ontario Municipal GHG Challenge Fund.

CONTEXT

The Corporation of the City of London's use of diesel represents about 12 percent of total corporate energy use (in terms of gigajoules of energy) and 7 percent of corporate energy cost, but diesel's environmental impact is significantly higher representing 31 percent of the Corporation's energy-related GHG emissions. Fleet greening is part of the Corporate Energy CDM Plan with a separate Green Fleet Strategy to be submitted later in 2018.

Encouraging other London-based fleet operators to use compressed natural gas (CNG) as part of their fleet greening programs is also an action outlined within London's 2014-2018 CEAP. The City of London partnered with Union Gas in November 2014 to co-host a CNG workshop for London-area fleet operators. The need for CNG refuelling was identified during that workshop. Since that time, Union Gas and other gas suppliers and dispensing vendors have been working on plans for a commercial CNG refuelling station in London.

At the January 17, 2017 meeting of Council, it was resolved that:

- c) That Civic Administration BE DIRECTED to report back to Civic Works Committee by December 2017 with:*
- i. a Business Case including a detailed feasibility study of options and potential next steps to change the City's fleet of garbage packers from diesel to compressed natural gas (CNG)*

During 2017, it was identified that a number of potential municipal funding programs may be launched based on revenues obtained from the Provincial Cap and Trade Program that would be advantageous to this Business Case.

The Municipal GHG Challenge Fund, announced in August 2017, 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). It complements other programs funded by Cap & Trade revenue, such as the Green Ontario (GreenON) Fund programs for residents and businesses, the Ontario Municipal Commuter Cycling Program, and the Green Commercial Vehicle Program. In particular, the Green Commercial Vehicle Program will help offset the costs associated with procuring CNG trucks in the future.

Using CNG as a fuel significantly reduces the emissions of hazardous air pollutants such as diesel soot as well as greenhouse gas emissions. CNG engines are also significantly quieter than diesel engines which is an important and positive feature for early morning collection vehicles in residential neighbourhoods and multi-residential buildings.

In terms of economic benefits, although vehicles that run on CNG have higher up-front capital costs, the operating (fuel) costs from using CNG are significantly lower than diesel, particularly for vehicles with high annual travel distances (more than 15,000 kilometres). As a result, there is a net lifecycle cost-saving benefit associated with switching from diesel to CNG for some vehicles.

The preliminary analysis has identified financial and environmental benefits of switching to CNG for waste collection vehicles. However, in order to facilitate the transition to CNG it is imperative to have a CNG fuelling strategy and a CNG compliant maintenance/repair facility to enable this transition.

The GHG Challenge Fund represented an ideal opportunity to assist the City of London, businesses in the community and fleet travelling along the 401/402 corridor with their fuel switching needs.

CNG Compliant Maintenance/Repair Facility Upgrade Plan for City of London

The Exeter Road Operations Centre (EROC) that currently serves as the operational base for the waste collection fleet and facilitates the inspection, repairs and service on the trucks, would need be retrofitted to accommodate the safety and code requirements for performing maintenance on CNG vehicles. Building and system requirements are a prerequisite in order for the City to move to CNG vehicles.

Fleet and Facilities Divisions commissioned a consulting engineer review of the shop space at EROC in October 2017. The report identified the Mechanical Code Compliance measures required and the feasibility of transitioning to a fully complaint CNG repair facility.

The enhancements and changes to the facility were identified and include estimated costs for the proposed upgrades. The major upgrade components are HVAC systems, air exchange equipment, gas detection systems along with various electrical, structural and architectural items to support those systems. The facility improvements will be procured and managed through the Facility Services.

Refuelling Infrastructure Plan – City of London and Businesses

After a preliminary review of various options and alternatives including investing in City-owned and managed on-site slow fill CNG infrastructure, the most viable and effective alternative for CNG refuelling, at this time, is to piggyback with a current public-private partnership opportunity being led by Union Gas. The project currently being proposed involves the City buying into the Union Gas led venture for a CNG fast-fill station at the Flying "J" Truck Centre at Highbury Avenue and Highway 401.

