



Propane School Buses Prove Positive for North Texas School District

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Prosper Bus
Photo Source: City of Prosper

School districts often maintain large fleets of buses that travel many miles in a single day, and vehicles are frequently run for long periods of time without break. These buses serve a critical role - in 2016, over a third of Texas public school students relied on buses for transport. Thus, school buses running solely on conventional diesel fuel can have quite an environmental impact.

Fortunately, propane is a great alternative fuel option for many school districts, and one North Texas district in particular has found great success in using propane.

Prosper Independent School District (ISD) operates in the Town of Prosper, located a little over 30 miles North of Dallas, Texas. The district maintains a fleet of 166 school buses - 144 of which are fueled by propane. Prosper ISD's switch to propane began in 2009 after the idea was presented at a district board meeting. Curtis Macdonald, Supervisor of Fleet Operations, says that the switch was motivated by Prosper ISD's dedication to an environmentally friendly school bus operation.

"It's about philosophy," says Macdonald. "That's a driven philosophy from the top down." Prosper ISD's switch to propane buses certainly represents this philosophy. A by-product of natural gas production and crude oil

Prosper ISD's Propane Fleet at a Glance



Started in 2009



144 Propane-powered School Buses



Fueling Infrastructure:
On-site Propane Fueling Station



Motivations:
Environmental Impact,
Reliability, Lower
Maintenance Costs

refining, Propane has a lower carbon content than conventional gasoline and diesel, and because its gaseous, presents no threat to soil, surface water or groundwater if spilled, according to the Alternative Fuels Data Center.

And the environmental benefits aren't the only up-side of switching to propane. Propane vehicles have also been shown to possess engines that are lower-maintenance, more reliable and cleaner overall - something that fleet personnel at Prosper ISD have witnessed firsthand. Macdonald says that these benefits can be seen in multiple system components.

"Tune up items - plugs, wires, hard parts, engine burns cleaner, less hydrocarbon deposits, oil stays cleaner, less wear and tear on the rings in the engine," says Macdonald.

And although propane vehicles are certainly different from diesel, Shop Foreman Jay Nelis says that fleets looking to adopt propane need not fear difficult and costly maintenance.

"They're not harder to work on than anything else," says Nelis. "Don't believe the rumors that propane is harder to work on." Though the benefits have been plentiful, the switch to propane was no walk in the park, and Macdonald and Nelis have a few words of advice for other fleets looking to make the switch.

"Ask yourself questions," says Macdonald. "What do you need to be effective in running a propane bus? What do tanks cost? Are you leasing or purchasing?" Macdonald also emphasizes the importance of disaster preparedness when it comes to propane fueling systems.

Electricity is needed to power a propane fueling system, and in North Texas, where powerful thunderstorms are a norm, a backup generator isn't a bad idea for those looking to add propane to their fleet. When a fueling system experiences a loss of power and a backup generator isn't an option, wet-hose trucks must be brought in to fuel the vehicles. Fueling on-the-go can also be a concern. Propane fueling infrastructure can be difficult to track down, and people accompanying the vehicle may not know how to use a propane fueling system. For these reasons, diesel buses still have a place in Prosper ISD for long-distance purposes.

When it comes to daily routes, however, propane buses are the vehicle of choice in Prosper - an environmental commitment which has made Macdonald proud of his fleet. "This wasn't just a test," says Macdonald. "I'm proud to say that they were fully committed to this program because they've supported us with every tool and everything we've needed without hesitation.

To learn more about alternative fuel options for school buses, visit www.dfwcleancities.org The Dallas-Fort Worth (DFW) Clean Cities Coalition is hosted within the NCTCOG. DFW was one of the first regions to be designated as part of the Department of Energy Clean Cities initiative in 1995 to reduce transportation energy use and improve air quality.

“ I'm proud to say that I work for a district that makes an environmental impact ”
- Jay Nelis Shop Foreman

