



Corporate and Finance Services

Date: March 21, 2024

To: City Council

From: Stephanie Sinnott, Commissioner,
Corporate and Finance Services Department

Mike Saulnier, Director, Operations Services
Community and Operations Services

Re: Additional Information regarding CF-24-20 – Contract Award - RFT -
C2024-010 Supply Delivery of 8 Side Loading Refuse Trucks – Split
Packers (All Wards)

The purpose of this memo is to provide additional information regarding the Corporate and Finance Committee’s recommendation to Council concerning Report CF-24-20.

Table 1 outlines staff’s estimated cost comparison between a standard bio-diesel collection vehicles, as specified in RFT C2024-010, to that of an electric waste collection vehicle similar to the one being piloted by Peel Region’s private waste collection contractor.

Table 1: Cost Comparison	Bio-Diesel Waste Collection Vehicle	Electric Waste Collection Vehicle
Asset Purchase (one time cost – year 1)	\$557,000	\$900,000
Infrastructure (one time cost – year 1)	Existing	\$700,000*
Maintenance and Fuel (annually)	\$113,000	\$50,000
Capital Replacement (annually)	\$56,000	\$112,000
Year 1 Total	\$726,000	\$1.8M
8 Year Lifecycle Total	\$1.9M	\$2.9M

*Note: It is important to recognize that the initial expenses associated with the bio-diesel vehicle fueling infrastructure are not reflected in the cost comparison as it is existing infrastructure. Presently, there is an ongoing deployment of charging stations for the transition of light-duty vehicles at the COD; however, to meet the charging demands of heavy duty vehicles like waste collection vehicles, further expansion of the infrastructure would be necessary.

Piloting the use of an electric waste collection vehicle offers numerous environmental and economic benefits, but it also comes with several challenges and considerations as outlined in Table 2.

Table 2: Pros and Cons of Piloting an EV Electric Waste Collection Vehicle

Pros	Cons
<ul style="list-style-type: none"> • Reduction in emissions and improved local air quality • Noise reduction • Lower operating and maintenance costs • Upgraded infrastructure could have benefits for fleet decarbonization projects in the future • Potential to take advantage of government incentives and grants to support the adoption of electric vehicles may help to reduce the initial investment cost. • Demonstrates a commitment to innovation and leadership in advancing the City’s goals within the Energy Conservation and Greenhouse Gas Reduction Plan 	<ul style="list-style-type: none"> • Higher initial investment due to the need for increased charging capacity. • A staff resource will be needed to oversee the installation of the infrastructure • EV lead time is 18-24 months versus 12-18 months for a bio-diesel vehicle • Parts availability is unknown • Mechanic training is necessary • Potential impacts of “up-fitting” the vehicle due to the complexity of the equipment • Road impacts due to the weight of the vehicle due to the battery • Longer charging time is needed which means charging will occur during peak hours

Several municipalities are actively employing or testing electric waste collection vehicles. Industry feedback indicates technological constraints and potential for improvement to mitigate the drawbacks listed in Table 2. Our team believes that initiating a pilot is unnecessary, as we can observe the outcomes of existing pilots. We suggest considering the acquisition of electric waste collection vehicles in the subsequent fleet renewal cycle. By then, it is anticipated that advancements in the electrification of heavy-duty vehicles could render the switch more feasible. Staff continues to monitor availability of electric vehicles and will advance them in new vehicle replacement schedules when financially and technologically viable.