

Date: 2021-02-08

Subject: **Brampton Transit – Canada Infrastructure Bank**

Secondary Title: Requesting Council authority to execute a non-binding Memorandum of Understanding (MOU) with the Canada Infrastructure Bank related to transit electrification financing opportunities.

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Report Number: Brampton Transit-2021-166

Recommendations:

1. That the report from Alex Milojevic, General Manager, Transit, dated February 8, 2021, to the Brampton City Council Meeting of February 17, 2021, re: **Brampton Transit – Canada Infrastructure Bank (Report Number: Brampton Transit-2021-166, IB.c)**, be received; and,
2. That the General Manager, Transit or designate be delegated the authority to execute on behalf of the City a non-binding Memorandum of Understanding (MOU) with the Canada Infrastructure Bank (CIB) for the purpose of exploring potential financing opportunities related to the electrification of the transit system on the terms described in this report and otherwise satisfactory to the General Manager, Transit or designate and in a form acceptable to the City Solicitor or designate.

Overview:

- **Council has approved recommendations related to the following transit electrification priorities:**
 - i. **That staff consider electric buses for any Bus Rapid Transit project;**
 - ii. **Endorsing the electrification during Phase 1 build, required to support a zero tailpipe emission bus fleet, of the New Third Transit Maintenance and Storage Facility (estimated at \$150M)**
 - **\$175M required for construction of Phase 1 (ICIP application pending approval);**
 - iii. **Approval in principle for an eBus Phase II trial, subject to external funding required by upper levels of government (estimated at \$32M), in support of the transition to an electric bus fleet.**

- iv. **Complete a network-wide Transit Fleet Electrification Feasibility Analysis & Simulation Based Planning (budget approved at \$250K, project has commenced);**
 - v. **Complete a Transit Sustainable Fleet Strategy and Rollout Plan (budget approved at \$150K).**
- **Items (ii) and (iii) above remain unfunded at this time.**
 - **On October 1, 2020, the federal government announced a new \$10 Billion investment in new major infrastructure initiatives under the Canada Infrastructure Bank's (CIB) Growth Plan (plan).**
 - **The plan allocates \$1.5B over three (3) years to expand and accelerate the adoption of zero emission buses, and electrify facilities.**
 - **The plan supports Federal government mandate to grow electrification:**
 - **Commit to working with provinces and territories to help school boards and municipalities purchase 5,000 zero-emission school and transit buses in the next five years (2020-2024); and,**
 - **Starting in 2023, ensure that new federal investments in public transit are used to support zero-emission buses and rail systems and work with municipalities to address any exceptional circumstances.**
 - **Staff have been in discussion with CIB and through this report are requesting Council approval to proceed into negotiation discussions with CIB regarding potential financing opportunities.**
 - **Should a satisfactory MOU be reached, staff will report back to Council on the plan for the negotiations on a subsequent legally binding financial arrangements for temporary and long term borrowing of the funds required by the City of Brampton for transit electrification from the Canada Infrastructure Bank.**

Background:

Summary of recent Council decisions supporting transit electrification:

June 10, 2020 | CW128-2020:

- **Electrification of the new Transit Facility will support the City's environmental commitments.**
- **A motion was approved and a request was subsequently initiated to the Government of Canada (Minister McKenna), for consideration of a funding grant of approximately \$150M, to provide the estimated investment required to construct ZEB-capable electrification of the third transit facility in the City of Brampton.**
- **The electrification of the third facility remains unfunded and the current high level preliminary cost estimate for electrification requirements in Phase 1 of this facility is \$150M, and is subject to further validation through the detailed design phase subject to available funding/financing. Elements include and not limited to chargers, substations, on-site energy storage capacity, etc.**
- **The \$150M estimate does not include the higher purchase price for an electric bus compared to conventional buses, or additional electric bus charging equipment and related infrastructure required beyond the property such as on-route overhead**

eChargers, power grid improvements, or additional retrofitting of existing transit facilities (Sandalwood or Clark Facilities).

