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Case Study: **School Districts Turn to Gasoline School Buses** **After Diesel Challenges**

Districts: Citrus County School District (Inverness, Florida); Rockwood R-VI School District (Eureka, Missouri)
Industry: Education
Vehicles: Citrus County School District: Blue Bird Vision Gasoline (52)
Rockwood School District: Blue Bird Vision Gasoline (56)

Challenge

Focused on fiscal responsibility, two school districts research new, cost-effective school transportation solutions that offer a quick return on investment and easier maintenance than diesel buses.

Gasoline Technology

In a typical year, Rockwood School District in Eureka, Missouri, transports more than 13,000 students to school each day. The school district's attendance area spans about 150 square miles, comprising 29 schools. In 2020, the school district added gasoline school buses to its fleet. The district chose Blue Bird's gasoline buses, which are equipped with a Ford 7.3L engine and ROUSH CleanTech's Gen 5 fuel system, boasting 350-horsepower and 468 ft-lbs. of torque.

"We toured the Windsor Ford plant and the quality that I saw there was outstanding," said Mike Heyman, Rockwood School District's transportation director. "I knew we would be getting a reliable engine not only from Ford's track record, but by combining ROUSH CleanTech and Ford, we could not go wrong."

Gasoline buses were common decades ago, but were phased out in favor of diesel around 2000. In 2016, Blue Bird reintroduced the Blue Bird Vision Gasoline bus. Since then, more than 10,000 gasoline school buses operate in more than 1,500 school districts across North America. Heyman says his district's gasoline school buses perform just as well as diesel buses, if not better.

“On top of fuel savings and better emissions, we switched to gasoline because the buses are much quieter to operate and that makes a big difference in the passengers’ riding experience,” added Heyman. “Drivers are happier and say student management is easier. Students don’t feel like they have to yell on the bus to be heard.”

Currently, 30% of Rockwood School District’s fleet runs on gasoline.

Similar to Rockwood School District, Citrus County School District in Inverness, Florida, considered gasoline school buses after experiencing a rising cost on diesel buses. The district transports more than 10,000 students to school each day on 137 daily bus routes. The school district’s attendance area spans the county’s 775 square miles and comprises 22 campuses.

“Our drivers like the gasoline buses because they drive and feel more like their cars, and there is so much less engine noise,” said Bruce W. Gaskins, district fleet manager of Citrus County School District. “There’s even been less noise complaints from residents in the community about the buses.”

Saving on Fuel

Like many school districts looking for fleet technology that helps them stretch a tight budget, Citrus County and Rockwood school districts found Blue Bird’s gasoline-fueled buses to be ideal and one of the most cost-effective on the market.

“Our gasoline buses are cleaner, quieter and less expensive to operate, and have a comparable fuel economy,” said Heyman. Rockwood School District has experienced a 10% savings in fuel costs since adding gasoline buses to its fleet.

School districts across the country have experienced similar findings. Blue Bird reports sales of the gasoline buses have grown substantially due to their low upfront costs, easy repair, reliable cold weather startup and public fueling accessibility.

“Initial cost is about \$10,000 less than diesel per bus. Additionally, we’ve saved 25 cents per mile year over year for the last four years,” said Gaskins.

Compared to other buses and fuel types, the Blue Bird Vision Gasoline bus has the lowest acquisition cost in the market. The bus is available in all Class 5-7 chassis. The fuel system control is designed specifically for the Ford powertrain, including engine, transmission and fuel system.

Easy to Maintain

Another appealing feature of the gasoline school buses to these school districts was no costly diesel after-treatment systems. Gasoline buses do not require exhaust gas recirculation, diesel exhaust fluid or diesel particulate filters.

According to Heyman, Rockford School District hasn’t had any issues with its gasoline buses. “Technicians like them because they’re easier to work on. Overall, there is less maintenance to

do. We don't have to worry about cold-start issues in the winter. The engines warm up quickly," he said.

Districts have also found that maintenance and repairs are easy for most technicians since they are already trained to work on gasoline engines. "The service parts are cheaper and all mechanics know how to work on gas," said Gaskins.

Citrus County School District and Rockwood School District have dedicated service support and a full range of repair options through Blue Bird dealers, third parties and in-house. They also have access to a warranty backed by Ford and ROUSH CleanTech. School districts choose from a five-year unlimited standard or a seven-year unlimited.

Environmental Benefits

Gasoline buses were especially attractive to Citrus County School District and Rockwood School District since government regulation mandates emission requirements on diesel engines. Issues with diesel buses is what led the districts to switch to gasoline.

"Once the warranty expires on diesel buses, there are more than \$20,000 worth of parts that can fail and fleets are stuck paying for them," Heyman said.

The Blue Bird Vision Gasoline bus is certified to the Environmental Protection Agency standard of 0.20 g/bhp-hr nitrogen oxide emissions.

"Compared to diesel, the gasoline buses are cleaner to work on and the problems are easier to diagnose," added Gaskins. "We've had a lot less emissions issues with gasoline buses."

Transitioning to Gasoline

With gasoline's widespread infrastructure, fueling can occur almost anywhere. School districts can also install fueling infrastructure on site, just as Citrus County and Rockwood school districts did.

Heyman recommends having a fueling strategy in place. "We opted to install new underground fuel tanks that support our gasoline buses," said Heyman. "Outside services for wet fuel unleaded gasoline on your lot will cost an additional 17 to 20 cents per gallon. That is still lower than diesel. Since we converted to underground tanks, we no longer need the outside wet-fueling services."

Citrus County School District has three on site fueling stations to support its gasoline buses. Currently, 38% of the district's fleet runs on gasoline.

"Get ready to have less headaches and save money," Gaskins said.

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About Blue Bird Corporation: Blue Bird (NASDAQ: BLBD) is the leading independent designer and manufacturer of school buses, with more than 550,000 buses sold since its formation in 1927 and approximately 180,000 buses in operation today. Blue Bird's longevity and reputation in the school bus industry have made it an iconic American brand. Blue Bird distinguishes itself from its principal competitors by its singular focus on the design,

engineering, manufacture and sale of school buses and related parts. As the only manufacturer of chassis and body production specifically designed for school bus applications, Blue Bird is recognized as an industry leader for school bus innovation, safety, product quality/reliability/durability, operating costs and drivability. Blue Bird has a rich history of bringing new technology to the school bus space and is the undisputed leader in alternative-power school buses, having more than 20,000 low and zero emission buses on the road. Blue Bird manufactures school buses at two facilities in Fort Valley, Georgia. Its Micro Bird joint venture operates a manufacturing facility in Drummondville, Quebec, Canada. Service and after-market parts are distributed from Blue Bird's parts distribution center located in Delaware, Ohio. For more information on Blue Bird's complete line of buses, visit www.blue-bird.com.

About ROUSH CleanTech: ROUSH CleanTech, an industry leader of advanced clean transportation solutions, is a division of the global engineering company Roush Enterprises. ROUSH CleanTech develops propane autogas and electric propulsion technology for medium-duty Ford commercial vehicles and school buses. With more than 37,000 vehicles on the road, the Livonia, Michigan-based company delivers economical, emissions-reducing options for fleets across North America. Learn more at ROUSHcleantech.com or by calling 800.59.ROUSH.

(Case study completed in 2021)

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