



Procurement Authorization – Supply of Cummins Factory Remanufactured Engines

Date: July 12, 2023
To: TTC Board
From: Chief Financial Officer

Summary

The purpose of this report is to obtain the Board's approval to award a contract to City View Bus Sales and Service Ltd. in the amount of \$10,833,102.41, inclusive of taxes, for the supply of 153 Cummins factory-remanufactured engines. The 2024 Bus Rebuild Program will overhaul a total of 180 Nova 12-metre buses. With 27 engines already procured in 2023 as provisional, this contract supplies the balance of parts required for the Nova 12-metre (40-foot) bus rebuild project for 2024.

Recommendations

It is recommended the TTC Board:

1. Authorize the contract award to City View Bus Sales and Service Ltd. in the amount of \$10,833,102.41 (inclusive of HST and core charges) for the supply of 153 Cummins factory-remanufactured engines for the TTC's Nova 12-metre (40-foot) buses on the basis of the lowest-priced compliant bid received.

Financial Summary

All 153 Cummins remanufactured engines acquired through this procurement will be used for bus overhauls scheduled to be completed in 2024. The 153 engines will be delivered in 2023 and 2024 to meet the rebuild production schedule. The resulting contract authority requirements are outlined in Table 1 below:

Table 1 – Capital Contract Expenditure Forecast

	2023 Forecast	2024 Forecast	Total
Engine Deliveries	32	121	153
Requested Contract Authority	\$2,265,746.91	\$8,567,355.50	\$10,833,102.41

The requested contract includes rebatable HST and core charges. The TTC is eligible for a core credit, as cores from replaced engines are returned to City View Bus Sales and Service Ltd. The return of cores from replaced engines and the subsequent issuing of credit to the TTC is expected to occur in 2024 and therefore the net financial impact, after accounting for rebatable HST and core credits for the 153 engines, is \$8.636 million as shown in Table 2 below:

Table 2 – Estimated Cash Flow Requirements

	2023 Forecast	2024 Forecast	Total Contract Amount
Engine Deliveries	32	121	153
Requested Contract Authority (with HST)	2,265,746.91	8,567,355.50	10,833,102.41
Core Credits	-	(1,243,684.22)	(1,243,684.22)
Requested Contract Authority (Net of Core Credits)	2,265,746.91	7,323,671.28	9,589,418.19
Requested Contract Authority (without HST)	2,005,085.76	6,481,125.03	8,486,210.79
Non Rebatable HST 1.76%	35,289.51	114,067.80	149,357.21
Total Contract Expense	2,040,375.27	6,595,192.83	8,635,568.00
Rebatable HST	225,371.64	728,478.45	953,850.09
Total Authority, including HST	2,040,375.27	7,838,877.05	9,879,252.32

Funds for this expenditure are included in the TTC’s 2023-2032 Capital Budget and Plan under Program 4.13 Bus Rebuild Program, which was approved by the TTC Board at its meeting on January 9, 2023, and approved by City Council on February 15, 2023.

The 10-Year Capital Plan includes a total of \$508.2 million in approved funding for the Bus Rebuild Program, including \$61.5 million budgeted to be spent this year, as outlined in Table 3 below. Of the approved funding in the 2023-2032 Capital Budget and Plan, approximately \$32.06 million has been committed to date.

Table 3 – Bus Rebuild Program – 2023-2032 Capital Budget and Plan Summary

Project Name	2023 Budget	2024	2025	2026	2027	2028-2032	10-Year Total
Bus Rebuild Program	61,489.7	36,264.0	26,469.0	1,059.0	934.0	381,987.0	508,202.7

(in thousands)

The Chief Financial Officer has reviewed this report and agrees with the financial impact information.

Equity/Accessibility Matters

A cornerstone of the TTC's current Corporate Plan is accessibility, and as a proud leader in providing accessible public transit in the city of Toronto, the TTC is committed to ensuring reliable, safe and inclusive transit services for all of its customers. The vehicle parts being recommended for the award of this contract will ensure that the TTC can continue to offer reliable, safe, accessible, and inclusive transit services for all customers.

The TTC is also committed to promoting equitable opportunities and removing barriers within our supply chain and procurement initiatives. The tender was open for bidding via the MERX website to a diverse group of vendors consisting of a variety of sizes and scales of operations to ensure an open, fair, and transparent procurement process.

Decision History

In 2022 and early 2023, the TTC procured 220 engines for the 2023 Bus Rebuild Program for the Nova 40-foot buses, the same engines to be procured for the 2024 program.

At its meeting on July 14, 2022, the TTC Board authorized the award of a contract to City View Bus Sales and Service Ltd. for the supply of 103 Cummins factory-remanufactured engines for the TTC's Nova 40-foot buses.

[Report: July 2022 – Procurement Authorization Supply of Cummins Factory Remanufactured Engines – EPA17](#)

Decision: [Procurement Authorization – Supply of Cummins Factory Remanufactured Engines](#)

At its meeting on January 19, 2023, the TTC Board authorized the award of a contract to City View Bus Sales and Service Ltd. for the supply of 117 Cummins factory-remanufactured engines for the TTC's Nova 40-foot buses.

[Report: January 19, 2023 – Procurement Authorization – Supply of Cummins Factory Remanufactured Engines – EPA 17](#)

Decision: [Procurement Authorization – Supply of Cummins Factory Remanufactured Engines – EPA 17](#)

Issue Background

The TTC performs bus mid-life overhauls on up to 180 buses per year at Duncan and Harvey shops, with parts required to complete the mid-life overhaul procured in the form of kits, single parts and complete sub-assemblies.

