

**Date:** 2022-06-27

**Subject:** Transit Electrification Resource Requirements

**Contact:** **Alex Milojevic, General Manager Transit**  
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**Report Number:** Brampton Transit-2022-724

**Recommendations:**

1. THAT the report from Alex Milojevic, General Manager, Transit, dated June 27, 2022, to the Council Meeting of July 6, 2022 re: Transit Electrification Resource Requirements (Report Number Brampton Transit-2022-724, IB.C), be received; and,
2. THAT Council approve three (3) permanent full-time staff to support the electrification program, as outlined in this report, with an estimated impact of approximately \$230,000 for the 2022 fiscal year, which will be funded through savings in the CAO's Emerging Issues operating budget; and
3. THAT the annual operating budget requirement of approximately \$450,000 associated with the three (3) permanent full-time staff, be included in the 2023 operating budget submission, subject to Council approval; and
4. THAT General Manager, Transit, be directed to include other positions that may be identified through the completion of the Zero Emissions Bus Implementation Strategy and Rollout Plan in the 2023 operating budget submission, subject to Council approval.

**Overview:**

- **With over \$700 million in combined electrification funding and financing confirmed and/or requested towards advancing electrification between now and 2027, staff are recommending a 2022 budget amendment to provide for the initial startup deployment of a dedicated electrification team within Transit, beginning with three FTEs in 2022 and an additional three FTEs in 2023 as described in this report.**

## Background:

### Canada Infrastructure Bank (CIB) Zero Emission Bus (ZEB) Program:

- On March 29, 2022, with full support of Brampton City Council, the Canada Infrastructure Bank (CIB), Region of Peel, and City of Brampton executed an agreement for the largest municipal transit investment in Canada by the CIB to date.
- During a Special Meeting of Council on March 9, 2022, approval to execute a financial arrangement with the Canada Infrastructure Bank (CIB) was provided via Council resolution CW086-2022.
- As part of this staff report (Brampton Transit-2022-241) there were a number of prerequisite requirements tied to execution of the CIB agreements, including the need for additional staff in order to effectively manage the new zero emission program, including the CIB agreements:

*“Resourcing requirements: Given the overall magnitude of the conversion of the transit fleet from existing conventional diesel and diesel-electric hybrid buses to a full ZEB fleet, along with all of the required new electrical infrastructure and retrofits to our existing Clark and Sandalwood Facilities, there is a need to build a team that will focus on Transit’s overall electrification program. This CIB deal is a strong indicator of progression, and this staffing requirement will be brought back to Council as a budget amendment.”*

### Brampton Transit Electrification Update:

- Additionally, during the regular meeting of Council on May 5, 2022, Council approved the recommendations within report “Transit Bus Electrification Update” (Brampton Transit-2022-427).
- Through approval of this report, Council provided the necessary authority (CW221-2022) for Transit to proceed with detailed implementation planning for the electrification program that will transition the transit fleet from current clean diesel and clean diesel-electric hybrid buses to fully electric zero tailpipe emission buses.
- Also within this report, the need for additional staff required to manage the zero emission program was highlighted as follows:

*“With over \$700M in combined electrification funding and financing confirmed and/or requested towards advancing electrification between now and 2027, staff will be reporting to Council with any budget impacts to support the deployment of a dedicated electrification team within Transit”; and,*

*“Resourcing requirements:*

*Electrification of the Transit fleet represents the single most significant technological change for bus operations in the history of Brampton Transit. This massive initiative requires an additional technical workforce to bring to fruition. Electrification includes not only the conversion of the existing conventional diesel and diesel-electric hybrid bus fleet to a fully electric zero emission fleet, it also includes significant new electrical infrastructure and retrofits to our existing Clark and Sandalwood Facilities.*

*With the CIB arrangement now financially closed and ZETF funding applications in queue, BEBs are expected to be in operation through to the earliest 2044. A dedicated team that will focus on Transit's overall electrification program is now required. Staff will present a budget amendment request to Council at a future date."*

During this term of Council, Transit – through City Council's leadership and support - has secured more external funding than ever before in its history. New and innovative zero emission bus financing and funding programs are making the electrification transition possible.

These programs will directly help Brampton support the federal government's mandate of reaching 5,000 new zero emission buses and support the purchase of only zero emission buses beginning in 2023.

The electrification program includes, but is not limited to, the following key initiatives:

- Funding
  - Zero Emission Transit Fund (ZETF)
  - Investing in Canada Infrastructure Program (ICIP)
  - Permanent Public Transit Program (PPTP)
  - Permanent Transit Fund (PTF)
- Financing – Canada Infrastructure Bank (CIB)
- New Third Transit Facility + Electrification
- Zero Emission Bus (ZEB) Program:
  - Phase I Trial: Eight Battery Electric Buses (BEBs)
  - Phase II Trial: Ten additional BEB's, Two Hydrogen Fuel Cell Electric Buses (FCEBs), and up to three Diesel Bus Conversions to fully electric.
  - Full fleet transition to zero emission (based on replacement and growth bus needs (which is subject to ridership demands and increased service hours).
- Key Studies (presently underway):
  - Feasibility: CUTRIC Fleet Electrification Feasibility Analysis & Simulation Based Planning Study
  - Implementation: ZEB Implementation Strategy and Rollout Plan
  - Transit 5-Year Business Plan Update (2023-2027)

## **Current Situation:**

As Transit's capital and major infrastructure electrification projects are identified and ultimately funded or financed, there will be requests forthcoming for municipal capital and operating contributions in order to implement and administer these key projects. Such approvals will occur through the regular budget process, or amendments as may be required.

