

The Regional Municipality of York

Committee of the Whole
Transportation Services
June 16, 2022

Report of the Commissioner of Public Works
and the Commissioner of Finance

Accelerating Fleet Electrification Zero Emission Transit Fund Application

1. Recommendations

1. Upon approval of the Region's Zero Emission Transit Fund Application Council authorize,
 - a) the Commissioner of Public Works to execute a Zero Emission Transit Fund agreement, including the associated Infrastructure Canada grant and Canada Infrastructure Bank loan component, to advance the purchase of electric buses and related infrastructure as detailed in this report
 - b) Acceptance of the Canada Infrastructure Bank loan subject to a favourable borrowing rate aligned with the Fiscal Strategy
2. Subject to the approval of the Region's Zero Emission Transit Fund Application, Council approve incremental capital expenditures changes and associated funding sources for the new electric buses and related infrastructure as follows:
 - a) Incremental capital expenditures from 2023 to 2025 for up to \$213 million
 - b) Up to an additional \$265 million Capital Spending Authority as required to issue contracts for fleet and supporting infrastructure, with further detail in Attachment 1
 - c) Debt Authority for up to \$137 million
3. If the Region's application is successful, Council authorize a one-time exemption to the Council directive of not issuing new tax levy debt to participate in the Canada Infrastructure Bank loan program.

2. Summary

This report provides Council with an update on the federal Zero Emission Transit Fund (ZETF) application process and how this fund could support the Region's Council-approved Transit Fleet Electrification Program.

This report also seeks Council authorization for a specific exemption to the Council directive not to issue new tax levy debt to participate in the ZETF program.

Key Points:

- The Zero Emission Transit Fund federal program was developed to provide financial support to municipal transit agencies pursuing fleet electrification
- The ZETF is a joint program providing \$2.75 billion in federal grants from Infrastructure Canada and \$1.5 billion in low-interest loans from the Canada Infrastructure Bank (CIB)
- Grants provided by Infrastructure Canada focus on infrastructure and chargers required to support electric buses included in the application. Loans provided by CIB focus primarily on the purchase of electric buses with the loan acting as a line of credit drawn on as eligible costs are incurred
- In 2021, an expression of interest was submitted by staff and subsequently approved to proceed to Stage Two of the financial application by Infrastructure Canada in January 2022
- Funding obtained through the ZETF will accelerate implementation of critical infrastructure needed to support the overarching plan while positioning the Region to achieve its stretch goal of transitioning our entire transit fleet by 2041
- Should the Region's application for funding be approved, an exemption to Council's directive not to issue new tax levy debt would be required for the loan portion of the fund from CIB
- The financial application includes a total funding request of \$213 million with about \$76 million in the form of a grant and \$137 million in the form of a low-interest loan. The total project cost of \$350 million includes \$137 million in Regional funding.
- Repayment of the low-interest loan is subject to realizing anticipated lifecycle cost savings
- If approved, this loan increases the Region's debt and may reduce its borrowing capacity for growth projects requiring development charge-related debt financing. Reprioritizing capital programs and using reserves would help offset the impact of the loan
- Acceptance of the loan is subject to the Region receiving favourable terms, including borrowing rate, that align with the Region's Fiscal Strategy and support Council-approved capital programs. In consultation with Commissioner of Public works, the Commissioner of Finance will determine if financial terms are favourable to the Region

3. Background

Council approved the Transit Fleet Electrification Plan in December 2020

In [December 2020](#), Council approved the Transit Fleet Electrification Plan providing a defined path for transitioning to a fully electric fleet by 2050. This includes a phased approach, balancing technology adoption with service reliability and incorporating timelines required to deliver necessary infrastructure.

