LRT Parts: High-Value Non-Competitive Open-Order Agreements

Recommendation:

That $2,225,000 annually, for a term not to exceed ten years, for non-competitive open-order agreements to purchase parts for Light Rail Vehicles from eleven vendors as outlined in the August 23, 2017, City Operations report CR_5109, be approved, and that the agreements be in form and content acceptable to the City Manager.

Report Summary

This report requests Urban Planning Committee's approval for $2,225,000 annually to acquire parts necessary for ongoing LRT maintenance. This sum exceeds the City Manager's delegated authority, pursuant to section 43(a) of Bylaw 16620, the City Administration Bylaw.

Report

Background

Edmonton's Light Rail Transit (LRT) has cars as old as 1978 (when the service first started) and as new as 2012. The original LRT vehicles are still in active service, and one of the cars has covered almost three million kilometres. The initial LRT line spanned 7.2 kilometres. Today, the same trains service over 24 kilometres of track between the Capital and Metro Lines.

To keep riders safe and to optimize taxpayer dollars, investing in routine maintenance and transit equipment is essential. Securing parts for the LRT system, however, can be challenging as there are limited aftermarket suppliers for the LRT fleet, and it is often difficult to use alternate equipment suppliers due to the systems, and their sub-systems, being engineered as a unit. In many cases, there is no other alternative for parts but to return to the Original Equipment Manufacturer. In other cases, there may be a different supplier for parts, but the time required to test potential alternatives, and the additional effort and resources required for internal re-engineering of products to suitable specifications for testing, makes using alternate suppliers time-consuming and inefficient.

Regular maintenance extends the life of the LRT, and having immediate access to parts when maintenance is required reduces repair times and minimizes customer service disruption. In order to have a sufficient stock of parts on hand, Administration is

looking to set up non-competitive open-order agreements for the Original Equipment Manufacturer components routinely ordered for the LRT system. The sum of many of these contracts will exceed the City Manager's Delegation of Authority limit ($500,000 with a maximum term of 10 years). In 2016, approximately 80 per cent (~$2.6 million CAD) of the total spent on parts for Light Rail Vehicle maintenance was sourced from 20 companies.

Based on historic purchasing from 2013 to 2016, Administration requests the approval to pursue open-order contracts with 11 companies totalling ~$2.225 million CAD in annual purchasing. These contracts are non-competitive due to the equipment either being critical to operational safety or proprietary to the Original Equipment Manufacturer. The intent is to set up five-year open-order contracts with optional extension terms that will allow the contract to extend to 10 years.

The name of the vendors, the annual contract values, and the justification for each contract are listed in the table below:

VENDOR	ANNUAL VALUE	JUSTIFICATION
Alstom Signaling Operation LLC	$ 50,000 CAD	Alstom Signaling Operation provides safety critical parts that are part of the engineered LRT Signal system. They are uniformly installed along the Capital LRT line. The parts are used when failures occur with the existing installed equipment. The system functions as a whole and cannot accept alternative parts from other manufacturers. Alstom is the OEM.
Dellner Couplers AB	$ 125,000 CAD	Dellner Couplers AB provides parts for ongoing maintenance and overhaul of 74 U2 couplers. The coupler system functions as a whole and cannot accept alternative parts from other manufacturers. Dellner is the OEM.
iFE North America, LLC	$ 50,000 CAD	iFE North America, a division of Knorr, provides parts for the corrective, preventative and overhaul maintenance of SD160 LRV door systems. The door system functions as a whole and cannot accept alternative parts from other manufacturers. iFE is the OEM.
Pennsylvania Machine Works,	$ 500,000 CAD	Pennsylvania Machine Works provides

Inc.		Bochum 54 resilient tires, hubs, and axles for the replacement of tires on the U2 and SD160 fleets. Pennsylvania Machine Works is the only known North American supplier of the Bochum 54 wheel. Contract value is based on the replacement of the wheels of 12 cars being replaced annually on an eight-year cycle.
Schunk Carbon Technology	$ 250,000 CAD	Schunk Carbon Technology is the manufacturer of the SD160 pantographs, as well as axle ground brushes and other carbon components. These components are required for corrective, preventative, and overhaul maintenance of U2 and SD160 pantographs and bogies. In most cases, Schunk is the OEM of the parts in question.
Siemens Canada Ltd	$ 500,000 CAD	Siemens is the manufacturer of the SD160 and U2 LRVs. Where possible, Edmonton Transit Service has tried to find other sources of supply but as the LRV OEM Siemens still supplies many safety critical and proprietary components for both LRVs.
Tectran - Canada	$ 250,000 CAD	Tectran, recently purchased by Knorr, provides parts for the SD160 brake system. The brake system is an integrated unit and it is not possible to replace sections of this system with those of other manufacturers. Tectran is the OEM. Note that with Tectran being purchased by Knorr the market for LRV brakes is condensing.
Thales Group	$ 50,000 CAD	Thales provides proprietary parts for the vehicle and wayside components of the signal system being used on the Metro Line and through the downtown. The system acts as an integrated unit so it is not possible to replace sections of this system with those of other manufacturers. Thales Group is the OEM.