The City is taking maximum advantage of these new programs, for example:

- **Financing** - The Canada Infrastructure Bank (CIB), Region of Peel, and City of Brampton now have an agreement in place for the largest municipal transit investment in Canada by the CIB to date. This is a financing arrangement with CIB for up to \$400M made available to Brampton to finance the higher acquisition costs of up to 450 ZEBs between now and 2027.
- **Funding** - In December 2021, the City submitted a consolidated Expression of Interest (EOI) to INFC under the ZETF for program contribution funding for eight (8) key electrification projects totaling approximately \$395M. With INFC's acceptance of certain projects within this EOI portfolio, Transit is now working with INFC on submitting the full applications for funding consideration.

Electrification of the Brampton Transit fleet represents the most significant change in the history of Brampton Transit. This includes complete transformation of bus operations, fleet maintenance, planning and scheduling, training, and responsibilities tied to complex funding and financial agreements with the federal and provincial governments.

Given the now current status of the electrification initiative additional technical workforce is required immediately to bring to the zero emission bus program to fruition.

Electrification includes not only the conversion of the existing conventional clean diesel and clean diesel-electric hybrid bus fleet to a fully electric zero emission fleet, it also includes significant new electrical infrastructure and retrofits to our existing Clark and Sandalwood Facilities and installation of additional on-street chargers.

With the CIB arrangement now financially closed and ZETF funding applications in queue, BEBs are expected to be in operation through to the earliest 2044.

## **Dedicated Electrification Program Team:**

A dedicated team that will focus on Transit's overall electrification program is now required in order to sustain the work being generated within this revolutionary portfolio. There is an immediate need to now advance these core resources, in a phased approach into 2023, to effectively plan and manage this program.

In order to sustain the current workload in this portfolio, through this report, staff are recommending a budget amendment to support an immediate increase to the 2022 Transit full-time complement for an initial three (3) positions required under the zero emission bus program. For the three positions required in 2022, annualized costs have been estimated at approximately \$450K (inclusive of salary, fringe benefits, WSIB, and non-labour (e.g. computer cost, etc.)). With phased onboarding of these three initial positions beginning in fall of 2022, the estimated financial impact is approximately \$230K from September 2022 until the anticipated approval of the 2023 operating budget in late Q1 2023.

The subsequent requirement of three additional resources will be included in Transit's 2023 operating budget, bringing the total to six new positions for the electrification team between now and 2023.

### **Corporate Implications:**

#### Financial Implications:

The recommendations in this report require three (3) permanent full-time staff, at a cost of approximately \$450,000 annually (inclusive of benefits and WSIB). Should Council approve this report, staff will include this amount in the 2023 operating budget submission, subject to Council approval.

The 2022 fiscal year impact of approving the recommendations in this report are anticipated to be approximately \$230,000. Given the unprecedented diesel fuel rates and despite the significant savings expected in the Transit labour budget, staff do not currently anticipate sufficient savings in the Transit department to offset this pressure. However, staff have identified savings in the CAO's Emerging Issues operating budget and agreed to maintain these savings for the remainder of 2022, which provides sufficient funding in the 2022 approved operating budget to proceed with the recommendations in this report.

#### Other Implications:

##### Human Resources:

The job descriptions for the three new positions in 2022 are drafted and ready for scoping and evaluation by Compensation. Recruitment for these positions will comply with the Recruiting and Retaining Top Talent Policy. Upon successful completion of the recruitment process, the successful candidates will be paid in accordance with the Salary Administration Policy.

### **Term of Council Priorities:**

Transitioning to a green and sustainable transit fleet through electrification supports the Brampton 2040 Vision and the 2019-2022 Term of Council Priorities, which established

commitments to improve transit, implement a green framework for sustainable growth, and lead in environmental innovation. Transit electrification builds on Council's Climate Emergency declaration in support of building a Green City, and helps to achieve the goals established by the Government of Canada including the ultimate goal of becoming net zero emissions by 2050.

As Transit accounts for almost 71% of the Corporate City of Brampton GHG emissions<sup>1</sup>, the electrification of the transit fleet will significantly contribute to reducing the City of Brampton's GHGs, in keeping with the City's established corporate reduction targets:

- Short-term: 20% GHG emission reduction target by 2024.
- Long term: targets to achieve GHG emission reductions of 30% in 2030 and 80% in 2050.

A well-connected environmentally sustainable transit network is critical to building Brampton's position on Canada's Innovation Corridor, and these zero emission electric bus initiatives will continue to drive more Brampton innovation to the Corridor, while continuing to position Brampton Transit as a leader in sustainable transportation and Brampton as a Green City.

## **Conclusion:**

Supporting Brampton's electrification program capital and planning needs there is currently now over \$700 million dollars in combined funding and financing approved through various senior levels of government. An additional \$400 million dollars is anticipated based on future eligible funding and financing currently available within existing federal policy mandates from now until 2029.

With the above investments in Brampton Transit's fleet electrification now in place, staff are progressing work through the ZEB Implementation Strategy and Rollout Plan with CUTRIC and Infrastructure Canada.

The transition to a fully electric fleet represents a major change to Brampton Transit and now requires the necessary resources to effectively manage this new portfolio. This includes the administrative requirements, funding and financing considerations, timeframe for implementation, and development of key strategic partnerships for the design, build, funding/financing, operation, and maintenance of electrical infrastructure required to sustain a fully electric zero tailpipe emission transit fleet. Brampton Transit continues to be recognized in North America as a leader in the new era of electric zero emission public transit.

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<sup>1</sup> Based on the 2018 data; City of Brampton Community Energy & Emissions Reduction Plan (CEERP) and Environmental Master Plan Refresh (Brampton Grow Green).

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