

**Minutes – Standing Policy Committee on Finance and Economic Development –
December 1, 2023**

REPORTS

**Item No. 4 Transition to Zero Emission Buses,
Project ID: 4210000221, 4210000222, 4210000223, 4210000224
Quarterly Project Status Report No. 2
For the Period Ended September 30, 2023**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Finance and Economic Development received the financial status of the Transition to Zero Emission Buses (“the Project”), as contained in this report, as information.

**Minutes – Standing Policy Committee on Finance and Economic Development –
December 1, 2023**

DECISION MAKING HISTORY:

Moved by Councillor Lukes,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

David Grant submitted a communication with respect to the matter.

ADMINISTRATIVE REPORT

Title: Transition to Zero Emission Buses,
Project ID: 4210000221,4210000222,4210000223,4210000224
Quarterly Project Status Report No. 2
For the Period Ended September 30, 2023

Critical Path: Standing Policy Committee on Finance and Economic Development

AUTHORIZATION

Author	Department Head	CFO	CAO
J. Crowder	G. Ewankiw	C. Kloepfer	M. Jack

EXECUTIVE SUMMARY

Project On Schedule: Yes No

Project On Adopted Budget: Yes No

Percent of Schedule Complete:

Percent of Adopted Budget Spent:

This is the second quarterly report to the Standing Policy Committee on Finance and Economic Development for this project.

This project has been impacted by Federal and Provincial approval delays; however, it is scalable and forecasted to be on time and on budget. Of note:

- Pricing on both diesel and zero emission buses has increased significantly since this project was developed in 2020. Without additional funding, the number of buses purchased will be reduced to stay within the project budget. The full impact of bus purchase reductions is still to be determined but may adversely impact the Transit bus fleet.
- Inflation on the costs related to the charging and hydrogen fueling infrastructure may also result in additional reductions in total bus purchases.
- Current production lead times of 16 months on new buses is not expected to improve significantly prior to the end of 2025 when the bus manufacturer, New Flyer Industries, is targeting to return to full production capacity.
- The Public Service has submitted requests to the Province and Federal Government to extend the Total Completion date from July 31, 2027, to April 30, 2028.
- To mitigate lead time and inflation issues, the Public Service will be requesting a first call on a portion of the 2025 and 2026 capital budgets to allow bus purchase backload in 2026 to be advanced.

The Advisory Committee has reviewed this report and recommends that the report be sent to the Standing Policy Committee on Finance and Economic Development.

RECOMMENDATIONS

That the financial status of the Transition to Zero Emission Buses (“the Project”), as contained in this report, be received as information.

REASON FOR THE REPORT

The Asset Management Administrative Standard FM-004 requires all projects with a total estimated cost of \$25 million (2023) or more report quarterly to the Standing Policy Committee on Finance and Economic Development. This threshold is reviewed at the beginning of each multi-year budget cycle. The Standing Policy Committee on Finance and Economic Development may also request reporting on any capital project.

IMPLICATIONS OF THE RECOMMENDATIONS

No implications.

HISTORY/DISCUSSION

See Appendix C – Key Project Events (History)

Bus Rolling Stock (Update from last report)

- Contract extension 1 for the purchase of 43 diesel buses was awarded to New Flyer Industries in April 2023.
- Contract extension 2 for the purchase of 45 diesel buses is planned to be awarded to New Flyer Industries in October 2023. This award report was approved by the Standing Policy Committee on Public Works on September 11, 2023.
- Battery Electric-Buses (BEB) are scheduled to be built between March and May 2024, with deliveries starting June 2024.
- The Public Service and New Flyer Industries have agreed to schedule production of the Fuel Cell Battery-Electric Buses (FC-BEB) to better align with the timeline of the hydrogen fueling station. These buses will now begin to arrive starting September 2024.
- The Public Service is currently working on pricing and timing of contract extension 1 for the ZEB contract with New Flyer Industries.

Pre-Construction - Charging Infrastructure (Update from last report)

- The design work for the mechanical HVAC upgrades required for the charging infrastructure at Brandon Garage is 99% complete and under review.
- A Request for Proposal (RFP) for the charging infrastructure is planned for October 2023 with chargers being operational in June 2024.

