

MEETING DATE: August 29, 2001

SUBJECT: Project Funding Approval Forty-Foot Low-Floor Diesel Bus Procurement Program

RECOMMENDATION

It is recommended that the Commission:

1. Approve funds, subject to Council of the City of Toronto approval, in the total estimated upset limit amount of \$278M, which includes an adjustment for the GST rebate, in-house engineering and administrative costs, in-plant and receiving inspections, preparation for service, travelling expenses to the manufacturing facilities, and an allowance for contract changes for the purchase of 509 forty-foot low-floor diesel buses, to cover bus deliveries for the period 2003 through to 2005,
2. Forward a copy of this Report to the Budget Advisory Committee and the Council of the City of Toronto with a recommendation for approval to permit the Commission to award a contract at its regular meeting of either October 31, 2001 or November 28, 2001, and

3) Noting that this procurement is based on a new bus fleet plan that incorporates the following items:

- the 6 year and a 12 year bus rebuilds are being replaced with only one mid-life rebuild to reach an 18 year life because:

- newer buses have better structural frames including stainless steel
- new buses have extended warranties (7 to 12 years)
- pre-rebuild assessments confirm better condition
- longer diesel engine life

life cycle costs are being reduced significantly

- 79 D40-90 Flyer buses (delivered in 1990) are being retired early because:

- structural corrosion is much worse than expected
- cost to rebuild uneconomical

- even if rebuilt, structural failure still possible (like the D40-87 buses that were retired early also)

- buy replacement buses earlier than planned ie. 2005 (reduce quantity to 60 from 79)

- do not do previously planned 12 year rebuild on these buses

FUNDING

Funds for the purchase of low-floor buses were included in the 2001-2005 Capital Program 4.11 Purchase of Buses under Project #6816 – Replacement of Forty-Foot Diesel Buses or Equivalent (pages 777-779 attached as Appendix "A") as approved by the Commission on December 13, 2000. However, at the meeting of April 30, 2001 City Council limited its project approval to expenditures in 2001 and requested that the Commission report back prior to proceeding with future commitments on new bus procurements under this Capital Program. This report responds to that request.

The following table summarizes the funding implications of this report. More detail is included in the body of this report plus in Appendix "C", particularly the summary on page 22.

OVERALL FUNDING SUMMARY

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2005 Total	2001-2010 Total
Operating 6-Year Rebuild)	A	443	4,518	4,609	8,838	13,330	0	0	0	15,570	15,776	31,738	63,084
	P	443	2,219	0	0	0	0	0	0	0	0	2,662	2,662
	C	0	(2,299)	(4,609)	(8,838)	(13,330)	0	0	0	(15,570)	(15,776)	(29,076)	(60,422)
Capital (6 vs Heavy Rebuild)	A	23,900	18,789	18,045	13,613	2,119	9,154	11,100	15,000	7,500	7,500	76,466	126,720
	P	23,783	15,868	14,898	16,071	17,033	17,011	17,861	14,477	1,427	0	87,653	138,429
	C	(117)	(2,921)	(3,147)	2,458	14,914	7,857	6,761	(623)	(6,073)	(7,500)	11,187	11,709
Capital (New Bus Purchase)	A	115	117	79,004	80,019	81,773	134,007	116,380	107,199	105,463	48,491	241,028	753,668
	P	(12)	642	79,699	81,006	116,426	136,262	118,284	94,218	96,134	39,937	277,761	762,596
	C	(127)	525	695	987	34,653	2,255	1,904	(12,981)	(10,329)	(6,554)	36,733	9,028
GRAND TOTAL	A	24,458	23,424	101,658	102,470	97,222	143,161	127,480	122,199	129,533	71,767	349,232	943,312
	P	24,214	18,729	94,597	97,077	133,459	153,273	136,145	108,695	97,561	39,937	368,076	903,687
	C	(246)	(4,695)	(7,051)	(6,393)	36,237	10,112	8,665	(13,504)	(11,972)	(11,830)	18,844	(39,685)

The 509 buses recommended for procurement include the full bus requirements for 2003, 2004 and 2005. The three-year quantity is proposed due to the lengthy lead times for delivery (up to two years) and the operating efficiencies associated with a large portion of our fleet being of the same configuration. The number of buses recommended for 2003 and 2004 is the same as described in the Commission-approved 2001-2005 bus fleet and procurement plan. The original funding plan for 2003-2004 is being maintained and includes two options – either 150 sixty-foot articulated low-floor buses plus 74 forty-foot

low-floor buses or alternatively 299 forty-foot low-floor buses. However, the number of buses recommended for procurement in 2005 is being increased by 60 forty-foot low-floor buses i.e. from 150 buses to 210 buses.

PROPOSED PROCUREMENT PLAN (BUY 60 BUSES EARLIER)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
APPROVED (40-ft + 60-ft)	0	0	100	124	150	241	205	185	180	80	1,265
40-ft in lieu of 60-ft	0	0	50	25	0	0	0	0	0	0	75
APPROVED (40-ft only)	0	0	150	149	150	241	205	185	180	80	1,340
Additions / (Deletions)	0	0	0	0	60	0	0	(25)	(20)	(15)	0
PROPOSED	0	0	150	149	210	241	205	160	160	65	1,340

The need to procure 60 additional buses in 2005 results from a technical assessment of New Flyer tubular steel buses that were scheduled for a 12-year heavy bus rebuild in 2002. This series of bus is not economical to rebuild, as well as being operationally expensive to maintain, and should now be replaced in 2005, not 2008, as previously planned in the Bus Fleet Plan. This advanced procurement shifts approximately \$33M from later years to 2005.