The City commitment in the proposed plan would be to provide funding support for the current start-up of the fast-fill (about the same length of time as diesel) CNG refuelling infrastructure project and also provide funding for add functionality and future growth infrastructure in support of the City's longer term 'anchor tenant' (i.e., large fuel purchaser) requirements as City fleet phases over to CNG waste collection vehicles over the next seven years. As added value to this plan and investment, the City would enjoy priority usage rights during our primary refuelling times and a significantly reduced price below standard market pricing for the CNG fuel.

This CNG facility would be available for use by other early CNG adopters that either currently have or would like to move into the CNG commercial vehicles space outside of typical waste collection fuelling hours.

Public sector investment in CNG refuelling infrastructure that is commercially available to other customers and businesses in addition to the City's waste collection vehicles provides a fundamental building block for financial and environmental change in the transportation sector. Having CNG refuelling readily available in London's south end industrial/manufacturing/warehouse district will open the options for companies to invest in CNG vehicles. This provides an excellent opportunity for London-based companies that rely heavily on transportation.

A proposed CNG refuelling location at the Flying "J" Truck Centre would also provide a strategically beneficial location for existing and new CNG freight vehicles that use the Toronto-Detroit 401 freight corridor. The ability to make this extra CNG fuelling capacity available to private sector vehicles will also help accelerate the overall value and economic payback for the City as a whole for the investment in this fuelling infrastructure.

The project will also have local economic benefits as facilities and equipment are retrofitted and replaced to support CNG vehicles thus creating demand for CNG-related products and services. This will result in investment in this field which translates into more jobs and enhanced investment and growth in the sector.

The transition of the City waste collection fleet to CNG also prepares and aligns our operation and vehicle assets to move to even greater environmentally sustainable fuel/energy sources like renewable natural gas (RNG).

Province of Ontario Commitment – GHG Challenge Fund

The estimated total capital cost that was submitted to the GHG Challenge Fund for the diesel to CNG fuel switching project was \$1,382,625 including detailed design, construction and contract administration costs. The GHG Challenge Fund has confirmed that it will cover 50 percent of these costs, or \$691,312.50.

FINANCIAL AND RISK CONSIDERATIONS

The overall project has been designed in two phases with estimated costs and timelines included on the table below. The costs below do not include the Harmonized Sales Tax (HST) which will be included within the Transfer Payment Agreement.

Project Activities	Estimated Cost to be Split 50/50	Timeline^(a)
Phase 1 – Complete Final Business Case and Fuel Purchase Agreement		
1. Finalize Business Case for fuel switching (diesel to CNG) for waste collection fleet. Re-confirm that the proposed City-Union Gas CNG refuelling partnership is the best option compared to alternatives (partner with private sector CNG developer, build City-owned CNG station)	In-kind City staff time and technical assistance where required	April – June 2018
2. Submission of Business Case and proposed CNG fuel purchasing agreement to Municipal Council for approval		July 2018 (continued)

Project Activities	Estimated Cost to be Split 50/50	Timeline^(a)
Phase 2A – Facility Upgrades to Service and Repair CNG Vehicles		
3. Final design, tendering, construction and implementation requirements to install combustible gas detection systems, upgrade ventilation and air distribution systems and the associated electrical, structural and architectural items required for the project at EROC through Facilities.	\$681,125	August 2018 – June 2019
Phase 2B – Refuelling Infrastructure Partnership		
4. Final design, equipment purchase, construction and implementation of CNG refueling equipment	\$701,500	August 2018 – June 2019
Total Estimated Budget	\$1,382,625	
<i>Province</i>	<i>\$691,312.50</i>	
<i>City of London</i>	<i>\$691,312.50</i>	

(a) An alternate timeline has also been prepared if circumstances change and the Business Case and related matters require additional time. This would push the end point for the project until September/October 2019.

Risk Mitigation

The completion of the Business Case will include two parts. Part one will be the details on the financial, technical and environmental aspects of switching from diesel to CNG for waste collection vehicles and the potential for other high kilometre vehicles (e.g., pickup trucks, service trucks, dump trucks).

Part two will include a final review of the proposed cost-sharing partnership with Union Gas for their proposed CNG refuelling station at the Flying J Truck Stop. This partnership would result in CNG fuel price for City fleet vehicles that will be lower than the price charged to other CNG vehicles. The costs and savings associated with this approach would be compared to alternative options, such as a direct partnership with a private sector CNG developer to develop a CNG station at a different location, and the installation of a slow-fill CNG refuelling station at the Exeter Road Operations Centre.