Engines for the NOVA 40-foot rebuild project in 2021, for the Nova 60-foot rebuild in 2019-2020 and prior years, were rebuilt in the Duncan Shop using single parts, such as pistons, rings, cylinder lining and bearings. As part of a cost-saving initiative in 2021-2022, engines were procured as a complete reconditioned engine that resulted in a cost saving of 23.06% based on a January 2020 cost estimate, plus the addition of a two-year original equipment manufacturer (Cummins) factory warranty.

Through the 2024 bus overhaul program, 180 buses are scheduled to be overhauled. Engine requirements for the first 27 buses were procured as buffer stock and/or spare requirements as part of the 2023 Bus Rebuild Program. This procurement fulfils the engine requirements for the remaining 153 buses.

In parallel, the TTC continues its transition to a zero-emissions fleet by the year 2040. This plan is aligned with the City of Toronto's TransformTO Net Zero Strategy and the C40 Fossil-Fuel-Free Streets Declaration. As part of the TTC's Green Bus Program, the TTC procured its last order of 336 hybrid-electric buses for delivery in 2023 and 2024. In January 2023, the TTC commenced its steady-state procurement of only zero-emissions, battery-electric buses with the award of 310 eBuses for delivery in 2024 and 2025. The next delivery of battery-electric buses will continue to provide numerous benefits as follows:

- i. Service Impact: Reliability continues to improve and lessons learned from the eBus Head-to-Head evaluation were used to inform the current large-scale eBus procurement;
- ii. Environmental Impact: Reduce GHG emissions by 100% or 93 tonnes/bus/yr over clean diesel;
- iii. Financial Impact: Reduced fuel/energy cost by 77% or \$40,000/bus/yr over clean diesel; and
- iv. Other Key Benefits: Zero tailpipe emissions, reduced operating noise and improved vehicle reliability.

Currently, the Green Bus Program is tracking toward completion in 2037, three years ahead of the 2040 target.

Comments

Procurement Process

A Request for Bids (RFB) was publicly advertised on the MERX website for the supply of 153 Cummins factory-remanufactured engines (TTC part number 080772; Cummins part number DR7782RX) to be used on the TTC's 40-foot Nova buses (as part of the Nova 40-foot bus rebuild project in 2024).

Twenty-two companies were notified of the RFB, in addition to the advertisement on the MERX website on April 24, 2023. Five out of the 22 companies that were included in the distribution list, and notified of the RFB, downloaded the bid documents from MERX, and three companies submitted a bid. One company outside the distribution list downloaded the bid documents, but did not submit a bid. A comprehensive list of bid results is contained in Appendix A.

The engines being recommended for the award are considered remanufactured (or reconditioned/exchanged) parts. When purchasing a remanufactured item, a damaged or worn unit (a core) is required by the applicable vendor in exchange within a period of 365 days. The vendor will then supply a remanufactured unit by either repairing the received core or supplying an existing unit that has previously been repaired. If the TTC does not have a core to supply to the vendor when purchasing a remanufactured part, an additional core charge will be applied. The RFB required Bidders to quote a core price for the engine, but stated that the TTC would return cores to the vendor under the same purchase order at a later date (within 365 days) for core credit at the quoted core charge.

As the TTC currently does not have any cores on hand to supply to the vendor, the core charges will initially apply. These charges have been factored into the total recommended award value and the bid totals, as detailed in the attached Appendix A. The TTC anticipates returning 153 engine cores in good, re-buildable condition to the vendor within 365 days for core credits, which will result in 100% reimbursement of the initial core charges.

Consequently, the bid evaluation and determination of the lowest-priced bid is based on the Bidder's submitted pricing for the remanufactured engine unit alone, irrespective of the core charges quoted. The RFB also requested the Bidder to propose financial incentives based on prompt payment discounts. Only one Bidder offered a prompt payment discount as noted below.

Excluding core charges, for which a credit is expected, City View Bus Sales and Service Ltd. (City View) submitted the lowest total bid amount of \$9,589,418.19, inclusive of HST, and complies with the TTC's requested delivery schedule. City View offered a 0.5% discount if the invoices are paid within 10 days. It should be noted that if the core charges had been included in the evaluation, the recommended company would still be the same vendor. City View is therefore recommended for the award of this contract.

A price comparison with the last buy price, where 117 engines were purchased from City View Bus Sales and Service Ltd. on January 19, 2023, and the current recommended bid revealed a 15.21% increase.

The price increase compared to the previous price is mainly attributed to the following key factors:

- The price of aluminum has increased approximately 14.68% over the last seven months from September 2022 (bid closing month for previous competition) as per London Metal Exchange (Aluminum Alloys) dated May 2, 2023; and
- These engines will be purchased in U.S. dollars by the recommended Bidder and sold to TTC in Canadian dollars, hence the Canadian bid price includes some hedge for current fluctuation. It is forecasted that the Canadian dollar will depreciate by approximately 4% in the next 12 months based on tradingeconomics.com

Contact

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Signature

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Attachments

Appendix A – Supply of Cummins Factory-Remanufactured Engines

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Bidder Name	Total Quoted Value for 153 Engines (including HST) (A)	Core Charges for 153 Engines (including HST) (B)	Total (including HST and core charges) (C=A+B)	Total Recommended Value (including HST and core charges)
City View Bus Sales and Service Ltd.	\$9,589,418.19	\$1,243,684.22	\$10,833,102.41	\$10,833,102.41
Tokmakjian Inc. dba TOK Performance	\$9,941,321.96	\$1,243,684.22	\$11,185,006.17	-
Mississauga Bus, Coach & Truck Repairs Inc.	Submitted a non-compliant bid			
TOTAL				\$10,833,102.41