Pre-Construction - Hydrogen Fueling Infrastructure (Update from last report)

- Colliers Project Leaders has been awarded a contract for Professional Owner Advocate Project Management Services for the Installation of Hydrogen Production and Dispensing Infrastructure at 421 Osborne.
- The RFP for the Design-Build of the hydrogen generation and dispensing station closed September 29, 2023. Only one bid was received, with pricing over the affordability threshold and a proposed timeline for completing the hydrogen infrastructure of 24 months. The Public Service is in discussions with the bidder regarding the scope and delivery model of the station which will need to be revised to reduce cost and schedule impacts to the overall program. Without a significant change, it is unlikely the Public Service can proceed with the current plan.
- The first 8 FC-BEB are scheduled to arrive beginning in 2024 Q3 so a provisional source of hydrogen and temporary fueling equipment to commission and test the buses will be required.

Pre-Construction – Maintenance Garage Updates (Update from last report)

- Dillon Consulting has been awarded a single source contract to design a maintenance bay for repairing and servicing compressed hydrogen and battery electric buses.

Table 1 – Contracts

Bid Opportunity #	Company Name	Description	Original Contract Award Value (GST & MRST extra as applicable)	Total Approved Over-Expenditures (Over-Expenditure amount only)	Date of Award	Date of Total Completion	Estimated % Complete
RFP 695-2022	Stantec Consulting Ltd.	Consulting Services for DC Fast Charging Bus Stations at 600 Brandon Avenue Transit Garage.	\$ 145,211.00	\$ -	7-Dec-22		60%
Single Source	Center for Transportation and the Environment	Consulting Services for the Preparation of RFQ and RFP Documents for Design Build Hydrogen Generation and Dispensing project at 421 Osborne Street.	73,000.00	\$ -	7-Dec-22		20%
Tender 539-2022	New Flyer Industries	Supply and Delivery of Heavy-Duty Low Floor Zero Emission Transit Buses.	33,038,400.00	\$ -	15-Dec-22		20%
RFP 64-2023	Colliers Project Leaders	Owner Advocate Project Management Services for Installation of hydrogen production and dispensing infrastructure at 421 Osborne Street.	502,197.00	-	19-Apr-23		10%
Single Source	Dillon Consulting	Maintenance Garage Updates.	51,050.00	-	7-Jun-23		75%
Tender 901-2019 Ext. 1	New Flyer Industries	Supply and Delivery of Heavy-Duty Low Floor Transit Buses.	41,478,462.40	-	19-Apr-23		0%
Single Source	Crosier Kilgour & Partners Ltd	Professional Consulting Services for the Detail Design, Tender and Construction Services for the addition of a Maintenance Service Platform and Crane.	14,000.00	-	27-Jul-23		0%
		Total	\$75,302,320.40	\$ -			

Upcoming Procurements:

Description	Anticipated Award Date
Tender-901-2019 Ext. 2 Supply and Delivery of Heavy-Duty Low Floor Transit Buses.	2023 Q4
RFP-763-2023 Direct Current Fast Charging at 600 Brandon Ave Transit Garage	2024 Q1
RFP-539-2022 Ext. 1 Supply and Delivery of Heavy-Duty Low Floor Zero Emission Transit Buses.	2024 Q2

Schedule (Update from last report)

The project is currently forecast to be on schedule. Under the ICIP program, the Public Service has requested to extend the Total Completion date from July 31, 2027, to April 30, 2028.

Table 2 – Milestones

Milestones					
	Deliverable	Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Date	Estimated % Complete
1	Charging infrastructure design award	2022 Q4		2022 Q4	100%
2	ZEB award	2022 Q4		2022 Q4	100%
3	Hydrogen fueling infrastructure Design-Build RFQ	2023 Q2	2023 Q2	2023 Q2	100%
4	Diesel Bus award	2023 Q2	2023 Q2	2023 Q2	100%
5	Charging infrastructure construction RFP	2023 Q2	2023 Q4		50%
6	Hydrogen fueling infrastructure Design-Build RFP	2023 Q2	2023 Q3	2023 Q3	100%
7	Hydrogen detection, protection, and ventilation updates design award	2023 Q3	2023 Q3	2023 Q3	100%
8	Hydrogen detection, protection, and ventilation updates RFP	2023 Q3	2023 Q4		75%
9	Award contract for charging infrastructure	2023 Q3	2023 Q4		0%
10	Award contract for hydrogen fueling infrastructure	2023 Q3	2023 Q4		99%
11	Charging infrastructure phase 1 construction	2024 Q2			
12	Delivery of first BEBs	2024 Q2			
13	Delivery of first FC-BEBs	2024 Q2	2024 Q3		
14	Delivery of first Diesel bus	2024 Q2			
15	ZEBs in-service	2024 Q3	2025 Q1		
16	Hydrogen detection, protection, and ventilation updates	2024 Q3			
17	Hydrogen fueling infrastructure Substantial Completion	2024 Q4			
18	Charging Infrastructure phase 2 charging infrastructure construction	2026 Q2			
19	Project Completion	2027 Q4			

Risk (Update from last report)

There are no new risks to report and the on-going major project risks are noted in Table 3 below.