The Business Case and the associated CNG fuel purchasing agreement between the City and Union Gas (i.e., or Clean Energy, Union Gas's CNG developer partner) requires Council approval.

Termination and Default Clauses

Section A15 of the Transfer Payment Agreement (Event of Default, Corrective Action, and Termination for Default) does allow for the City of London to withdraw from the agreement in the event that Municipal Council does not approve the business case or the recommendation from the RFP.

Section A14 of the Transfer Payment Agreement (Termination Where No Appropriation) has similar language in the event that the Province does not receive the necessary appropriation from the Ontario Legislature.

Source of Financing

The attached Source of Financing report 'Appendix B' outlines the source of financing for the Phase 1 – Fuel Switching Project – Diesel to Compressed Natural Gas (CNG) Transition. The City's portion, \$691,312.50, although not included in the approved Capital Plan, can be accommodated with a drawdown from the Efficiency, Effectiveness & Economic Reserve in combination with an equal contribution from the Ontario Municipal Greenhouse (GHG) Challenge Fund.

ACKNOWLEDGEMENTS

This report was prepared with assistance from Jamie Skimming, Manager, Air Quality; Jason Davies, Manager III, Financial Planning & Policy; and Laurie Green, Financial Business Administrator.

PREPARED BY:	PREPARED & SUBMITTED BY:
MIKE BUSHBY, DIVISION MANAGER FLEET & OPERATIONAL SERVICES	JAY STANFORD, M.A, M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER	

Attach: Appendix A – By-law. A.-
Appendix A Schedule 1 – Transfer Payment Agreement
Appendix B – Source of Financing Report

c: Anna Lisa Barbon, Managing Director Corporate Services and City Treasurer
Laurie Green, Financial Business Administrator

APPENDIX A

Bill No.
2018

By-law No. A.-

A by-law to authorize and approve a Transfer Payment Agreement under the Ontario Municipal GHG Challenge Fund Program, between Her Majesty the Queen in Right of Ontario, as represented by the Minister of Environment and Climate Change for the Province of Ontario and The Corporation of the City of London; to authorize the Mayor and the City Clerk to execute the Agreement; and to delegate authority to the Managing Director of Environmental & Engineering Services and City Engineer, or their written designate, and the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, or their written designate, to execute any financial reports and all other documents required under the Agreement.

WHEREAS section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS section 8 of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended provides that the powers of a municipality shall be interpreted broadly so as to confer broad authority on the municipality to enable it to govern its affairs as it considers appropriate and to enhance its ability to respond to municipal issues;

AND WHEREAS subsection 10(1) of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS the Province of Ontario (the "Province") and The Corporation of the City of London (the "City") recognize that investment in compressed natural gas fuel switching projects is a key component in Ontario's Climate Change Action Plan;

AND WHEREAS the City has applied to the Province for funding under the Ontario Municipal GHG Challenge Fund Program for a list of projects;

AND WHEREAS subsection 5(3) of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that a municipal power shall be exercised by by-law;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. The Transfer Payment Agreement to be entered into between Her Majesty the Queen in Right of Ontario, as represented by the Minister of the Environment and Climate Change for the Province of Ontario and The Corporation of the City of London, for the provision of funding from the Ontario Municipal GHG Challenge Fund Program, attached hereto as Schedule "1", is hereby authorized and approved.
2. The Mayor and the City Clerk are hereby authorized to execute the Agreement authorized and approved under section 1, above.
3. The Managing Director of Environmental & Engineering Services and City Engineer, or their written designate, and the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer, or their written designate, are delegated authority to verify and attest to the accuracy of claimed costs and all other documents required by the Province and is the Authorized Representative with signing authority on behalf of the City.
4. The City commits to reviewing its existing Community-wide GHG Emissions Inventory, Community-wide GHG Reduction Targets, and Community-wide GHG Emissions

Reduction Plan to ensure they meet each of the definitions in Schedule B of the Transfer Payment Agreement within two years of signing the Agreement.

5. This by-law shall come into force and effect on the day it is passed.

PASSED in Open Council on March 27, 2018.

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – March 27, 2018
Second Reading - March 27, 2018
Third Reading - March 27, 2018

Schedule 1
Transfer Payment Agreement