

## Report to Civic Works Committee

**To:** Chair and Members  
Civic Works Committee

**From:** Anna Lisa Barbon, CPA, CGA  
Deputy City Manager, Finance Supports

**Subject:** RFP 21-37 Supply and Delivery of CNG Split Stream Rear Loading Waste Collection Trucks

**Date:** August 31, 2021

## Recommendation

That, on the recommendation of the Deputy City Manager, Finance Supports:

- a) The submission from London Machinery Inc. (LMI) 15790 Robin's Hill Road, London, Ontario N5V 0A4 for the Supply and Delivery of Compressed Natural Gas (CNG) Split Stream Rear Loading Waste Collection Trucks at a total purchase price of \$10,755,520 excluding HST, **BE ACCEPTED**;
- b) Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this purchase;
- c) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract, purchase order, or contract record relating to the subject matter of this approval in accordance with Section 12.2 b) of the Procurement of Goods and Services Policy; and
- d) That the funding for this purchase **BE APPROVED** as set out in the Source of Financing Report attached, hereto, as Appendix A.

## Executive Summary

Fleet and Operational Services in conjunction with staff from Climate Change, Environment and Waste Management initiated a Request for Proposals (RFP) for twenty-six (26) compressed natural gas (CNG) split stream rear loading waste and Green Bin collection trucks with Purchasing and Supply on June 9, 2021.

Based on the analysis and evaluation of the submissions received, Fleet Services and Waste Management recommend that RFP 21-37 be awarded to London Machinery Inc. (LMI). The recommendation provides the best overall value to the City of London having met the specifications, conditions, and operational requirements of the service area, and scoring the highest on the evaluation.

The RFP document and specifications were a product of an extensive equipment and service review by a task team focused to deliver on the two Council approved business plans:

1. Supporting waste diversion targets through the introduction of a "Green Bin" organic waste collection program beginning late fall of 2022; and
2. Replacing all waste collection trucks with CNG powered units in support of reducing greenhouse gas emissions as part of the Corporate Energy Management Conservation Demand Management (CDM) Plan and the declaration of a climate emergency.

The task team determined that rear loading waste collection trucks will continue to be the primary method of delivering residential collection services to Londoners. The new rear loading packers will be standardized to provide split stream collection capability (organic Green Bin material on one side and garbage on the other) and will be powered by CNG instead of diesel fuel.

The separation and management of useful organic materials through a Green Bin program increases waste diversion, creates jobs, reduces greenhouse gas, reduces landfill impacts, makes better use of materials and resources, and provides opportunities for the City to benefit in the future from the production of renewable energy sources like methane and renewable natural gas (RNG).

Linking very closely with the organic collection strategy is the fuel switching business case that will see the entire fleet of waste collection trucks being powered by CNG instead of the traditional diesel-powered trucks. Fuel switching to CNG reduces emissions and noise, removes toxic pollutants from the air, enhances lifecycle of the assets, has more stable less volatile pricing system, and is much less expensive than diesel fuel.

Moving to organic collection in concert with fuel switching to CNG-powered trucks provides the future groundwork to have a more sustainable closed loop strategy where collected household organic waste could be processed and used to create a source of renewable fuel and green energy.

Renewable energy sources reduce the impact of emissions and carbon on the environment and support the City's Corporate Energy Management Conservation Demand Management Plan (Green Fleet) and demonstrate a strong commitment and actions for change in line with the declaration of a climate emergency and the development of the Climate Emergency Action Plan.

## **Linkage to the Corporate Strategic Plan**

### **Building a Sustainable City**

London's infrastructure is built, maintained, and operated to meet long-term needs of our community

- Manage assets to prevent future infrastructure gaps
- Increase waste reduction, diversion, and resource recovery
- Conserve energy and increase actions to respond to climate change

### **Leading in Public Service**

Londoners experience exceptional and valued customer service

- Increase responsiveness to our customers
- Increase efficiency and effectiveness of service delivery

### **Growing our Economy**

- Increase partnerships that promote collaboration, innovation, and investment

## **Analysis**

### **1.0 Background Information**

There have been many changes and improvements in the waste collection and disposal sector over the last decade. In addition to the main objective of continuing to provide quality collection and disposal services to Londoners, Waste Management and Fleet Services Team have focused on improvements in the program to meet government regulations and key climate change and environmental sustainability objectives.

