

Saskatoon Transit Long-Term Fleet Renewal and Funding Strategy Update – December 2023

ISSUE

Saskatoon Transit is in the process of implementing a ten-year fleet renewal strategy. Increased inflation rates, increased frequency of fleet breakdowns, and increased fleet retirements, in addition to increasing ridership is imposing significant pressure on Saskatoon Transit to accelerate the purchase of new vehicles in the short term to better position for meeting service levels and current demands. How might the fleet replacement strategy be adjusted to improve the condition and available fleet?

RECOMMENDATION

That the Standing Policy Committee on Transportation recommend to City Council:
That the updated fleet replacement strategy provided in this report be approved, subject to approval of funding from the federal government for the Zero Emission Transit Fund (ZETF) program.

BACKGROUND

City Council, at its regular business meeting held on November 21, 2022, considered the [Approaches to Address Saskatoon Transit's Long-Term Fleet Renewal and Funding Strategy](#) report, and resolved:

1. That the fleet replacement strategy provided in Option 3 – The Fully Accelerated Approach be approved, subject to additional reporting for the 30 diesel articulating buses and subject to a funding strategy for the city contributions for the ZETF program; and
2. That in 2023 funding of \$6.5M be approved for the purchase of five 40-foot conventional diesel buses and three 60-foot articulating diesel buses to be funded by the Federal Support for Transit and Housing Program (STHP).”

At its meeting held on August 16, 2023, the Governance and Priorities Committee (GPC) received the [2024 – 2035 Major Capital Funding Plan](#) report, which included the funding strategy for the City of Saskatoon contributions for the ZETF program. The major capital funding plan presented in this report was approved by the GPC in principle and approved by City Council, contingent on federal government funding approval under the Zero Emissions Transit Fund (ZETF), as part of the 2024/2025 Business Plan and Budget Review meeting in November 2023.

Saskatoon Transit's fleet renewal strategy is generally aligned with its existing Asset Management Plan but is subject to annual funding approvals. The most recent [Saskatoon Transit Asset Management Plan and report](#) outlining the state of the conventional bus fleet was presented to the Standing Policy Committee on Transportation in October 2023 in preparation for the 2024/2025 Multi-Year Business Plan and Budget Review.

At the November 1, 2023 Standing Policy Committee on Transportation, Administration presented the [Status of Saskatoon Transit Operations for Winter 2023/2024](#) report. This report outlined an increased risk for service disruptions in the winter of 2023/2024 due to an increase in the average age of the fleet, bus retirements with no replacements since 2019, and increasing ridership approaching pre-COVID numbers.

A formal announcement of funding for the Bus Rapid Transit project under the Investing in Canada Infrastructure Program (ICIP) was made on November 16, 2023. Included within this grant funding approval is \$60M for new buses. In the 2022/2023 and 2024/2025 Multi-Year Business Plan and Budget meetings, \$45M of the total \$60M of City contributions for bus purchases under the ICIP program was approved under Capital Project 02328. The remaining \$15M is programmed for approval consideration in 2026.

DISCUSSION/ANALYSIS

Cost increase for new buses

In September 2023, Administration executed a contract for eight buses ordered with financial support from Canada's Support for Transit and Housing Program (STHP). Bid pricing was approximately 30% higher than anticipated.

The ten-year fleet renewal strategy approved in November 2022 was based on 2022 dollars. The revised ten-year strategy in Appendix 1 is based on anticipated pricing in 2024 and has resulted in eight fewer 40 foot zero emissions buses that can be purchased with the available ICIP funding due to inflationary pressures. Administration plans to update the ten-year fleet renewal strategy on an annual basis as part of the Saskatoon Transit annual report and/or Saskatoon Transit Asset Management Plan updates.

There has been a recent increase in frequency of fleet breakdowns and fleet retirements, which is expected to accelerate as the existing fleet continues to age. This, in conjunction with increasing ridership, is imposing significant pressure on Saskatoon Transit to secure new buses in the short term and has necessitated accelerating the bus purchase schedule in the ten-year fleet renewal strategy so buses are available to meet service levels and increased demand.

Adjusted fleet renewal strategy

The table in Appendix 1 summarizes the buses to be purchased over the next decade, including impacts to the average age and maximum age of the fleet. Under this updated strategy, the number of bus purchases over the next three years is accelerated, which results in a quicker reduction of the average and maximum age of the fleet, largely due to the 30 buses anticipated to be secured using ZETF funding over this period.

While this is expected to reduce the average age of the fleet to 5.9 years by 2026, the average age will again begin to exceed 7.5 years in 2030. Over the years of 2032 and 2033, 17 existing buses will be older than 15 years, requiring an additional estimated \$25.5M (\$2024) for funding transit fleet replacement. It is important to note that the ten-

year fleet replacement strategy addresses fleet replacement of the existing fleet. Additional buses needed to address growth due to service expansion to new neighbourhoods as well as ridership growth are not included in the strategy.