September 30, 2020 | CW216-2020:

- Staff will report back in 2022 on the status of battery-electric bus trial (eBus) Phase I following a period of one year after the official start of service with the new electric buses.
- Scope highlighted for eBus Phase II trial (estimated at \$32M) to support the transition to an all-electric bus fleet, contingent on securing external funding.
- Council approved an amendment to the 2020 capital budget and delegated authority to the General Manager, Transit, to undertake two key studies required to support electrification of the bus fleet:
 - a. Brampton Transit Network Electrification Feasibility Analysis and Rollout Plan (\$250K), and
 - b. Brampton Transit Sustainable Fleet Transition Strategy (\$150K)

January 27, 2021 | Report #: CAO's Office-2021-155

- Through the above report, Council approved the updated Term of Council Priorities' including, as outlined in the Term of Council Priority Project Summaries (Table A), the electrification of the 3rd Transit Facility at build.
- Further intergovernmental advocacy is required to advance this priority project, with a motion approved by Council to engage Brampton-area MPs on the importance of this project and the funding required to include electrification.

Current Situation:

Current ICIP Funding:

The City of Brampton has submitted applications under the Investing in Canada Infrastructure Program, Public Transit Stream (ICIP); including Project # ICIP-BRM-09, \$175M for Phase 1 of the Third Facility. At the time of writing this report, ICIP project and funding approval has not yet been provided. This amount does not include the additional high-level cost estimate of \$150M for the electrification of this facility required to support a ZEB fleet.

Brampton Transit's total ICIP submission of \$479,096,045 is the total application value under ICIP public transit stream, which utilizes our entire federal (\$191,638,418) and provincial (\$159,682,712) allocations. At this time, the City has submitted projects to fully exhaust the City of Brampton's ICIP funding allotment under this stream.

CIB Growth Plan:

On October 1, 2020, the federal government announced a new \$10 Billion investment in new major infrastructure initiatives under the Canada Infrastructure Bank's (CIB) Growth Plan. This is a three (3) year plan that is projecting creation of approximately 60K jobs. Investments will be delivered through five (5) major initiatives as follows:

	\$1.5B for zero emission buses	To expand and accelerate the adoption of zero emission buses which will modernize bus fleets, reduce green house gases and reduce operating costs over the long-term. This supports the government's goal of 5,000 new zero emission buses.
	\$2.5B for clean power	To facilitate interprovincial electricity transmission or interties, clean power and storage. This step will support clean power, reduce greenhouse gas emissions and help Canada in its 2030 and 2050 emissions reductions targets.
	\$2B for energy efficient building retrofits	To improve the energy efficiency of existing buildings and help large real estate owners, both public and private, modernize their assets. Improved energy efficiency will reduce greenhouse gas emissions and operating expenses.
	\$2B for large scale broadband	To develop large projects with significant connectivity gains for Canadians in underserved communities. The CIB will drive projects forward which connect substantial numbers of households and businesses.
	\$1.5B for agriculture infrastructure	To catalyze investments in transformative agriculture infrastructure projects. Benefits of this new initiative would include cultivation of more land, increased food output, improved water resource management, secure domestic food supply and an increase in exports.
\$500 million for Project Acceleration		To accelerate the delivery of high impact projects in which the CIB intends to invest. This includes investments for due diligence and early construction works.

\$1.5 Billion – Zero Emission Buses (ZEBs):

- Investment targets the accelerated adoption of ZEBs
- The CIB will assist transit agencies by financing the transition to fleet electrification to cover high up-front capital cost of ZEBs and related charging infrastructure including transit facility ZEB capable/ready new construction and retrofits.
- Lifetime operational costs for ZEBs are estimated to be as much as 40% lower than diesel*, this provides a sustainable source of funds to repay the CIB's investment.
- CIB's investment strategy may also help address the transition and procurement barriers by facilitating Pan-Canadian participation, knowledge sharing and potentially bulk purchasing.
- Beyond the immediate priorities in the \$10B Growth Plan, the CIB will continue to focus on existing and new opportunities for transformational public transit projects across Canada such as light rail transit, regional rail, and subway and bus rapid transit.
- This is a financing model, not a funding mechanism. Repayment terms (rate, period) have not been published by the CIB and are negotiable with each agency dependent on terms.
- Long term (15+ years) and low interest loans. Debt repayment would only commence once the projected net savings over diesel are proven.
- CIB would share in the risk associated with these repayment assumptions.
- Additional details may be referenced on the [CIB's website](#).