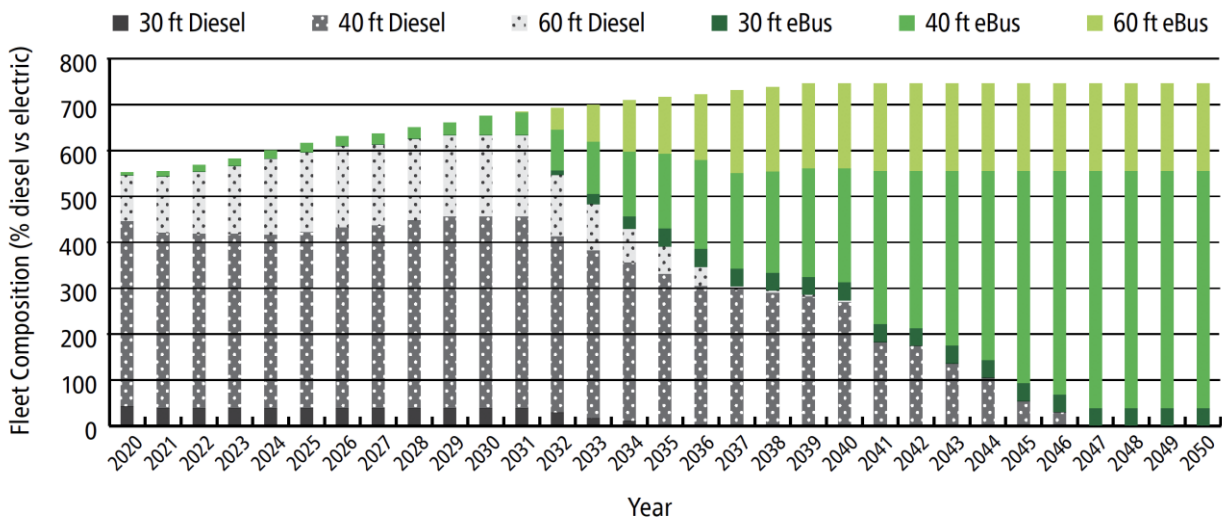
The electrification plan includes purchasing diesel buses along with incremental quantities of electric buses up to 2029 and then transitioning to exclusively purchasing electric buses in 2030 and beyond.

The plan will see the entire transit fleet converted to electric by 2050, in line with Canada’s target of net-zero emissions by 2050. Council also recognized an accelerated approach that includes exclusive purchase of electric buses starting in 2025. This accelerated approach would see the transition of the entire transit fleet completed by 2041 as a stretch goal.

Transit Fleet Electrification Plan will require \$832 million in capital funding over the next 30 years to achieve the zero emissions target

The Transit Fleet Electrification Plan is a phased approach to electrification. An incremental number of electric buses are being purchased between 2020 and 2029, totalling 30 buses, followed by transitioning to exclusive purchase of electric buses by 2030. Through this plan, the Viva Rapid Transit fleet totalling 22% percent of the overall YRT fleet, including most of the sixty-foot buses would be fully converted by 2042. The conventional YRT fleet totalling 78% percent of the total fleet would be converted by 2050 (Figure 1).

**Figure 1
Fleet Electrification Plan (2050)**



This plan requires an estimated \$832 million over 30 years to deliver infrastructure upgrades, required charging stations and the increased cost of electric buses compared to diesel buses.

Zero Emission Transit Fund was developed to support transit agencies pursuing fleet electrification and emission reductions

The ZETF was developed to support municipal transit agencies and school transportation providers pursuing fleet electrification and emission reductions. The fund identifies a shift from fossil fuel engines to electric energy generated from zero emission power sources across Canada as an opportunity for significant greenhouse gas emission reductions.

The fund also recognizes challenges faced by municipalities when considering a shift to an emissions-free fleet. Complexities from new technology adoption and up-front infrastructure costs have specifically been identified as eligible for grant funding. The fund's goal is to help procure 5,000 zero emission public transit and school buses throughout Canada.

In support of these challenges, the joint program consists of a \$2.75 billion ZETF grant program from Infrastructure Canada and a \$1.5 billion low-interest loan from the Canada Infrastructure Bank. Planning work and capital expenditures, including fleet and supporting infrastructure, are eligible expenses.

Applicants can accept both grant and low-interest loan financing as part of the program. Approved projects require all eligible expenses to be submitted before the fall of 2025.

Over the last two years, staff have been monitoring performance of York Region Transit electric buses and charging systems

In [January 2019](#), Council approved the purchase of six electric buses as part of the Pan Canadian Electric Bus Demonstration and Integration Trial. These electric buses were received in early 2020 and went into service in June of that year.

In 2021, six more electric buses were added to the York Region Transit (YRT) fleet to expand service areas, bringing the total to twelve electric buses.

Over the last two years, staff have been monitoring and evaluating the performance of our electric buses and associated charging systems, and continue to evaluate energy usage, emission reductions, bus reliability, charging events, operations and maintenance.

The cost of operating an electric bus throughout the two-year trial is 31% less than a diesel bus of a similar age when comparing energy costs and preventative maintenance activities.

