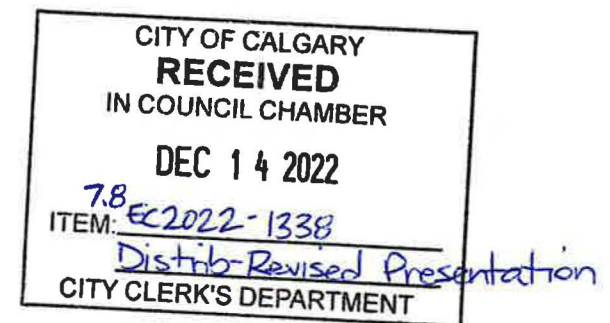


Bus Electrification Strategy

Bus Electrification Project Update

2022 December 14





Recommendations

Executive Committee forward this report to the 2022 December 20 Combined meet of Council and recommends that Council:

1. Approve the Bus Electrification Project as represented in the Calgary Transit Fleet Transition Plan, specifically the Bus Electrification Strategy (Attachment 4),
2. Direct Administration to negotiate and execute any definitive agreements required to implement the Project as represented in the strategy, and with terms acceptable to the General Manager Operational Services and Chief Financial Officer,
3. Approve the purpose, terms and conditions, and restrictions for the Canada Infrastructure Bank Zero Emission Bus Lifecycle Reserve as outlined in the Reserve Template - Request to Create a New Reserve (Attachment 6),
4. Upon execution by the Government of Canada of a contribution agreement for the Zero Emission Transit Fund with terms acceptable to the General Manager Operational Services and Chief Financial Officer, direct Administration to appropriate \$80 million in previously approved capital funding as part of the 2023-2026 Service Plans and Budgets and \$20 million from the Centralized Climate Fund to support the Bus Electrification Strategy, and
5. Direct that Attachment 5 of Report EC2022-1338 remain confidential pursuant to Sections 24(1) and 25(1) of the Freedom of Information and Protection of Privacy Act (Alberta) to be reviewed upon execution of all definitive agreements to implement the Project.



Bus Electrification Strategy

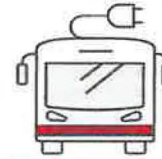
- ❑ The City of Calgary has developed a Bus Electrification Strategy within the overall Fleet Transition Plan. This strategy forms the basis to secure federal funding.
- ❑ The City requires significant financial support to implement the Bus Electrification Project, and with that comes necessary Council approvals to secure the funding.
- ❑ In accordance with Council's direction (EC2022-1159), Administration is reporting back to Executive Committee with an update on the Project and seeking necessary approvals.
- ❑ The Project's implementation will be contingent on signing definitive agreements with Infrastructure Canada.

Bus Electrification Project

Number of battery electric buses purchased:
up to 259



\$1.2 M
Estimated cost per bus



\$310 M
Estimated total cost of buses



\$137 M
Estimated total charging infrastructure capital costs



up to 2
bus base garages equipped with required supporting infrastructure

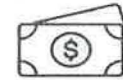


Bus base garages:
Spring Gardens and/or Anderson Garage¹

Funding for charging infrastructure capital costs:
up to 50% in grant funding from Zero Emission Transit Fund

Amount of Canada Infrastructure Bank credit facility available:

up to \$168 M²



Amount of Zero Emission Transit Fund grant funding available for charging infrastructure and bus capital costs:

up to \$223 M



Estimated Calgary Transit greenhouse gas emission reductions:

13,000 tonnes/year



Financing for purchase of up to 259 battery electric buses:

Canada Infrastructure Bank credit facility



¹ Project can be scaled to match funding
² Based on initial battery electric bus operational cost savings assumptions



Anticipated Timeline of Key Events

Milestone	Status	Date
Preparations Begin for Application Submission to ZETF	✓	November 2021
Fleet Electrification Planning Study Initiated	✓	December 2021
Expression of Interest Submitted for the ZETF	✓	March/April 2022
Canada Infrastructure Bank (CIB) Project Screen	✓	May 2022
Fleet Electrification Planning Study Complete	✓	September 2022
Memorandum of Understanding and Terms Sheet with the CIB	✓	October 2022
Borrowing Bylaw Approval Process Initiated	✓	October 2022
Finalize Baseline Assumptions and Contract Terms with the CIB	✓	December 2022
Report Back to Executive Committee Seeking Remaining Approvals	In Progress	December 2022
Execute CIB Credit Agreement	In Progress	January 2023
Start Utility Planning with ENMAX	Outstanding	January 2023
ZETF Application Approval	In Progress	April 2023
ENMAX Construction Start	Outstanding	October 2023
Infrastructure Construction Start	Outstanding	June 2024
Infrastructure Commissioning	Outstanding	December 2025
Initial Battery Electric Buses Onsite	Outstanding	December 2025



Proposed Funding Strategy

- ❑ An immediate step is leveraging the Canada Infrastructure Bank federal loan funding.
- ❑ Interest and principal repayment of the loan will be covered through savings from not operating a diesel fleet.
- ❑ Secure remaining grant funding from Infrastructure Canada's Zero Emission Transit Fund (ZETF).

Sources of Funds

Canada Infrastructure Bank

 \$168 million

Infrastructure Canada


+
 \$223 million

City of Calgary (Transit)


+
 \$80 million

City of Calgary (Climate)

\$20 million

Uses of Funds

Zero Emission Buses (ZEB)

\$310 million 

Charging Infrastructure

\$137 million 

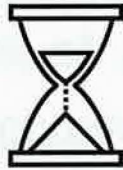
Other Costs

\$44 million 

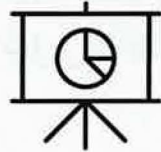
ZEB & Infrastructure
100% City Owned



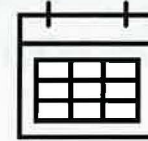
Key Financial Risks



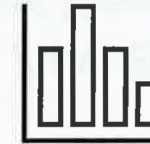
Program economics may be impacted by delaying financial close



The City is unable to secure remaining sources of funding



Implementation of the Project within Federal funding timelines



Long-term forecasts and macro-economic impacts



Recommendations

Executive Committee recommend that Council:

1. Approve the Bus Electrification Project as represented in the Calgary Transit Fleet Transition Plan, specifically the Bus Electrification Strategy (Attachment 4),
2. Direct Administration to negotiate and execute any definitive agreements required to implement the Project as represented in the strategy, and with terms acceptable to the General Manager Operational Services and Chief Financial Officer,
3. Approve the purpose, terms and conditions, and restrictions for the Canada Infrastructure Bank Zero Emission Bus Lifecycle Reserve as outlined in the Reserve Template - Request to Create a New Reserve (Attachment 6),
4. Upon execution by the Government of Canada of a contribution agreement for the Zero Emission Transit Fund with terms acceptable to the General Manager Operational Services and Chief Financial Officer, direct Administration to appropriate \$80 million in previously approved capital funding as part of the 2023-2026 Service Plans and Budgets and \$20 million from the Centralized Climate Fund to support the Bus Electrification Strategy, and
5. Direct that Attachment 5 of Report EC2022-1338 remain confidential pursuant to Sections 24(1) and 25(1) of the Freedom of Information and Protection of Privacy Act (Alberta) to be reviewed upon execution of all definitive agreements to implement the Project.