Two key aspects of the current 60% Waste Diversion Action Plan are to develop programs and processes that promote source separation and diversion, and second reduce harmful emissions caused by diesel powered vehicles that are contributing to

climate change and air quality impacts. Previous reports have been presented and prepared describing these plans and are listed below for reference.

Fuel Switching – Diesel to CNG for Waste Collection Trucks - Fleet and Waste Management Report to Civic Works Committee September 25, 2018

Updates - 60% Waste Diversion Action Plan Including the Green Bin (Revised Timetable) - Waste Management Report to Civic Works Committee, November 17, 2020 and approved during the Annual Budget Update, January 12, 2021

Since approval of these reports several task teams, consultants and working groups have developed specific objectives and action plans. Below is a summary and update to the two programs to provide context for this report and purchase recommendations.

### **Fuel Switching Business Case Update**

- As of April 2021, six (6) waste collection units are now in service powered by CNG. This change has saved over \$300 per vehicle/month in fuel costs and reduced over 365 kg of GHG/vehicle/month;
- 50% of the Exeter Road Maintenance Operations Centre Facility has been converted to a certified CNG repair facility, with additional modifications initiated and slated for 2022;
- The plan to have all waste collection units powered by CNG by 2025 has now been moved up based on the waste management program changes. In the new plan the target is to have over 95% of the waste collection fleet powered by CNG by early 2023;
- The CNG fleet has supported one of the first commercially available CNG refueling stations in London by Clean Energy at the Flying “J” Truck Centre. This anchor tenant relationship has opened the door in London for both highway trucking and surrounding commercial fleets to consider moving into cleaner, renewable fuel options like CNG and renewable natural gas (RNG); and
- All the trucks being recommended in this report will be powered by CNG instead of the traditional diesel-powered trucks. Fuel switching to CNG reduces emissions and noise, removes toxic diesel exhaust pollutants from the air, enhances lifecycle of the assets, and is less expensive and more stable than diesel fuel pricing.

### **Green Bin Organic Collection Update**

- An RFP is nearing completion and will be released shortly to select a company or companies to supply a kitchen container for indoor use to recover organics; supply and deliver to London homes a Green Bin curbside container (approximate size 45 litres); and supply and deliver a larger Green Bin curbside container (approximate size 80 litres or 120 litres) potentially for use in some townhome complexes where a smaller Green Bin is not practical;
- An RFP is nearing completion and will be released shortly to select a processor for Green Bin materials;
- Work is underway on a short-term alternative plan to start organic material diversion from a select number of apartment buildings to serve as a pilot project while a mixed waste processing solution is still being considered. This will be subject of a future report to Civic Works Committee;
- A dedicated campaign on food waste avoidance is being planned alongside actions being developed for the Climate Emergency Action Plan; and
- Work is underway on the potential of additional plastics recycling and recovery; increasing opportunities for textiles recycling; and increasing opportunities to divert bulky items including mattresses, furniture and carpet.

## **2.0 Discussion and Considerations**

Based on the background above, an RFP was initiated by Fleet Planning after consultation with staff in Waste Management with an objective of acquiring twenty-six (26) CNG Split Stream Rear Loading Waste Collection Trucks.

As part of the packer assessment and replacement process, Waste Management, Fleet Planning and Fleet Maintenance teams were involved in the development and evaluation criteria of the RFP for vehicle specifications and operational requirements. Corporate Health and Safety were consulted around safety and ergonomic design of vehicles. Purchasing and Supply leads the process.