YRT electric buses have travelled over 251,000 kilometres to date, resulting in a reduction of 217 tonnes of greenhouse gas emissions.

Overall reliability of electric buses and charging equipment has improved from the Trial launch. Staff is working with original equipment manufacturers and industry partners to address ongoing issues, and better align support and servicing with transit agency expectations.

4. Analysis

In November 2021, staff submitted an expression of interest for the Zero Emission Transit Fund

The mandatory first stage of the ZETF application process included submission of an expression of interest (EOI), allowing Infrastructure Canada and the CIB an opportunity to evaluate the Region's project and provide feedback.

The EOI submitted summarized our progress to date on emission reduction initiatives, including the Council-approved Transit Fleet Electrification Plan. The submission included supporting documents such as plans, studies and models.

The EOI proposed funding for 177 battery-electric buses, associated chargers and infrastructure upgrades at YRT garages.

Staff are currently preparing a comprehensive Stage Two financial application, which, if successful, will accelerate our electrification plan

In January 2022, staff were advised the Region's EOI was successful and were invited to submit a financial application in Stage Two of the application process.

With guidance provided by Infrastructure Canada and CIB, staff are developing a comprehensive application, building on project information included in our EOI, and further outlining the extensive planning and project development completed in support of the Region's Transit Fleet Electrification Program.

Funding obtained through the Zero Emission Transit Fund could accelerate implementation of critical infrastructure needed to support the overarching plan, while also increasing the number of electric buses purchased between 2023 and 2025. If successful, ZETF funding would convert 30% of the YRT fleet to battery-electric buses by 2026. Resources required to support the acceleration of work will be proposed as part of the 2023 multi-year budget process.

Participation in the Zero Emission Transit Fund includes an option to access a low-interest loan from the Canada Infrastructure Bank

In accordance with terms of the joint funding under the ZETF, the Region's application is reviewed by Infrastructure Canada and CIB. While the Region is not required to take the loan to access the grant, the application process requires applicants to work with CIB to identify what could be available in the form of a loan. Infrastructure Canada then uses this value to determine how much grant funding could be available to fund the total project cost. If the Region does not use all or a portion of the available low-interest CIB loan, alternative funding would be required of the same value as the CIB loan to complete the project.

The CIB financing links loan repayment requirements with projected lifecycle cost savings over the lifecycle of battery-electric buses purchased through the project. Based on preliminary modelling results, staff believe it is feasible to repay the loan given projected operating cost savings. Furthermore, loan forgiveness is a possibility if anticipated savings do not offset the loan amount over the life of the buses.

5. Financial

Allocation between grant and loan portions will be subject to Zero Emission Transit Fund and Canada Infrastructure Bank application review

In December 2020, Council was advised financial assistance from federal and/or provincial governments would be necessary to offset capital program costs associated with implementing the Transit Fleet Electrification Plan.

Project costs included in the application total \$350 million and include procurement of 180 electric buses, 105 chargers and required infrastructure upgrades between 2023 and 2025.

The Region's 2022 10-year Transportation Capital Plan includes \$137 million expenditures through 2025 and \$85 million in Capital Spending Authority (CSA) to purchase 180 diesel buses. If successful, this Regional funding would be repurposed towards the purchase of 180 electric buses.

Of the total \$213 million incremental expenditures for 2023-2025, 2023 expenditures would decrease by \$9 million compared to the current capital plan to reflect a shift in planned delivery timelines, while expenditures in 2024 and 2025 would be higher than plan by \$158 million and \$64 million, respectively. The slight decrease in 2023 capital expenditures is due to additional time required for procurement of a larger number of electric buses and associated facility upgrades.

Until our Stage 2 funding application has been evaluated by Infrastructure Canada and CIB, the Region will not know the amount of grant funding and/or loan financing that will be available. Preliminary consultation with CIB has identified up to \$137 million in the form of a low-interest loan could be available for this project. Table 1 outlines funding sources and values for the \$350 million project.

