Comparing Diesel, Propane, and Electric

Diesel, propane, and electric are the three main fuel options for school buses on the market, with many models available in each category. VEIC has compared each type of bus to help school districts determine which option is right for them.

When deciding which school bus to buy there are four key factors to consider:

Health and Emissions | **Operational Costs** | **Purchase Costs** | **Site Needs**

	Diesel	Propane	Electric
Emissions	High	Medium	Low
Fuel Costs • Diesel and propane subject to frequent fluctuations • Lower electricity prices may be available for off-peak charging, generally overnight	High	Medium	Low
Maintenance Costs • Time & resources	High	Medium	Low
Purchase Cost • Varies by model • Incentives may be available • Cost of electric batteries declining rapidly	Low	Medium	High
Noise	High	Medium	Low
Site Needs	Proximity to diesel fueling stations.	Ability to construct underground or fenced fuel tanks.	Ability to install electric charging stations at maintenance garage or storage location.
Mechanical Considerations	Purpose-built for diesel motors.	Retrofitted to convert propane for use in modified gasoline engines.	Purpose-built for electric motors.
Operational Considerations	Drivers must arrive early to warm buses in the winter.	Drivers must arrive early to warm buses in the winter. Regular fuel tank inspections required.	Buses can be set remotely to warm in the winter. Battery range varies from 60 to 120 miles, dependent on model type and weather conditions.

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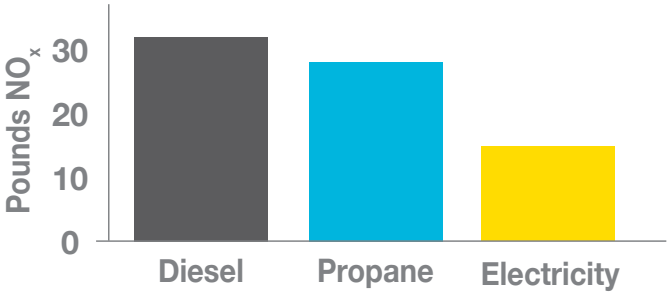
Health and Emissions

Harmful pollutants have serious implications on the environment and the health of those exposed to them. Children are more susceptible than adults to the health impacts from harmful exhaust; cleaner fuels reduce these health risks.

NO_x

Nitrogen Oxides

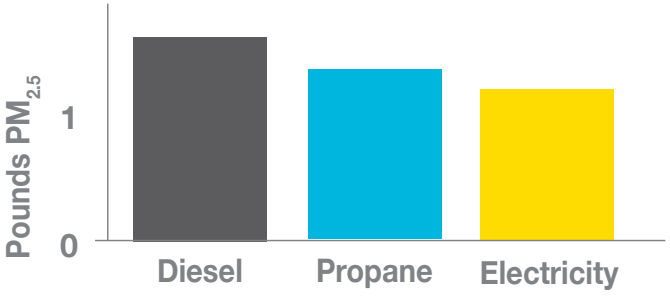
Reducing nitrogen oxides reduces respiratory disease, such as asthma.



$PM_{2.5}$

Particulate Matter

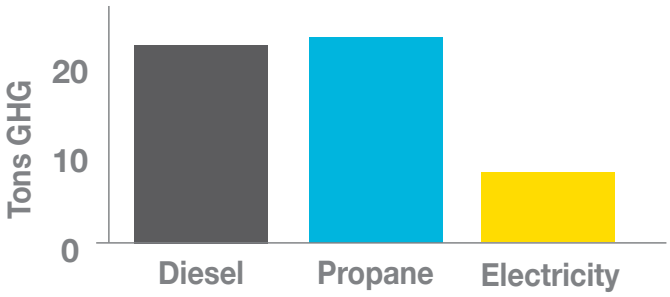
These fine particles pose the greatest health risk and can get deep in the lungs.



GHG

Greenhouse Gas

Reducing greenhouse gas (GHG) emissions helps to mitigate climate change.



Illustrative example of emissions from school bus traveling 12,000 miles for one year in Massachusetts;
Emission Data Source: US DOT AFLEET 2017 Footprint Tool

Contact us today to learn more:

info@veic.org | www.veic.org/electric-school-buses

VEIC is a sustainable energy organization with a mission to enhance the economic, environmental, and societal benefits of clean and efficiency energy use for all people.

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