

Item No. 11.1.2
Halifax Regional Council
October 22, 2013

TO: Mayor Savage and Members of Halifax Regional Council

Original signed by



SUBMITTED BY:

Richard Butts, Chief Administrative Officer

Original Signed by

Mike Labrecque, Deputy Chief Administrative Officer

DATE: September 11, 2013

SUBJECT: Award - Tender No. 13-128, Mini-Hybrid Thermal Systems

ORIGIN

The Approved 2013/14 Project Budget.

LEGISLATIVE AUTHORITY

Under the HRM Charter, Section 79, Halifax Regional Council may expend money for municipal purposes. Administrative Order #35, The Procurement Policy, requires Council to approve the award of contracts for sole sources exceeding \$50,000 or \$500,000 for Tenders and RFP's.

The following report conforms to the above Policy and Charter.

RECOMMENDATION

It is recommended that Halifax Regional Council award Tender No. 13-128, for the supply and installation of ninety-nine (99) EMP "Mini Hybrid" Kits, to the lowest bidder meeting specifications, Cummins Eastern Canada, for a Total Tender Price of \$2,580,562.71 (net HST included), with funding from Project Account CM020006, Emission Reduction - Public Transit Buses, as outlined in the Financial Implications section of this report.

BACKGROUND

In January 2010, HRM embarked on a project to install Mini Hybrid Thermal Systems on a selected portion of the Metro Transit fleet for testing purposes. The selected units were of an age where they would still see a number of years of active service and therefore would provide the most economic return for investment.

Past staff reports, including detailed information on the equipment technology and subsequent purchases can be found on the following webpages:

- <http://www.halifax.ca/council/agendasc/documents/100112ca1111.pdf>
- <http://www.halifax.ca/council/agendasc/documents/100126ca10111.pdf>
- <http://www.halifax.ca/Council/agendasc/documents/101207ca1112.pdf>

The mini hybrid system replaces a transit bus traditional hydraulic fan system with a slide-in, controllable electric fan package. The retrofit provides a number of benefits, including:

- Reduced emissions resulting in contribution to greenhouse gas (GHG) reduction commitment of 0.09% per bus.
- An annual per vehicle fuel reduction of 3,800 litres (approximately \$3,500 in cost).
- An annual per vehicle reduction in maintenance costs of approximately \$2,000.00.
- An annual per vehicle reduction in total operating costs of approximately \$5,500.00
- Reduces the risk of hydraulic failures or thermal events (fire incidents) in installed units.
- The retrofitted bus produces less noise than a regular bus.
- The payback period on capital investment is approximately five (5) years.

DISCUSSION

Tender No. 13-128 for up to one-hundred (100) Mini Hybrid Thermal Systems was publically advertised on the Province of Nova Scotia website starting on July 15, 2013, and closed on August 1, 2013.

There was a single response received from Cummins Eastern Canada to supply and install the system for \$24,995.00, plus net HST, for a total of \$26,066.29 per unit. Cummins Eastern Canada is the lone local supply and installer of the Mini Hybrid Thermal Systems for transit style buses in this region.

This purchase will supply and install ninety-nine (99) units over a three (3) year period which is approximately two (2) to three (3) unit conversions per month. The supply of the buses to Cummins Eastern Canada for conversion is at the sole discretion of Metro Transit based on

service requirements and bus availability.

Staff Assessment of Technology Efficiency

Staff assessment of the efficiency of the technical solution is based on three components:

- 1) References,
- 2) 2009 Federal Government Study (Transport Canada): <http://www.stm.info/en-bref/raptechhybride.pdf>, and
- 3) Metro Transit Fleet Services Assessment on tested units.

There have been numerous proven installations and fleet deployments of this technology, which was originally introduced in 2006, including early installations at: Capital Area Transit Authority (Lansing, Michigan), Metro Boston Transit Authority and New York City Transit. There are now over 150 municipalities in North America with installed mini hybrid kits.

Metro Transit Fleet Services has confirmed the anticipated fuel savings by examining mileage and fuel consumption information on the 19 units installed to date under the program.

Opportunity for Full Fleet Approach

With the proven results of the mini hybrid test units there was deemed value in pursuing a “Full Fleet Approach” which would see a further approximately one-hundred (100) buses, in their midlife period, converted to mini hybrid systems. With a payback period of five (5) years and gross annual savings approaching \$550,000 in fuel and maintenance costs, along with the associated reduction in GHG emissions, this was concluded to be the next logical step in the program.

With the majority of the public transit style bus manufacturers now producing their own versions of a hybrid system, all future purchases of this style of bus will likely be equipped with some form of a hybrid system. The “mini” hybrid installation is seen as an interim measure to convert the older buses, which still have a number of service years left, to the new technology and gain the benefits of the reduction in fuel and operating costs.

FINANCIAL IMPLICATIONS

Corporate Fleet recommends the award of this tender based on the lowest tendered price, meeting specifications, of \$2,474,505.41 plus net HST of \$106,057.30 for a total tender cost of \$2,580,562.71 for the installation of ninety-nine (99) mini hybrid thermal units over a three (3) year period.

The first-year price per unit is \$24,995.00, plus net HST of \$1,071.29, for a net total of \$26,066.29 per unit. Total cost for the supply of the thirty-two (32) units under the first year agreement is \$834,121.28 (net HST included). Funding is available from Project Account No. CM020006 - Emission Reduction - Public Transit Buses

Budget availability has been confirmed by Finance.

Budget Summary: Project Account No. CM020006 - Emission Reduction - Public Transit Buses

Cumulative Unspent Budget	\$867,000.00
Less: Tender No. 13-128 (13/14 - 32 units)	<u>\$834,121.28</u>
Balance	\$ 32,878.72

* This project was estimated in the Approved 2013/14 Project Budget at \$3,000,000.00.

The balance of funds will be used for further implantation of the Emission Reduction program.

The purchase in years two (2) and three (3) of the contract will be contingent on Council's approval of the Capital Projects in those budget years.

ENVIRONMENTAL IMPLICATIONS

This purchase progresses HRM towards lower corporate GHG emissions as per the Corporate GHG Emissions Reduction Plan.

ALTERNATIVES

Council, at its discretion, may choose to not award this tender. This is not the recommended course of action as Metro Transit will not be able to achieve the improved fuel efficiency, reduced maintenance costs and reduction in GHG emissions without the installation of this technology.

ATTACHMENTS

None

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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