Table 1
Zero Emission Transit Funding Sources

Funding Source	CSA included in 10-Year Capital Plan (millions)	Additional CSA Requested (millions)	Total Project Funding Required (millions)
York Region	\$85	\$ 52	\$137

Funding Source	CSA included in 10-Year Capital Plan (millions)	Additional CSA Requested (millions)	Total Project Funding Required (millions)
Canada Infrastructure Bank Loan		\$137	\$137*
Infrastructure Canada Grant		\$ 76	\$ 76*
Total	\$85	\$265	\$350

*Estimated, subject to application and approvals from Infrastructure Canada and Canada Infrastructure Bank

Grants provided by Infrastructure Canada focus on infrastructure and chargers required to support electric buses included in the application. Loan components provided by CIB focus on the purchase of electric buses with the loan acting as a line of credit drawn on as eligible costs are incurred.

If secured, the combined \$213 million grant funding and loan financing would support the conversion of 30% of the transit fleet and would position the Region to achieve its stretch goal of 2041.

Options to offset financial impacts of this low-interest loan include using reserves and reprioritizing capital programs

Based on CIB's financing rate of 1.00% under the ZETF program, the Region would incur costs of \$8.8 million per year to service up to a \$137 million loan, structured as a line of credit.

The potential loan was not factored in the approved 2022 10-year Capital Plan. This low-interest loan will add to the Region's debt pressure and may reduce its borrowing capacity by up to \$137 million for growth projects that require development charge-related debt financing, based on 2022 approved Capital Plan. Options to offset this impact in line with the Region's Fiscal Strategy include using reserves instead of CIB debt and reprioritizing capital programs to offset the loan and maintain the Region's overall debt.

While the potential loan eventually sourced from tax levy adds pressure to the Region's debt level, repayment of the loan will be made possible by lifecycle cost savings realized by accelerated implementation of electric buses. If lifecycle cost savings cannot be realized during the lifespan of the assets, the recovery period could be extended. If full payment cannot be made despite efforts to repay are demonstrated, the unpaid portion could potentially be forgiven.

Credit rating agencies base their opinions on known strengths and risks over the near to mid-term. The Region's existing debentures are issued as general obligation bonds backed by the Region's revenue. Since the loan is supported by lifecycle cost savings of electric buses, it is unknown how this type of debt structure would be treated by credit rating agencies. Finance and Public Works staff will continue to follow up with CIB and credit rating agencies as our application moves forward to clarify and mitigate potential credit rating implications.

The potential Canada Infrastructure Bank loan requires a one-time exemption from Council's directive to avoid issuing tax levy debt

As part of the [2014 Fiscal Strategy](#), Council directed the Debt Reduction Reserve to be used to reduce or eliminate the need to issue tax-levy funded debentures. Repayment of debt from lifecycle cost savings of an electric bus would be funded from the tax levy. As such, obtaining financing from the CIB loan requires a specific exemption to the Council directive if York Region were to participate in it. Staff recommend, if successful, a one-time exemption to the Council directive of not issuing new tax levy debt to participate in the Canada Infrastructure Bank loan program.

6. Local Impact

Local municipalities will benefit from accelerating emission reduction goals and low-carbon transportation, including lower transit fleet-related greenhouse gas emissions, vehicle idling and noise pollution. Funding received through the ZETF supports the Region's move towards a reliable, sustainable and emissions-free transportation network by 2051, in line with local municipal climate change work.

7. Conclusion

The Region's Transit Fleet Electrification Plan identifies significant additional program investments required to transition the fleet to emission-free alternatives. The Zero Emission Transit Fund and Canada Infrastructure Bank loan program could support the electrification of 30% of the YRT fleet if our application is approved.

If our Stage 2 ZETF application is successful, execution of agreements is subject to the Region receiving favourable terms, including borrowing rate, that align with the Fiscal Strategy and support Council-approved capital programs.

These significant investments support the Region's emission targets identified in Vision 2051 and present an opportunity to advance critical infrastructure needed to accelerate fleet electrification by 2041.

This report seeks the required Council authorization to enter into a funding agreement for the Zero Emission Transit Fund program, and the corresponding increase in 2022 budget capital spending and funding authorities, up to a combined value of \$265 million.

For more information on this report, please contact Kyle Catney Director, Operations (A), York Region Transit at 1-877-464-9675 ext. 75637 or Ed Hankins, Director, Treasury Office, ext. 71644. Accessible formats or communication supports are available upon request.



Recommended by:

Kelly Strueby

Acting Commissioner of Finance and Regional Treasurer



Erin Mahoney, M. Eng.

Commissioner of Public Works



Approved for Submission:

Bruce Macgregor

Chief Administrative Officer

June 3, 2022
13725508
Attachment (1)