Table 3 – Significant Risks and Mitigations Strategies

Significant Risks and Mitigation Strategies	
Risk Statement and Explanation	Risk Mitigation Management Plan
New:	
N/A	
Ongoing:	
Charging infrastructure not reaching substantial completion prior to arrival of buses	Equipment lead time considered in development of charging infrastructure design. Investigate staged installation and temporary charging infrastructure.
Vehicle Lead time	Maintain good lines of communication with New Flyer Industries and advise them early as possible regarding contract extensions to secure earlier line entry position for future contract options.
Decreased purchasing power due to inflation	Revise procurement strategy to ensure maximum number of buses are purchased to reduce operational impact.
Hydrogen infrastructure not reaching substantial completion prior to arrival of buses	Investigate temporary fueling provisions. Modify delivery timelines of buses.
Mitigated:	
N/A	

Financial (Update from last report)

As of the September 30, 2023, the City of Winnipeg has submitted two financial claims to the Province of Manitoba for payment totaling \$5,230,409.02. Claims will not be paid until the project's Contribution Agreement is signed.

For further information, refer to Appendix B – Financial Forecast.

Funding (Update from last report)

The total anticipated budget is presented in Table 4 below.

For additional information, refer to Appendix C - Key Project Events for historical details.

Table 4 – Project Funding Forecast

Funding Forecast				
Funding Source	Adopted Budget ¹ (in millions)	Amended Budget ² (in millions)	Forecasted Budget (in millions)	Committed ³ (in millions)
Class of Estimate	Scalable			
City of Winnipeg				
Transit Bus Replacement Reserve		8.27	22.89	31.16
External Debt	28.43	28.43	17.94	46.37
Federal Government of Canada				
Investing in Canada Infrastructure Program (ICIP)	38.73	51.13	59.53	110.66
Province of Manitoba				
Investing in Canada Infrastructure Program (ICIP)	31.95	42.28	49.92	92.20
Total	99.11	130.11	150.28	280.39

¹ 2021 - 2023 adopted budgets.

² Includes Council authorized first charge of up to \$31 million in 2023 or prior to the adoption of the 2024 capital budget.

³ Total Committed approved by Council April 29, 2021.

Property Acquisition (Update from last report)

N/A

Stakeholder Engagements/Communications (Update from last report)

ICIP signage has been installed at 421 Osborne Street.

The Public Service has updated the Winnipeg Transit major projects website to include “Transition to Zero Emission Buses”, with a timeline that reflects the current project.

The Public Service is developing new bus wraps for the general fleet, with small differences distinguishing diesel and ZEBs, as well as a limited-edition wraps, logos, and branding for a public education campaign to align with the in-service date of the ZEB.

Subsequent Events after Report Period End Date

N/A

FINANCIAL IMPACT

Financial Impact Statement Date: October 30, 2023

Project Name:

**Transition to Zero-Emission Buses,
Project ID: 4210000221, 4210000222, 4210000223, 4210000224
Quarterly Project Status Report No. 2
For the Period Ended September 30, 2023**

COMMENTS:

There is no financial impact from the recommendation in this report as it is for information only.

Laurie Fisher October 30, 2023

Laurie Fisher, CPA, CA
Manager of Finance & Administration

CONSULTATION

This Report has been prepared in consultation with:

N/A

OURWINNIPEG POLICY ALIGNMENT

OurWinnipeg 2045 (2022)

Goal - Environmental Resilience,

Objective 2: Prioritize sustainable transportation as the mobility options of choice.

Prioritize sustainable transportation as the mobility options of choice. Transition to a sustainable transportation system that safely and efficiently moves people, goods and services, increases access to a variety of affordable mobility choices, encourages less reliance on personal vehicle travel, reduces travel time, mitigates congestion and related greenhouse gas emissions, and supports the development of denser, better-connected, healthy and complete communities.

Policy 2.9: Reduce Road Congestion

Increase the efficiency, convenience and usage of the active and public transportation system, to improve air quality, provide a viable alternative to the automobile, and reduce current and future road congestion.

