

BUSES FUELED BY PROPANE AUTOGAS REDUCE EMISSIONS, COSTS FOR PORTLAND PUBLIC SCHOOL DISTRICT

School district focused on reducing emissions realizes cost savings and high performance

AT A GLANCE

Industry

School bus

Organization

Portland Public Schools,
Portland, Ore.

Challenge & Solution

To reduce emissions and fuel costs by remaining on the cutting edge of alternative fuels through the purchase of factory-built school buses fueled by propane autogas.

Advantages of Buses Fueled by Propane Autogas

- School buses fueled by propane autogas produce fewer annual life-cycle greenhouse gas emissions per bus, per year, than school buses fueled by compressed natural gas or gasoline.
- On-site propane autogas refueling stations are compact and easy to install. The speed and ease of propane autogas refueling is comparable to that of gasoline and diesel.
- Vehicles fueled by propane autogas emit fewer harmful emissions than gasoline- and diesel-fueled vehicles, reducing short- and long-term effects in passengers.
- Propane autogas typically costs less than gasoline and it burns cleaner than gasoline and diesel, resulting in less engine maintenance and reduced emissions.



Portland Public Schools (PPS) in Portland, Ore., recognized as one of the most environmentally friendly cities in America, is supporting the city's green initiatives by choosing clean-burning propane autogas for its school bus fleet. The district operates some of its own buses, and contracts with First Student Inc. for additional bus service to transport students. Eighty percent of all the buses are fueled by propane autogas. Combined, PPS's buses travel more than 3.3 million miles each year and transport more than 8,000 students a day. The school district has been committed to using buses fueled by propane autogas for nearly 30 years, setting an alternative fuel example for other schools nationwide.

Going the Distance: From Past to Present

PPS began exploring alternative fuels in the early 1980s because of high gasoline prices and clean air regulations. In 1983, the district converted several buses to run on propane autogas, and the results were impressive. It found that propane autogas was more cost-effective than conventional fuels and burned cleaner, reducing emissions and vehicle maintenance requirements. Soon after, the school district converted most of its buses to run on propane autogas.

Until recently, new buses purchased by the district were retrofitted by a local vendor to run on propane autogas. Now that major bus manufacturers offer factory-built propane autogas buses, PPS is purchasing new school buses with dedicated liquid propane autogas injection engines directly from manufacturers. The district recently purchased 10 new Type-A school buses manufactured by Collins Bus Corp. through Western Bus Sales Inc., that use CleanFuel USA's liquid propane autogas injection system.

Additionally, PPS is installing upgraded fuel dispensing equipment to support its on-site refueling infrastructure. The district's propane provider is covering the majority of the costs of infrastructure installation. The new refueling station will allow two buses to be fueled at once and will track miles per gallon for each bus. The station also will allow for the systematic monitoring of district fuel cost savings.



Propane Autogas — Making Sense and Saving Cents

PPS uses propane autogas to fuel its school bus fleet for the same reasons it originally converted in the 1980s. Propane autogas typically costs less than gasoline and it burns cleaner, resulting in less engine maintenance and reduced emissions. In fact, propane autogas can reduce greenhouse gas emissions by up to 25 percent in propane-autogas-fueled applications compared with gasoline-fueled vehicles.

The school district has reaped financial benefits of propane autogas through reduced bus maintenance costs and extended engine life. According to PPS' fleet maintenance supervisor, Melvin Philbrook, the propane-autogas-fueled buses run up to 30,000 miles longer than those fueled by gasoline.

The district also is saving through significantly lower fuel costs. "PPS' projections for 2012 show a 50 percent savings for its propane autogas purchases when compared with those for gasoline," Andy Leibenguth, PPS' transportation director, explains.

"With all these advantages, propane autogas is clearly the way to go," Philbrook adds.

Working Together for a Sustainable Future

Portland Public Schools contracts with bus provider First Student Inc. to transport many of the students in its district. "When we renew our agreements with contracted student transportation companies, like First Student, we expect them to provide 100 percent propane-autogas-fueled buses," Leibenguth says. "Fueling our school buses with propane autogas has been our priority for years, but it is becoming easier for us to maintain that commitment with the refueling infrastructure for propane autogas already in place. Now advances in technology and manufacturer support have allowed us to purchase liquid-injection, factory-built, dedicated propane-autogas-fueled buses directly from manufacturers."

Within the next several years, the school district expects its contract bus provider to buy a considerable number of new buses, all factory-built to run on propane autogas. Leibenguth says First Student Inc. is expecting the delivery of 90 propane-autogas-fueled NexBuses from Collins Bus Corp. "The buses fueled by propane autogas are clean-burning and are fiscally great," Leibenguth says. "We receive positive perceptions and feedback from the public and employees. Overall, propane autogas has been working well for us, so we plan to continue down this path."



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