With the recent ICIP funding announcement, the Administration intends to procure five diesel articulating buses and ten diesel conventional low-floor buses using a portion of this funding. The ten 40 foot diesel conventional low-floor buses would be substituted for ten 60 foot diesel articulated buses, with approval to this revision from the federal government, for two reasons: 1) to replace a portion of the 12 40-foot diesel buses that have been retired in the last year as quickly as possible to reduce risks to reliability of transit service; and 2) to stretch the available ICIP funding to secure the most buses possible given the impacts of inflation on bus purchase costs. This would reduce the total number of 60-foot diesel articulated buses to be purchased with ICIP funding from 30 to 20.

Zero Emission Transit Fund

The Administration is collaborating with the Canadian Urban Transit Research and Innovation Consortium (CUTRIC) to complete a Zero Emissions Transition Plan for Saskatoon Transit. The planning study is funded through the planning stream of the ZETF with the federal government contributing 80% and the City contributing 20% of the funding. Infrastructure Canada requires the planning study to be completed prior to considering funding for capital purchases of battery electric buses. The study is anticipated to be completed in January 2024.

When CUTRIC has completed the planning study, Administration plans to bring a report to Committee with the findings, conclusions and recommendations on the Zero Emissions Transition Plan for Saskatoon Transit. The planning study is looking at the following options:

1. Transition to a full fleet of battery electric buses with all charging infrastructure at the Civic Operations Centre (COC);
2. Transition to a full fleet of battery electric buses with charging infrastructure at COC supplemented with on route charging; and,
3. Transition to a mixed fleet of battery electric buses and fuel cell electric buses (hydrogen).

The economic analysis will include a comparison to the base case scenario of a full diesel fleet.

The assessment will confirm the number of battery electric buses that can be supported by the existing capacity of the building and identify necessary future upgrades including charging infrastructure to support transition to a zero-emission fleet. Once this work is complete, the ZETF application will be finalized for review by the federal government.

If building upgrades are determined to be required to support the 30 additional battery electric buses in the current ZETF application, the Administration would consider a reduction in the number of battery electric buses and the addition of eligible costs

associated with building upgrades under the grant application. The Administration would report back to the Committee should the ZETF grant application be amended in this manner.

Technology is evolving very quickly in both the areas of battery electric buses and fuel cell electric buses (hydrogen), and more is being learned from jurisdictions that have implemented zero emission buses. The economic analysis and cost/benefit analysis and comparison to the base case of a full diesel fleet will influence the future zero emissions transition strategy.

FINANCIAL IMPLICATIONS

If approved, the updated transit fleet replacement strategy is planned to result in a \$115.4M investment from 2023 to 2031. There is \$6.5M accounted for from reallocation of operating funds that was available in one-time funding from the Canada's Support for Transit and Housing Program, which was allocated for the purchase of eight new buses in late 2023. Approximately half of the total investment (\$60M) will be funded by the ICIP funding announced on November 16, 2023.

The remaining \$47M is anticipated to be funded with the City's ZETF application. If successful, 50% of this investment would be funded by the ZETF, with the City being responsible for the remaining 50% or \$23.5M. The funding plan for the City's contribution was approved by GPC in principle in August 2023, and approved under Capital Project P.0583 by City Council in the 2024/2025 Business Plan and Budget Review meetings in November 2023.

OTHER IMPLICATIONS

There are no privacy, legal, social, or environmental implications identified.

NEXT STEPS

Upon approval, the Administration will proceed with procurement of the initial 15 diesel buses with ICIP funding, subject to receiving approval from the federal government to substitute ten 40-foot diesel buses for ten 60-foot diesel buses. The Administration will continue the work with CUTRIC to complete the planning study for the Transition to Zero Emissions Buses and finalize its application under the ZETF program. The Administration would report back to Committee with any required updates to the fleet renewal strategy should the ZETF application require amendment to account for building upgrades at the Civic Operations Centre as well as possible implications to the ten-year fleet renewal strategy.

As more information becomes available from the federal government on the Permanent Public Transit Funding program announced to start in 2026/2027, the Administration will look for opportunities to leverage this funding for fleet replacement and/or addition when the current federal program funding has been exhausted. This will include consideration for infrastructure enhancements to support the zero emissions bus implementation subject to the findings of the CUTRIC planning study and future reporting to Committee.

The Administration will make adjustments to the exact numbers and type of buses ordered as outlined in this report based on factors such as actual tender prices and procurement timing. The numbers and type of buses in this report outline the overall strategy, and the Administration will report back to City Council only if significant deviation from the strategy is being considered. Further, the Administration will provide regular reporting, at least annually, on fleet status as part of Saskatoon Transit annual report and/or Saskatoon Transit Asset Management Plan updates.

APPENDICES

1. Saskatoon Transit 10 Year Fleet Renewal Strategy Update

Report Approval

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