### **2.1 Purchasing Process**

To maximize the competitive process an RFP process was chosen as the procurement method. An RFP format allowed interested bidders to showcase their products and solutions and provided the best method to ensure City specifications, expectations and value-added criteria were considered and evaluated.

Fleet and Operational Services initiated the RFP process on June 9, 2021, with Purchasing and Supply. The RFP closed on July 13, 2021, and six (6) bids were received and evaluated.

### **2.2 Evaluation and Results**

The evaluation team was chaired by a Purchasing and Supply and consisted of staff representing Fleet and Operational Services, Waste Collection Operations and Climate Change, Environment & Waste Management. The following evaluation criteria was used to evaluate the submissions:

- Company Certification, Experience and Past Performance
- Specifications - Mandatory Requirements for both chassis and body
- Service Support, Delivery, Training, and Warranty
- Delivery schedule
- Price

After evaluation of the criteria and scoring of the six submissions, London Machinery Inc. was the winning bid having met the terms and conditions and in the view of the evaluation team offering the best overall value to the City of London. The recommended submission from London Machinery Inc. offers a Peterbilt 548 Cab and Chassis with a McNeilus 2566 split stream rear load body configuration.

Optional items identified in the submission that were negotiated include:

- increasing the CNG fuel tank storage capacity up to 75 DGE (Diesel Gallon Equivalent),
- extending the term of warranty coverage available for the engine and transmission components to five (5) years,
- adding towing coverage for the five (5) year warranty period, and
- purchasing and installing cart tippers on ten (10) of the split stream units.

### **2.3 Disposal of Decommissioned Units**

The optimum life cycle is determined considering both the performance, reliability, and maintenance/repair cost aspects of aging equipment as well as the best time to remarket these assets for maximum resale values. Fleet Services in conjunction with the Manager of Purchasing and Supply evaluate various trade/sell options to provide the best value to the City. Retiring Fleet assets have a target salvage value of 15% (on average) based on experience.

Based on review of the trade options provided in the RFP, Fleet Planning in consultation with Purchasing and Supply will not be accepting the trade options submitted. All the decommissioned packers will be sold at public auction with the proceeds being utilized to help offset the cost of purchasing these units. The existing units will be decommissioned and disposed of after the new units arrive.

Trade in values were requested in the RFP as an optional item and did not directly form part of the bid selection criteria.

## 2.4 Extended Period of Time Required to Receive Vehicles

Ten (10) of these units are up now for replacement due to normal lifecycle renewal. The remaining units are made up of eight (8) existing single stream packers that will be retired early and eight (8) additional units to meet the Green Bin organic collection plan.

All existing units will remain in service as the replacement trucks are being built which is estimated to be between 14-16 months. The reason for the longer than normal build time is associated with market and manufacturing recovery challenges from the pandemic. Raw material shortages, production delays, labour challenges and backlog of orders are all impacting delivery times, order schedules and costs.

The supply chain challenges identified in this report for vehicle and equipment orders and delivery are consistent with many different manufacturing operations including the manufacture and delivery of green bins for organics collection. These pandemic-related challenges that exist in most parts of the world make it very challenging for manufacturers to predict exact delivery dates.

## 2.5 Tentative Rollout Plan for the Green Bin Program

It is currently anticipated that the Green Bin program rollout will begin as previously scheduled in fall 2022; however, it will be required to roll out over a longer period of time to match when collection vehicles will be delivered and ready for use.

In a report to CWC in November 2020 and approved in the 2021 Multi-year Budget Update (January 2021), the Green Bin implementation schedule was revised to a "Tentative start date roll-out in summer/early Fall 2022". With the estimated build and delivery dates supplied by the recommended bidder, London Machinery Inc. now known, the rollout schedule phases beginning in September 2022 are tentatively set as follows:

Phase	Target Dates for Start-up of Green Bin Program	Approximate Number of Homes to be Served	Area of London
1 Note A	Early September, 2022	6,500	Lambeth, River Bend, rural and small community areas on the west/south side of London
Note B			Mid-November, 2020 – Collection Zone Adjustments
2	Mid-November, 2022	60,000	To be determined
3	Mid-January, 2023	60,000	To be determined

Table Notes:

A Green Bin and Blue Box will be weekly. Garbage collection will be collected every two weeks.

