

## E1-Bus Replacement 1, \$

### E1(2) – Bus Replacement 2, \$

#### Project Description:

Fleet replacement is one of RFTA's greatest challenges. Each 12-15 years RFTA must replace its entire 88-bus fleet, per FTA and bus manufacturer 12-year/500,000-mile recommendations. RFTA must consider propulsion, seating capacity, cost/seat and other factors in replacement decisions. While standard diesel buses cost the least, they create the most noise and air pollution. The 45' coaches cost far more than the 40-ft or the 35-ft transit vehicles, but they are the most comfortable and attractive to passengers, provide greater seated capacity, and cost less (capital and operating) on a per-seat basis. Propulsion seems to be the most important factor. RFTA's current priority is to consider replacing as much of the fleet as possible with electric buses. Electric buses have the highest capital cost, but they are the quietest, emit nearly zero emissions, and may have the least O&M costs. The rapid pace of electric bus technology development suggests that cost, battery range and charging infrastructure will become less critical concerns in the future.

#### Project Cost Estimate Bus Replacement 1 (includes inflation):

In this scenario, a total of 27 buses are replaced at the end of their service life with BEBs.

Vehicle Type	Quantity-Current	Change	Quantity- Option 2	Cost
<b>CNG</b>	<b>28</b>		<b>27</b>	<b>\$18,803,000</b>
Commuter	6	-4	2	\$1,880,000
Transit	22	3	25	\$16,923,000
<b>Diesel</b>	<b>51</b>	<b>-19</b>	<b>32</b>	<b>\$22,676,000</b>
Commuter	18	-2	16	\$13,444,000
Transit	33	-17	16	\$9,232,000
<b>Electric</b>	<b>9 (hybrid)</b>	<b>29</b>	<b>29 (Electric)</b>	<b>\$29,476,000</b>
Commuter	0	7	7	\$8,680,000
Transit	0	22	22	\$20,796,000
<b>TOTAL</b>	<b>88</b>		<b>88</b>	<b>\$70,955,000</b>

#### Project Cost Estimate Bus Replacement 2 (includes inflation):

Additional replacement cycles are assumed. A second replacement cycle will start in the year 2032 and the cost for this replacement cycle between years 2032 and 2040 is \$88,593,930.

#### Special Considerations:

RFTA has developed the following replacement alternatives.

1. Status Quo Replacement Scenario which will cost approximately \$60 million
2. Invero, Hybrid, MCI BEB Replacement Scenario which is detailed above and will cost approximately \$71 million.