Winnipeg Transit Master Plan (2021)

Network Goals:

- Enhance Customer Experience
- Increase Ridership
- Improve Downtown Mobility
- Complement Land-Use Development
- Improve Multi-modal Mobility
- Ensure Transit is Inclusive
- Continuously Innovate
- Empower Healthy Communities
- Balance Investment with Affordability

Transportation Master Plan (2011)

Key Strategic Goal Five: A transportation system that is financially sustainable.

Key Strategic Goal Six: A transportation system that reduces its greenhouse gas emissions footprint and meets or surpasses climate change and emissions reduction goals set by the City and the Province.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

Strategic Opportunity #3: Advancing Sustainable Transportation – Increasing Mobility Options and Shift to Zero Emission Vehicles

Key Direction 3.7: Utilize Zero Emission Buses

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

Winnipeg Poverty Reduction Strategy Alignment will serve as a guide for strengthening poverty reduction priorities, including affordable housing, employment and income, community well-being, transportation equity, equity in city services, food security, and community safety.

Goal 5(b) Transportation System Equity is Enhanced- improvements to transportation and transit infrastructure and services prioritize areas of higher poverty, and increased interconnectivity to employment and affordable goods and services.

SUBMITTED BY

Department: Transit

Division: Asset Management Office

Prepared by: Erin Cooke, Project Manager – Transition to Zero Emission Buses

Date: November 1, 2023

Appendices

Appendix A – Key Project Facts

Appendix B – Financial Forecast

Appendix C – Key Project Events (History)

Appendix A – Key Project Facts

Appendix A – Key Project Facts	
Project Name	Transition to Zero Emission Bus
Business Owner (Department)	Transit
Project ID	4210000221,4210000222,4210000223, 4210000224
Project Sponsor	Greg Ewankiw
Department Responsible for Project Delivery	Transit
Consultant Engineer (Company Name)	N/A
Adopted Budget	\$280.931M
Class of Estimate (Adopted)	Adopted as a scalable program; current estimate of existing and planned awards is Class 2
Range of Estimate (Adopted)	-15% to +20%; \$238.332M to \$336.436M
Amended Budget	N/A
Class of Estimate (Amended)	N/A
Range of Estimate (Amended)	N/A
<u>Project Scope</u>	
<p>The Transition to Zero Emission Buses is multi-year Project to provide Winnipeg Transit with the data necessary to understand the costs, performance, and operational challenges associated with zero-emission transit, while providing sufficient time for the development of strategies to transform Winnipeg Transit from a diesel bus operator to a zero-emission bus operator. Clean diesel buses and zero emission buses (ZEB) with either battery electric or fuel cell battery electric propulsion systems to replace older model diesel buses and to also address Transit operational requirements.</p>	
<p>The Project also includes the purchase and installation of up to 18 chargers and 72 charge dispensers and associated civil and electrical works including utility connections, electrical service updates, transformers, and equipment installation and commissioning of charging infrastructure anticipated to be installed at the Winnipeg Transit Garage located at 600 Brandon Avenue; hydrogen production and/or dispensing equipment will be installed outdoors at the Winnipeg Transit property located at 421 Osborne Street including, site development, soil remediation, utility connections to existing water and electrical service, new switching and transformers, and equipment installation and commissioning; and modifications to Winnipeg Transit's maintenance facility to accommodate service and maintenance of compressed hydrogen fueled buses.</p>	
<p>Once completed, this Project will result in improved capacity of public transit infrastructure, and improved quality and/or safety of existing and/or future public transit.</p>	
Major Capital Projects Advisory Committee Membership:	
<ul style="list-style-type: none"> - Greg Ewankiw, Director of Transit (Chair) - Catherine Kloepfer, Chief Financial Officer - Jesse Crowder, Manager Asset Mangement Office, Transit - Bjorn Radstrom, Manager Service Development, Transit - Geoff Patton, Director, Assets & Project Management - Danny Tooth, A/Manger, Major Projects Oversight, Assets and Project Management - Matt Dryburgh, Senior Manager Econmic Development & Policy, Economic Development - Becky Raddatz, Manager Office of Sustainability, Water & Waste 	

Appendix B – Financial Forecast

Appendix B - Project Transition to Zero Emission Bus Financial Forecast As at Sep 30, 2023

