

Benefits of Electric School Buses

As you consider electric school buses for your fleet, there's a few things you should know. Electric school buses offer benefits like:

Cleaner air

- Electric school buses have zero tailpipe emissions.
- When accounting for the emissions from electricity generation, electric school buses reduce greenhouse gas emissions by more than half compared to a diesel school bus.

Safety and comfort

- Electric school buses are quiet, reducing noise pollution on the bus and in neighborhoods.
- Drivers are better able to communicate with students due to reduced noise pollution.

Lower cost

- Electricity is less expensive than diesel fuel and prices are more stable.
- Fewer moving parts means reduced maintenance costs and no oil changes.

Estimated Operating Cost Savings

	Diesel School Bus		Electric School Bus		Savings	
Number of Buses	1		1		-	
Annual Miles Traveled ¹	10,800	mi/yr	10,800	mi/yr	-	
Fuel Efficiency ²	6.8	mpg	0.67	mi/kWh	-	
Fuel Price ³	\$3.70	/gal	\$0.13	/kWh	-	
Total Fuel Cost	\$6,830	/yr	\$2,177	/yr	\$4,653	/yr
Total Maintenance Cost⁴	\$6,500	/yr	\$3,250	/yr	\$3,250	/yr
Lifetime Operating Cost⁵	\$266,600		\$108,540		\$158,060	

¹ Actual mileage data from a local school district

² Actual diesel mpg data from a local school district. Electric fuel efficiency estimated based on manufacturer's specifications.

³ Estimated diesel fuel price for 2022. Electric fuel price based on PGE's rate schedule 32.

⁴ Actual diesel maintenance cost from a local school district. Electric maintenance cost estimated at 50% lower based on manufacturer recommendations.

⁵ Estimated based on expected vehicle life of 20 years.



Estimated Emissions Reduction

	Diesel School Bus		Electric School Bus		Savings
Energy Consumed	1,588	gal/yr	18,360	kWh/yr	
Emissions Factor ⁶	22.4	lbs CO ₂ /gal	0.5	lbs CO ₂ /kWh	
Annual Emissions	35,576	lbs CO ₂ /yr	9,253	lbs CO ₂ /yr	26,323 lbs CO ₂ /yr
Lifetime Emissions⁷	711,529	lbs CO₂	185,069	lbs CO₂	526,461 lbs CO₂

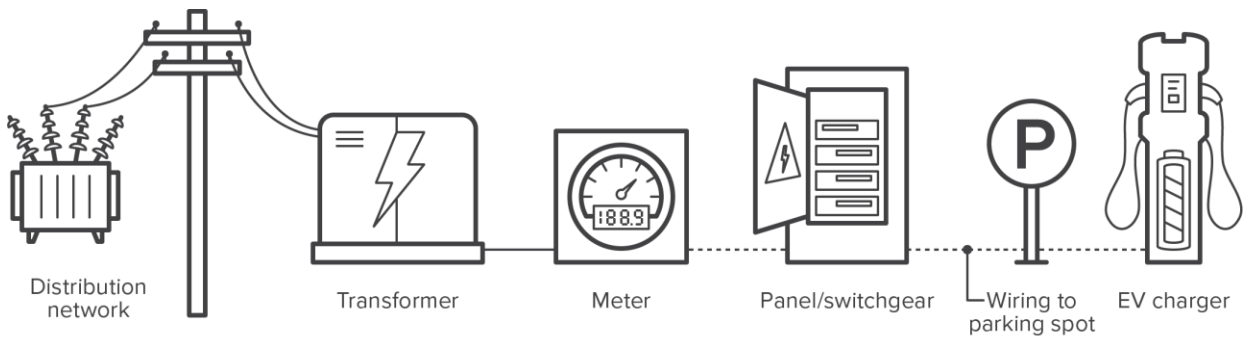
Upfront Costs

Electric school buses cost approximately three times as much as a diesel school bus due in part to how new the technology is and the fact that manufacturers aren't yet producing them on a large scale.

To learn more about the costs and savings of switching to electric school buses, check out our [Fleet Total Cost of Ownership tool](#).

Charging

Electric school buses will need a place to recharge at their depot but the cost to install charging infrastructure can vary by location. PGE's [Fleet Partner](#) program can work with you to determine the appropriate solution. For a full list of eligible chargers, please visit our [Qualified Chargers](#) website.



Infrastructure supporting electric vehicle readiness

Once chargers are installed, consider the utility's electricity rates and how to save money by scheduling charging during off-peak times, managing the peak demand, and participating in utility demand response programs. PGE is exploring new programs that will allow participants to earn revenue while benefiting the grid and enabling more renewable energy.

For more information, contact us at electricschoolbus@pgn.com

⁶ Diesel emissions factor: https://www.eia.gov/environment/emissions/co2_vol_mass.php. Electric emissions factor based on forecasted average emissions factor for PGE energy mix between 2020 and 2030

⁷ Estimated based on expected vehicle life of 20 years.