B All remaining areas shift to the new schedule based on 5 Collection Zones (instead of the current 6 Collection Zones).

Further details on the rollout schedule will be the subject of a future report to CWC when the results of the Green Bin cart RFP and processing of Green Bin materials are known in the fall of this year.

In addition, City staff are looking at a proposed opportunity to introduce source separated organics collection at 10 buildings (about 1,500 units) as part of a pilot project as the proposed mixed waste processing solution in Ontario is not operational at this time. This will be subject of a future report to CWC and require Council approval.

### **3.0 Financial Impact**

#### **3.1 Project Budget**

Fleet and Operational Services set the project estimated capital budget at \$425,000 per truck for a total expected budget of \$11,050,000 excluding HST for twenty-six (26) trucks.

The recommended bid from London Machinery Inc. (LMI) has a base price of \$396,788 (excluding HST) per truck. Including the options of extended warranty, towing coverage and 75 DGE (Diesel Gallon Equivalent) fuel tank system the total price for sixteen of the units will be \$410,655 (excluding HST) per unit.

The remaining ten units will have the options identified above but will also be outfitted with Green Bin cart tipplers. The total cost for those units being recommended is \$418,504 (excluding HST) per unit.

In summary the total cost for the purchase of the twenty-six (26) units with options will be \$10,755,520 (excluding HST) which is within the estimated budget for this purchase.

#### **3.2 Project Funding**

Funding details for this procurement are outlined in the Source of Financing (Appendix A).

Eighteen (18) of the twenty-six (26) waste collection trucks that are, or soon will be, up for lifecycle renewal will be funded using the approved Fleet capital replacement budget supplemented with additional funding from the approved Green Bin capital budget.

Capital requirements for the eight (8) additional units will be fully funded from the approved Green Bin capital budget as these units are all additional fleet assets being purchased to support organic waste collection needs.

The Green Bin capital budget is significantly funded from the Canada Community-Building Fund (formerly the Federal Gas Tax program).

Future capital and operating budgets will be impacted by the changes to the existing assets and the addition of more packers. Fleet Services have calculated the expected operational, fuel, maintenance and future replacement capital requirements. Rental rates for the Waste Management program will be adjusted accordingly beginning upon delivery (Fall of 2022). On an annual basis those rental rate costs will be evaluated and adjusted as required as more actual cost experience is acquired.

It is expected there will be lower maintenance costs with the CNG engine configuration, and the purchase of the 5-year extended warranty on both the engine and transmission will help offset the additional operating costs going forward.

As well, research indicates with the cleaner burning CNG engine it is very likely these assets can be extended for an additional year of lifecycle (up to 10 years) which will also help to support the costs to the program.

Fuel savings from CNG during the start up years will be going to pay back the loan from the Operating, Efficiency, Effectiveness and Economy Reserve Fund (EEE) for the CNG maintenance facility modifications required at Exeter Road Operations Centre.

## **Conclusion**

Based on the analysis and evaluation of the submissions received, Fleet Services in conjunction with Solid Waste Management recommend that RFP 21-37 be awarded to London Machinery Inc., 15790 Robin's Hill Rd. London, Ontario N5V 0A4 for the supply and delivery of CNG Split Stream Rear Loading Waste Collection Trucks.

The recommendation provides the best overall value to the City of London having met the operational requirements, terms, and conditions of the RFP, scored the highest on the evaluation criteria, and is within the estimated budget established for the project.