It should also be noted that the project cost to procure the approved number of buses for the years 2003-2005 has increased by approximately \$4M over previous estimates due to unit cost increases and the decision to procure forty-foot buses.

The increase in funding required for new bus procurement can be partially accommodated through under-expenditures in Capital Program 4.13 Bus Overhaul and reductions in the Operating Budget in the period 2001-2005. For the 10-year period 2001-2010, changes in the capital requirements are more than offset by significant savings in the Operating Budget.

BACKGROUND

Bus purchases are ongoing to allow replacement of an ageing fleet and to address increases in ridership. Although transit buses typically have a life of 12 years, the Commission's buses are usually replaced at the end of 18 years. The average age of a Commission bus is currently 13 years compared to an average of 6 to 7 years for buses at transit properties in the United States. Some non-tubular steel frame buses are being rebuilt at 18 years to extend the life to 24 years. In other cases, some tubular steel frame buses are being retired before reaching the 12-year bus heavy rebuild due to the premature onset of structural corrosion. When such corrosion occurs, it is not economical to rebuild the bus and continued use of buses in this condition causes an unacceptable safety risk.

The approved 2001-2005 Bus Fleet Plan is attached as Appendix "B". Initially, it was intended to purchase sixty-foot low-floor articulated buses and forty-foot low-floor buses during the period 2003-2005 or alternatively, if low-floor articulated buses were not available, purchase the equivalent number of forty-foot low-floor buses in lieu of the articulated buses during the same period. After reviewing the sole submission regarding articulated buses earlier this year, it became evident that articulated buses in an acceptable technical configuration would not be available for delivery in the required time frame. Staff decided to defer the purchase of articulated buses and proceed with the alternate option to purchase only forty-foot low-floor buses for delivery in 2003-2005.

A recent inspection of the 79 New Flyer tubular steel buses, delivered to the Commission in 1990 and scheduled for a 12-year bus heavy rebuild in 2002 revealed that they had deteriorated through structural corrosion to a greater degree than expected. As a result, they are unsuitable for continued use in service and should be scheduled for early retirement during 2002-2003 as they fail and/or when new buses are received in 2003. This causes the need to purchase an additional 60 forty-foot buses in 2005.

A revised Bus Fleet Plan is included as part of Appendix "C". It describes changes from the current approved Plan. As summarized below, it includes the purchase of 60 additional buses in 2005 to replace the New Flyer buses being retired prematurely, as well as other significant changes planned for the Commission's bus fleet.

- An additional 60 buses are being purchased in 2005 to replace the loss of New Flyer buses. However, this action reduces new bus procurements in the 2006-2010 period. The total number of buses purchased in the 2001-2010 period remains unchanged at 1340 new buses. However, more funds are required in the first five years of the 10- year plan.

\$36.7M capital in 2001-2005 (includes unit price increase and conversion to forty-foot buses)

- The early retirement of the New Flyer buses reduces the Capital Budget because the 12-year bus heavy rebuild for that series of buses will not occur.

(\$10.6M) capital in 2001-2005

-

- The two bus heavy rebuilds, scheduled at 6 and 12 years, are being replaced with only one bus heavy rebuild at the mid-life, which significantly reduces the life-cycle costs. Over the 10-year period 2001-2010, Commission operating and capital costs are being reduced significantly. However, in the 2001-2005 period,

the Capital Budget actually increases. The factors affecting these changes are as follows:

- The transition to a mid-life bus heavy rebuild results in savings in the Operating Budget because the 6-year rebuild is no longer required.

(\$29M) operating in 2001-2005

- The transition to a mid-life bus heavy rebuild increases the capital costs in the short-term because staff must continue with some 12-year bus heavy rebuilds that cannot be included in the new mid-life program plus introducing mid-life rebuilds instead of 6-year bus heavy rebuilds.

\$18.4M capital 2001-2005

- As a result of both the transition to a mid-life rebuild and the deletion of the 12 year rebuild on the New Flyer buses, production changes were made to the 18 year rebuild to take advantage of the cost efficiencies of maintaining a consistent workforce.

\$3.4M capital in 2001-2005

The net effect of these 2001-2005 bus fleet changes are summarized below. Additionally, the 2001-2010 bus fleet changes, set out in Appendix "C" and also as summarized below, result in a savings of \$40M.

2001-2005 2001-2010

- Capital Budget \$48M \$20M
- Operating Budget (\$29M) (\$60M)
- Total \$19M (\$40M)

-

-

DISCUSSION

In May 2001, a request for proposals for forty-foot low-floor buses was publicly advertised resulting in thirteen companies being issued proposal documents out of which two companies, Orion Bus Industries and New Flyer Industries, submitted proposals. The submissions received from both companies included unacceptable exceptions and qualifications. As a result, the proposal was cancelled.

Staff is negotiating with Orion Bus Industries and New Flyer Industries, which have provided buses to the Commission in the past. Upon successful completion of negotiations, staff intends to seek appropriate procurement authorization subject to funding approval. Due to the lead time for bus procurements of 18-24 months, it is critical that a contract be awarded in 2001 to ensure delivery in 2003. This delivery plan may be optimistic in view of the current experience by numerous transit properties that receive buses many months after the planned delivery schedules due to problems on the suppliers' production lines. Thus, any delay in making a commitment for the procurement of new buses could be further complicated by poor adherence to delivery schedules.

-

JUSTIFICATION

Due to the urgency in establishing a contract to ensure delivery of new forty-foot low-floor buses on schedule, staff is recommending Commission approval of capital funds in an amount not to exceed \$278M, subject to City Council approval.

August 16, 2001

5-92-91

Attachments: Appendix 'A'

Appendix 'B'

Appendix 'C'