

Municipality of Chatham-Kent
Infrastructure and Engineering Services
Engineering and Transportation

To: Mayor and Members of Council
From: Ian Clark, Engineering Technologist
Date: August 30, 2022
Subject: Zero Emission Transit Fund

Recommendations

It is recommended that:

1. A contribution agreement be entered into with the Government of Canada for the purpose of receiving \$111,140.80 under the Zero Emission Transit Fund towards a feasibility study on transitioning to battery-electric transit vehicles.
2. An agreement for services be entered into with HDR Corporation, selected through a competitive joint procurement according to terms negotiated under the Transit Procurement Initiative, at a total value of \$138,926 including HST and contingency.
3. The Director, Engineering and Transportation with approval of the Director, Legal Services be authorized to enter into the agreements.
4. The Municipality's financial portion of \$27,785.20 be funded from the Provincial Gas Tax Reserve.

Background

On November 4, 2019, the Municipality entered into a Multi-Year Governance Agreement (2019-2024) for Joint Transit Procurements facilitated by Metrolinx for the purposes of jointly procuring transit goods and services with other Ontario transit systems.

On March 7, 2022, Council authorized administration to apply to Infrastructure Canada's Zero Emission Transit Fund for the purposes of funding a feasibility study on transitioning to battery-electric transit vehicles.

Comments

Procurement

Administration participated with thirteen Ontario transit systems in a joint procurement facilitated by Metrolinx under the Transit Procurement Initiative. The objective of the procurement was to take a cooperative approach in obtaining a qualified consultant to create a plan for municipalities to integrate battery-electric buses (BEB) into its public transit services.

The consultant's scope of work was as follows:

- Route Scheduling and Optimization: Energy consumption modelling along Chatham-Kent routes to determine range requirements and optimization of schedules accounting for various BEB manufacturer models;
- Electrification Transition Plan: Overall electrification plan to achieve full fleet electrification including rolling stock and supporting infrastructure specifications, implementation strategy, environmental benefits, timelines, and costing;
- Facility Assessment: Analysis including power and equipment requirements, existing constraints and capabilities, and off-depot solutions;
- Noise reduction estimates and climate risks and resiliency measures.

A Request for Qualified Quotation closed in March 2022. HDR Corporation of Toronto, Ontario was awarded the master services contract by a panel of Ontario transit system representatives. It is recommended Chatham-Kent enter into a service agreement with this consulting firm according to the terms negotiated under the Transit Procurement Initiative.

Funding for this project is recommended to come from Infrastructure Canada's Zero Emission Transit Fund (ZETF). ZETF will fund up to 80% of the consultant costs, equating to \$111,140.80. It is recommended a contribution agreement be entered into with the Government of Canada to receive this funding with the remaining \$27,785.20 project cost funded from the Provincial Gas Tax Reserve.

Facility Assessment

The primary obstacle to electrification in Chatham-Kent is a lack of charging infrastructure. The Municipality is further challenged because it does not own a transit depot where charging infrastructure would be most beneficial. Third-party transit operator contracts include the provision of their own depot for overnight vehicle storage and servicing.

The depot location, physical design, and local energy capacity is critical to both the type of BEB procured and how routes can be designed to accommodate electrification. Some Ontario transit agencies have concluded their depots require extensive

renovation to install charging stations and electrical substations. There is currently no plan for the Municipality to obtain its own depot in which to install charging infrastructure. It is unknown if the scope of infrastructure necessary to electrify Chatham-Kent's public transit fleet would be found in a future transit operator bid. Capital funding from senior levels of government for public transit charging infrastructure require the Municipality to retain ownership.

Staff anticipate the facility assessment performed by the consultant may either be used in future transit operator bid specifications or to determine the ability for existing Municipal facilities to be utilized for off-depot vehicle charging. While the latter option may not support a long-term approach to full-scale transit electrification, it may be suitable to commence a smaller scale pilot program involving one or two BEB transit vehicles.

Areas of Strategic Focus and Critical Success Factors

The recommendations in this report support the following areas of strategic focus:

- ☐ Economic Prosperity:
Chatham-Kent is an innovative and thriving community with a diversified economy
- ☐ A Healthy and Safe Community:
Chatham-Kent is a healthy and safe community with sustainable population growth
- ☐ People and Culture:
Chatham-Kent is recognized as a culturally vibrant, dynamic, and creative community
- ☒ Environmental Sustainability:
Chatham-Kent is a community that is environmentally sustainable and promotes stewardship of our natural resources

The recommendations in this report support the following critical success factors:

- ☒ Financial Sustainability:
The Corporation of the Municipality of Chatham-Kent is financially sustainable
- ☒ Open, Transparent and Effective Governance:

The Corporation of the Municipality of Chatham-Kent is open, transparent and effectively governed with efficient and bold, visionary leadership
- ☐ Has the potential to support all areas of strategic focus & critical success factors
- ☐ Neutral issues (does not support negatively or positively)

Consultation

Financial Services were consulted regarding the recommendations in this report.

Financial Implications

The financial implications and funding sources for this project are as follows:

Budget	Amount
Project Cost (incl. HST and contingency)	\$138,926.00
Zero Emission Transit Fund	(\$111,140.80)
Provincial Gas Tax Reserve	(\$27,785.20)
Total	\$0

Table 1: Project Cost Breakdown

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Attachment(s):

none