* Note: The 40% savings referenced by CIB funding announcement are based on CIB market assumptions; yet to be validated by the transit industry in Canada (based on real world deployments of ZEBs).

Corporate Implications:

Financial Implications:

Upon completion of a proposed financing arrangement with CIB, staff will be reporting back to Council with the full implications.

Legislative Services:

Legal Services will review the MOU to be executed and approve same as to form.

Other Implications:

Through this report, staff are seeking Council authority for the General Manager, Transit, to execute a non-binding Memorandum of Understanding (MOU) with the CIB. This MOU will permit more detailed discussions to progress with CIB, which staff believe may lead to an eventual long-term, shared-risk financing arrangement with CIB for Brampton's unfunded priority electrification requirements.

The MOU would be a high level document. The MOU would be a non-binding document that would not place any budgetary obligations upon the City. The MOU would demonstrate a willingness by each party to dedicate the required time and resources to reach a financial close on a mutually satisfactory deal.

The MOU would allow staff and the CIB to establish the core requirements of a potential financing arrangement, which may include such terms as:

- The characteristics of the long-term, low financing loan, methodology to model operations and determine the operational savings from where loan payments will be made.
- Target number and type of eBuses required (financing the price differential between a diesel bus and ZEB) over a defined period of time. This may include eBus Phase II.
- Facility and infrastructure requirements, including the electrification requirements for the New Third Transit Facility (to build the facility as eBus capable, during Phase I construction), and retrofit requirements for existing transit facilities (Sandalwood and Clark).
- Support required on-street infrastructure, including installation of on-route overhead chargers, transformer and power requirements, and civil works to construct.
- Additional consulting work (architectural/civil/electrical) that that may be required to assess the power requirements for facility design, construction, and retrofitting.
- The financing structure(s) required to comply with the Municipal Act, 2001 including the requirements of the Region of Peel as the upper-tier municipality
- Roles and responsibilities of each organization.

Each party would have the ability to end the MOU at any time by notifying the other, without penalty. The execution of any binding agreement would be subject to further approvals from both Council and the CIB, based on the terms agreed upon, at a later point in time.

Staff will ensure that the City of Brampton will continue to be eligible for upper level government funding of electrification infrastructure and eBuses, even if a loan arrangement with CIB is executed.

Term of Council Priorities:

Transitioning the current diesel/diesel-electric hybrid bus fleet to full zero tailpipe emission buses supports the Brampton 2040 Vision and was included in the 2019-2022 Term of Council Priorities established to improve transit, implement a green framework, sustainable growth, and lead in environmental innovation. During the Council meeting of January 27, 2021, Council reconfirmed the priority status of transit electrification, to be included as part of Phase 1 build of the New Third Transit Facility.

Transitioning to a fully electric zero emission bus fleet in the future builds on Council's commitment to reducing our carbon footprint and building a Green City, and helps to achieve the goals established by the Government of Canada to become net zero emissions by 2050.

Conclusion:

Transit electrification projects such as the electrification of the new Third Transit Facility to support ZEB-capable bus fleet are all critical milestones in the City's journey to reducing greenhouse gas emissions generated in Brampton by 80% by 2050.

Electric buses would be introduced into the New Third Facility as new growth buses and replacement buses are purchased based on Brampton's 10-year capital forecast and approved budgets, including Investing in Canada Infrastructure Program (ICIP) and other funding.

Based on the current funding envelope available to the City through ICIP's Public Transit Stream, the City has maximized our approved allocation. The City's application for the \$175M required to construct Phase I of the New Third Transit Facility remains outstanding, awaiting decision by Infrastructure Canada. The estimated \$150M required to electrify the New Third Transit Facility during Phase 1 construction is unfunded, as is the estimated \$32M required to support an eBus Phase II trial in Brampton.

Through the CIB's \$10B Growth Plan, financing opportunities now exist to assist transit agencies in their electrification efforts, during the short (2022-2031), medium (to 2040), and longer term (2050). Staff are seeking Council approval to enter into a non-binding MOU with CIB to explore these potential financing scenarios.

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