Project Component Deliverables	Budget (in 000's)			Actual Costs To Sept 30, 2023	Expenditure Forecast (in 000's)				Total Forecasted Costs	Surplus (Deficit) From Amended Budget	Variance Last Report	Change in Variance
	Adopted Budget	Council Approved Change	Amended Budget		Projected Costs							
					2023	2024	2025	2026*				
Engineering, Design and Other	\$ 2,192	\$ -	\$ 2,192	\$ 171	\$ 185	\$ 1,343	\$ 279	\$ 214	\$ 2,192	\$ -	\$ -	\$ -
Construction	\$ 238,638	\$ 31,000	\$ 269,638	\$ 7,110	\$ 7,129	\$ 116,555	\$ 50,616	\$ 88,228	\$ 269,638	\$ -	\$ -	\$ -
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Internal Financing/Overhead Costs	\$ 1,561	\$ -	\$ 1,561	\$ 139	\$ 25	\$ 258	\$ 250	\$ 889	\$ 1,561	\$ -	\$ -	\$ -
Contingency	\$ 7,000	\$ -	\$ 7,000	\$ -	\$ -	\$ -	\$ -	\$ 7,000	\$ 7,000	\$ -	\$ -	\$ -
Total Project Budget	\$ 249,391	\$ 31,000	\$ 280,391	\$ 7,420	\$ 7,339	\$ 118,156	\$ 51,145	\$ 96,331	\$ 280,391	\$ -		
% of Project Budget Spent (Actual Costs to Date / Adopted & Amended Budget)	3%		3%									

* '2026 values are for 2026 and beyond

Project #	Adopted Budget (in millions)	Amended Budget (in millions)	Forecasted Budget (in millions)	Committed (in millions)	Actual Costs (in millions)
4210000221	27.01	27.01		27.01	5.64
4210000222	49.78	49.78		49.78	1.78
4210000223	22.32	22.32		22.32	-
4210000224 *		31.00	7.70	38.70	-
4210000225			41.68	41.68	-
4210000226			100.90	100.90	-
Total	99.11	130.11	150.28	280.39	7.42

*\$31 million first charge authorized in advance of Council adoption of the 2024 budget.

Appendix C – Key Project Events (History)

- On April 29, 2021, Council directed the Public Service to submit the Transition to Zero Emission Buses project to the Investing in Canada Infrastructure Program (ICIP) for Federal and Provincial funding under the Public Transit Infrastructure Stream (PTIS), subject to written confirmation of Federal and Provincial funding that is satisfactory to the Chief Financial Officer, including the 2021 Adopted Capital budget and 2022 to 2026 Five-Year forecast be amended to include \$280.391M for that project.
- On December 16, 2021, Council approved the 2022 Capital Budget, and amended the 2023 to 2027 Five-Year budget to include \$253.385M allocated to the Transition to Zero Emission Buses. The project total of \$280.391M also includes \$27.006M from the approved 2021 budget.
- On September 7, 2022, the Standing Policy Committee on Public Works approved the provisional award of the first contract extension for the Supply and Delivery of Heavy-Duty 40ft. and 60ft. Low Floor Transit Buses in the amount of \$38,476,428 to New Flyer Industries subject to receipt of written confirmation of ICIP-PTIS funding. However, the price proposal from New Flyer Industries expired prior to confirmation of funding.
- On November 16, 2022, the City received notification from the Province that the Transition to Zero Emission Buses was approved for Federal and Provincial funding under the ICIP-PTIS stream. The notification outlined maximum eligible costs of \$276,638,000 with a maximum \$110,655,200 Federal and \$92,203,445 Provincial contribution, respectively.
- On November 29, 2022, the Standing Policy Committee on Public Works approved the provisional award to New Flyer Industries for supply and delivery of 16 Heavy-Duty 40 ft. and 60 ft. Low Floor zero-emission buses under RFP No. 539-2022 subject to written confirmation of ICIP funding.
- On December 5, 2022, the Province provided interim information regarding the project contribution agreement, including an effective start date of October 25, 2022. Only expenditures signed on or after this date are eligible for reimbursement, with the exception of Climate Lens Assessments.
- On December 15, 2022, New Flyer Industries was awarded the contract for supply and delivery of 16 Heavy-Duty 40 ft. and 60 ft. Low Floor zero emission buses under RFP No. 539-2022
- On April 11, 2023, the Standing Policy Committee on Public Works approved the provisional award of the revised first contract extension for the Supply And Delivery of Heavy-Duty 40 ft. and 60 ft. Low Floor Transit Buses in the amount of \$41,478,462.40 to New Flyer Industries.
- On September 11, 2023, the Standing Policy Committee on Public Works approved a provisional award of the second contract extension for Supply and Delivery of Heavy-Duty 40 ft. and 60 ft. Low Floor Transit Buses in the amount of \$34,134,911.10 to New Flyer Industries.