

ACCESS

Vehicle Replacement

Current Fleet Profile

- 248 22-foot cutaway buses
- 116 due for replacement



Overall Length	22'
Operating Range	275 miles
Seating Capacity	12 seated passengers or 5 wheelchairs
Bumper to Bumper Warranty	1 year / Unlimited - Chassis
Drivetrain Warranty	5 years / 100k miles
Fuel type	Gasoline
Estimated Cost	\$110,000

GreenPower – EV Star Min-eBus



- Based in Vancouver, Canada; Porterville, California
 - Chassis and Drivetrain made in China
- Deployments
 - Sacramento Regional Transit: 3 + 3 on order
 - City of Porterville: 10
 - San Diego Airport: 2

Overall Length	22' to 24'
Operating Range	Up to 120 miles
Seating Capacity	14 seated passengers 9 seated + 2 wheelchairs
B2B Warranty	1 year / Unlimited - Chassis 5 years / 100k miles
Drivetrain Warranty	5 years / 100k miles
Charge Time (refuel)	Up to 7.5 hours
Estimated Cost	\$247,738

Lightning Systems – Electric Bus



 Repower
Available

- Based in Loveland, Colorado
- No transit shuttle bus sales
- Orders for transit vans - Amazon



Overall Length	22' to 24'
Operating Range	Up to 110 miles
Seating Capacity	22 seated passengers or 16 seated + 2 wheelchairs
B2B Warranty	3 years / 36k miles
Drivetrain Warranty	5 years / 60k miles
Charge Time (refuel)	Up to 16.75 hours
Estimated Cost	\$200,000

Motiv – Epic E-450 Electric Bus



- Based in Foster City, California
- Deployments
 - Google Mountain View, California: 4
 - University of California, Los Angeles: 1
 - School buses: 20

Overall Length	25'
Operating Range	Up to 100 miles
Seating Capacity	22 seated passengers or 16 seated + 2 wheelchairs
B2B Warranty	5 years
Drivetrain Warranty	5 years
Charge Time (refuel)	8 hours
Estimated Cost	\$247,900

Phoenix Motorcars – Zeus Electric Bus



- Based in Ontario, California
- Deployments
 - City of Redlands, California: 1
 - Austin-Bergstrom Airport: 3 + 3 on order
 - John Hancock/LAZ Parking: 3
 - Procore Campus: 1

Overall Length	22' – 24'
Operating Range	110 miles
Seating Capacity	16 seated passengers or 12 seated + 2 wheelchairs
B2B Warranty	3 years / 36k miles
Drivetrain Warranty	5 years / 60k miles
Charge Time (refuel)	Up to 8.5 hours
Estimated Cost	\$246,493

Vehicle Specification Comparison - Fleet

Energy Type	Electric	Gasoline	CNG	Propane
Drivetrain conversion	Yes - complete drivetrain	No	Yes - Fuel System	Yes - Fuel System
Operating Range	130 miles	275 miles	195 miles	205 miles
Refueling Time	8-9 hours	6-10 minutes	6-10 minutes	6-10 minutes
Altoona Tested? / Warranty	In-progress / 5 Year	Yes - 7 Year / 200,000	Yes - 7 Year / 200,000	Yes - 7 Year / 200,000
New Infrastructure Needed	Yes	No	Yes	Yes
New Infrastructure Cost	\$3.0 - 5.5M	\$0	\$3.7M 3 year (2007)	\$2.0M
Estimated Vehicle Cost (Base)	\$246,493	\$110,000	\$139,500	\$128,000
Incentives	\$80,000	N/A	N/A	N/A
Vehicles Needed	432	248	248	248
Vehicle Cost				
Infrastructure Estimate				
Total				

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New Infrastructure Cost	\$3.0 - 5.5M	\$0	\$3.7M 3 year (2007)	\$2.0M
Estimated Vehicle Cost (Base)	\$246,493	\$110,000	\$139,500	\$128,000
Incentives (HVIP)	\$80,000	N/A	N/A	N/A
Vehicles Needed	432	248	248	248
Vehicle Cost	\$106,484,976	\$27,280,000	\$34,596,000	\$31,744,000
Infrastructure Estimate	\$4,000,000	\$0	\$4,000,000	\$2,000,000
Total	\$110,484,976	\$27,280,000	\$38,596,000	\$33,744,000

Vehicle Specification Comparison - 116

Energy Type	Electric	Gasoline	CNG	Propane
Drivetrain conversion	Yes - complete drivetrain	No	Yes - Fuel System	Yes - Fuel System
Operating Range	130 miles	275 miles	195 miles	205 miles
Refueling Time	8-9 hours	6-10 minutes	6-10 minutes	6-10 minutes
Altoona Tested? / Warranty	In-progress / 5 Year	Yes - 7 Year / 200,000	Yes - 7 Year / 200,000	Yes - 7 Year / 200,000
New Infrastructure Needed	Yes	No	Yes	Yes
New Infrastructure Cost	\$3.0 - 5.5M	\$0	\$3.7M 3 year (2007)	\$2.0M
Estimated Vehicle Cost (Base)	\$246,493	\$110,000	\$139,500	\$128,000
Incentives (HVIP)	\$80,000	N/A	N/A	N/A
Vehicles Needed	253	116	116	116
Vehicle Cost	\$62,362,729	\$12,760,000	\$16,182,000	\$14,848,000
Infrastructure Estimate	\$4,000,000	\$0	\$4,000,000	\$2,000,000
Total	\$66,362,729	\$12,760,000	\$20,182,000	\$16,848,000

ACCESS Vehicle Replacement

- Conclusion

- Electric vehicle cutaway vehicle market is not mature enough for large orders
- Electric vehicle cutaway vehicles are not Altoona tested
- California Air Resources Board, Innovative Clean Transit Rule - Zero Emission vehicles for paratransit not required until 2026
- Converting to compressed natural gas or propane will require infrastructure upgrades

- Recommendation

- Procure 116 replacement vehicles using current configuration