**Prepared by:** Mike Bushby, B.A.  
Division Manager, Fleet and Facilities Division  
Finance Supports

**Concurred by:** Jay Stanford, MA, MPA  
Director, Climate Change, Environment & Waste  
Management, Environment & Infrastructure

**Concurred by:** Tim Wellhauser, CIM  
Director, Fleet and Facilities  
Finance Supports

**Concurred by:** Kelly Scherr, P.Eng., MBA, FEC  
Deputy City Manager  
Environment and Infrastructure

**Recommended by:** Anna Lisa Barbon, CPA, CGA  
Deputy City Manager  
Finance Supports

**Attached:** Appendix A – Source of Financing

## Appendix "A"

#21152

August 31, 2021

(Award Consultant)

Chair and Members  
Civic Works Committee

RE: RFP21-37 Supply and Delivery of CNG Split Stream Rear Loading Waste Collection Trucks

(Work Orders 2530316-2530331, 2487253-2487261, 2487274)

Capital Project ME202001 - Vehicles and Equipment Replacement - TCA

Capital Project SW6050 - New and Emerging Solid Waste Technologies

London Machinery Inc. - \$10,755,520.00 (excluding HST)

### Finance and Corporate Services Report on the Sources of Financing:

Finance and Corporate Services confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To This Date	This Submission	Balance for Future Work
<b>ME202001 - Vehicles and Equipment Replacement - TCA</b>				
Vehicles and Equipment	6,000,312	2,489,248	2,906,000	605,064
<b>SW6050 - New and Emerging Solid Waste Technologies</b>				
Consulting	1,000,000	309,341	0	690,659
Construction	26,961,182	0	0	26,961,182
Vehicles and Equipment	8,038,818	0	8,038,818	0
<b>SW6050 Total</b>	<b>36,000,000</b>	<b>309,341</b>	<b>8,038,818</b>	<b>27,651,841</b>
<b>Total Expenditures</b>	<b>\$42,000,312</b>	<b>\$2,798,589</b>	<b>\$10,944,818</b>	<b>\$28,256,905</b>
<b>Sources of Financing</b>				
<b>ME202001 - Vehicles and Equipment Replacement - TCA</b>				
Capital Levy	701,267	201,267	500,000	0
Drawdown from Fleet Renewal Reserve Fund	5,183,927	2,172,863	2,406,000	605,064
Drawdown from Self Insurance Reserve Fund	115,118	115,118	0	0
<b>ME202001 Total</b>	<b>6,000,312</b>	<b>2,489,248</b>	<b>2,906,000</b>	<b>605,064</b>
<b>SW6050 - New and Emerging Solid Waste Technologies</b>				
Debenture Quota	11,700,000	0	0	11,700,000
Drawdown from Solid Waste Renewal Reserve Fund	16,351,532	309,341	90,350	15,951,841
Canada Community-Building Fund (Federal Gas Tax)	7,948,468	0	7,948,468	0
<b>SW6050 Total</b>	<b>36,000,000</b>	<b>309,341</b>	<b>8,038,818</b>	<b>27,651,841</b>
<b>Total Financing</b>	<b>\$42,000,312</b>	<b>\$2,798,589</b>	<b>\$10,944,818</b>	<b>\$28,256,905</b>



## Appendix "A"

#21152

August 31, 2021

(Award Consultant)

Chair and Members

Civic Works Committee

RE: RFP21-37 Supply and Delivery of CNG Split Stream Rear Loading Waste Collection Trucks

(Work Orders 2530316-2530331, 2487253-2487261, 2487274)

Capital Project ME202001 - Vehicles and Equipment Replacement - TCA

Capital Project SW6050 - New and Emerging Solid Waste Technologies

London Machinery Inc. - \$10,755,520.00 (excluding HST)

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<b>Financial Note:</b>	<b>ME202001</b>	<b>SW6050</b>	<b>Total</b>
Contract Price	\$2,855,739	\$7,899,781	\$10,755,520
Add: HST @13%	371,246	1,026,972	1,398,218
Total Contract Price Including Taxes	3,226,985	8,926,753	12,153,738
Less: HST Rebate	-320,985	-887,935	-1,208,920
Net Contract Price	\$2,906,000	\$8,038,818	\$10,944,818

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Jason Davies

Manager of Financial Planning & Policy

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