



November 8, 2018

To: Transit Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Sole Source Agreement for the Purchase of a Cummins L9N Near-Zero Emission Bus Engine for the Midlife Overhaul Prototype

Overview

The Orange County Transportation Authority's active vehicle fleet includes 20 articulated, compressed natural gas-powered buses, model year 2013, that are currently eligible for a midlife engine overhaul. The proposed replacement engine has been certified by the State of California as a near-zero emission compressed natural gas-powered engine and will include a multi-year manufacturer warranty. There is only one manufacturer with engines certified by the State of California for use in transit buses, and a sole source agreement is necessary to proceed with a prototype installation and review.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Purchase Order No. C-8-1892 between the Orange County Transportation Authority and Cummins Pacific, LLC, in the amount of \$84,293, for the purchase of one replacement Cummins L9N near-zero emission compressed natural gas-powered engine.

Discussion

The Orange County Transportation Authority (OCTA) purchased 20 articulated (60-foot) New Flyer compressed natural gas (CNG)-powered buses that were delivered in 2013 and 2014. The buses were equipped with a Cummins 8.9 Liter CNG ISL-G engine and will be replaced with the cleanest Cummins 8.9 Liter L9N near-zero emission CNG-powered engines certified by the State of California for use in transit buses.

The California Air Resources Board has certified the Cummins L9N near-zero emission CNG-powered engine at 0.02 grams NOx per brake horsepower-hour.

The L9N near-zero emission CNG-powered engine reduces NOx by 90 percent and greenhouse gases by nine percent, compared to the standard ISL-G CNG-powered engine. These engines became available in early 2018.

The Maintenance Department recently completed a mid-life repower campaign on 98 of the forty-foot CNG New Flyer buses using the Cummins ISL-G near-zero emission CNG-powered engine. This was the first time this engine had been installed in this type of bus. Accordingly, an Installation Quality Audit (IQA) process was required and successfully completed on a single prototype before the remaining 97 vehicles could advance through the repower campaign. The 60-foot articulated buses are in need of an engine repower due to the high mileage and ongoing engine failures experienced, and must follow the same process.

A midlife engine overhaul is generally performed once a bus has exceeded 250,000 miles or when cumulative failures deem it necessary to advance the replacement to ensure vehicle reliability in revenue service. These vehicles are expected to reach the 250,000 mileage threshold within the next year. Although the vehicles have not yet reached 250,000 total miles traveled, engine-related failures have been frequent, requiring replacement of major engine components. Due to these frequent and costly failures, staff recommends the engines be replaced as soon as possible.

The installation of the L9N near-zero emission CNG-powered engine on a single prototype 60-foot articulated bus will be jointly performed by OCTA and Cummins Pacific, LLC (Cummins). The IQA will be conducted by Cummins as part of the project. The IQA is required before installation of the L9N near-zero emission CNG-powered engine repower can occur on the remaining buses. Installation of this engine in a prototype bus will create the engineering blueprint for the engine replacement program for the remaining 19 articulated buses. Based on prior experience, staff estimates that the IQA could take as long as nine months to complete.

In order to advance the midlife engine replacement, beginning with development of a prototype, a sole source agreement is necessary. The sole source agreement request is to purchase one engine with a five-year or 300,000-mile extended warranty.

Procurement Approach

This procurement was handled in accordance with OCTA Board of Directors (Board)-approved policies and procedures for a sole source procurement.

Cummins engines are the only approved and certified engines for transit buses in California, and Cummins is the sole supplier and distributor. Therefore, the procurement meets the guidelines for a sole source purchase as the engine is available from only one responsible source, and no other supplier can meet the requirements.

Cummins provided pricing to OCTA for one Cummins L9N 8.9 Liter CNG-powered near-zero emission engine prototype with a five-year 300,000-mile extended warranty on the electronic modules and sensors, and will perform IQA testing and certification at a firm-fixed price in the amount of \$84,293.

This is a sole source request over \$50,000; therefore, OCTA's Internal Audit Department conducted a review to meet the objectives of agreed-upon procedures, which assists Contracts Administration and Materials Management (Camm) Department in evaluating sole source proposals. As a result of the audit findings and negotiated pricing, Camm determined the proposed rates to be fair and reasonable. Based on Cummins' financial status and negotiated pricing, Camm staff has concluded that Cummins is deemed responsive to OCTA's requirements.

Fiscal Impact

The project was included in OCTA's Fiscal Year 2018-19 Budget. Funds have been allocated under Near-Zero Emission Engine Prototype for Articulated Buses, Account 2114-9024-D2108-TZZ, Engine Repower.

Summary

The articulated bus fleet is eligible and in need of a midlife engine replacement. To facilitate this replacement and ensure compliance with California air quality requirements, staff is seeking Board authorization for the Chief Executive Officer to negotiate and execute an agreement with Cummins to purchase one Cummins L9N near-zero emission CNG-powered engine to serve as a prototype for further replacement evaluation.

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Near-Zero Emission Bus Engine for the Midlife Overhaul
Prototype**

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Attachment

None.

Prepared by:



Cliff Thorne
Director, Maintenance and Motorist
Services
(714) 560-5975

Approved by:



Beth McCormick
General Manager, Operations
(714) 560-5964



Virginia Abadessa
Director, Contracts Administration and
Materials Management
(714) 560-5623



Jennifer L. Bergener
Chief Operating Officer, Operations
(714) 560-5462