

Comparative costs

estimated cost ranges

	Diesel Bus	compare tbus		Tbus	compare diesel		Guided Tbus	compare diesel		Tram	compare diesel	
			notes			notes			notes		notes	
Initial vehicle cost	190-380k	<	d1	250-400k	>	t1	400-800k	>	t1	500-800k	>	l1
infrastructure /km	150-250k	<	d2	400k-1million	>	t2	450k-1million	>	t2	1-4million	>	l2
maintenance, 20years	900k-1million	>	d3	600k-700k	<	t3	600k-700k	<	t3	700k-900k	>	l3
environmental	50-100k	>	d4	0	<	t4	0	<	t4	0	<	l4
lifetime fuel, 20 years	100k-130k	>	d5	15-20k	<	t5	15-20k	<	t5	18-25k	<	l5
indicative totals	1.31 - 1.80 million			1.26 - 2.2 million			1.82 - 3.1 million			2.52 - 6.02 million		
system installation	9.5 - 17.6 million		sys	18.2 - 39.2 million		sys	23.2 - 47.2 million		sys2	40.0 - 131.2 million		sys2
system lifetime total	39.0 - 52.9 million			35.3 - 59.2 million			37.9 - 64.4 million			57.1 - 153.3 million		

notes

Diesel bus d1 assuming 15 year vehicle life and comparative additional vehicle replacement cost

d2 assuming upgraded road works, improved stopping facilities

d3 assuming replacement cost within 20 years, maintenance at £0.58/km 80,000km/year

d4 EU directive conformity costs, higher taxation costs, carbon credits = £1.33/tonne @ 100tonsCO2/year/diesel + £20,000 for scrubber equipment

d5 1 million miles at 7mpg at £.73/gal

Tbus t1 20 year life, no replacement cost, guided tbuses carry more passengers, as tram

t2 including overhead and feeder equipment and improved busway

t3 no replacement cost, maintenance at £0.41/km 80,000km/year

t4 no ascribable cost

t5 1 million miles at 3kw/mile at £.051/kwh

Tram l1 30 year life, no replacement cost, comparative cost reduction

l2 including overhead and feeder equipment, track construction and civil engineering

l3 no replacement cost, maintenance at £0.64/km 80,000km/year inc. track maintenance

l4 no ascribable cost

l5 1 million miles at 4kw/mile at £.051/kwh

sys 28 vehicles over 28km

sys2 24 vehicles over 28km

maintenance calculations	Diesel Bus	Tbus	Tram
San Francisco:	1.95	1.66	
Vancouver	1.01	0.78	
Seattle	1.22	0.93	
Philadelphia	1.16	0.93	
Dayton:	1.74	0.93	
average	1.416	1.046	
lifetime	1,416,000.00	1,046,000.00	
sterling	933,001	689,208	
£/km	0.579766811	0.428274071	0.64
lifetime, 20years@80km/year	927,627	685,239	1,024,000

source - Booz, Allen and Hamilton, Electric Trolleybus Study for the RTD and LACTC, 1991

conversions factors used -	reciprocal
km/ml	1.609269392
C\$/£	2.244724337
\$/£	1.517683287