Transit Innovations	$ 75,000 CAD	Transit Innovations provides parts that are part of the engineered LRT Overhead Catenary system (LRT power system). They are widely installed along the LRT line. The parts are used when failures occur with the existing installed equipment. While other manufacturers exist, it is not possible to replace only part of an assembly. Replacing the entire assembly with alternative parts would extend the repair and return to service times associated with catenary tear down incidents. Transit Innovations is the OEM.
Unisource Technology	$ 75,000 CAD	Unisource Technology provides rubber to metal bonded components used during the SD160 bogie overhauls. Unisource is GMT's (Gummi Metall Tecknik) authorized Canadian dealer and therefore represents the OEM and supplies OEM components.
Voith Turbo Inc	$ 300,000 CAD	Voith Turbo provides parts for the SD160 Coupler systems. The coupler system functions as a whole and cannot accept alternative parts from other manufacturers. Voith Turbo is the OEM.
TOTAL	**$2,225,000 CAD Annually**	

Conclusion

As the LRT is composed of an integrated set of engineered systems, Administration is often required to return to the specific Original Equipment Manufacturers of systems and subsystems for parts. Without open-order contracts in place, LRT Maintenance will be unable to purchase components due to delegation of authority limits being exceeded. Not having sufficient parts in stock will result in delayed maintenance, LRT systems being sidelined, and an eventual impact on Administration's ability to meet operational requirements.

Corporate Outcomes

Acquiring essential parts to ensure the safety and reliability of Edmonton's LRT system supports the corporate outcomes of "The City of Edmonton has sustainable and accessible infrastructure," "Edmontonians use public transit and active modes of

transportation," "Edmontonians are connected to the city in which they live, work and play," and "Edmonton is a safe city."

Risk Assessment

Risk Element	Risk Description	Likeli-hood	Impact	Risk Score	Current Mitigations	Potential Future Mitigations
Operational	If funding for parts is not approved, LRT operations will be compromised.	5 Almost Certain	3 Major	15 High	Work with current suppliers to confirm access to required parts.	For future system purchases, request list of 2-to-3 suppliers, beyond the OEM, who can provide parts.
Suppliers	Non-competitive open-order agreements restrict the ability to shop competitively.	5 Almost Certain	2 Mod-erate	10 Med-ium		For future purchases, request list of 2-to-3 suppliers, beyond the OEM, who can provide parts.
Corporate Governance	Decision to have non-competitive open-order agreements could be questioned.	3 Possible	2 Mod-erate	6 Low	Continuously research and compare competitive offering.	

Budget/Financial Implications

The existing Materials and Inventory budgets for 2017 and 2018 include approximately $3 million annually for LRT parts. It is expected that these budget amounts are sufficient to fund all required parts purchases; consequently, there are no adverse budget impacts associated with this request.

Legal Implications

The New West Partnership Trade Agreement and the Canadian Free Trade Agreement each require public tendering of contracts with values greater than $75,000

and $100,000 respectively in the case of goods and services unless an exemption exists. In the situation described in this report, it is likely that an exemption exists as it appears that the goods or services can be supplied only by a particular supplier and no reasonable alternative or substitute goods or services exist for the following reasons: to ensure compatibility with existing goods and due to an absence of competition for technical reasons. An approval of these single source procurements would thus entail compliance with each of New West Partnership Trade Agreement and Canadian Free Trade Agreement.

Metrics, Targets and Outcomes

Metrics	Targets	Outcomes
Time required for open-order contract procurement versus Competitive Procurement Exception Request procurement. From time stock is required to time it is ordered. CPER 4-7 weeks Open Order 5-10 days	Info Only	Information-only metric to show the time required for the two purchasing streams. Note that shifting from Competitive Procurement Exception Request purchasing to Open Order Purchasing will also free up time within CPSS to focus on process efficiency.
Total Value of Competitive Procurement Exception Request requests by LRT in 2016: $1,980,976.76	Reduction to $310,747.86 (by 84%) by end of Q1 2018.	Reduction in the valuer of Competitive Procurement Exception Request requests results in more efficient internal processes and reduced internal overhead cost of parts procurement.

Justification of Recommendation:

Approving funding for the non-competitive open-order agreements to purchase Light Rail Vehicle parts will enable ETS to continue to provide safe and reliable transit service.

Others Reviewing this Report

- T. Burge, Chief Financial Officer and Deputy City Manager, Financial and Corporate Services
- A. Laughlin, Deputy City Manager, Integrated Infrastructure Services