



Case Study:

ThompsonGas Doubles Down on Autogas with Propane Vehicles

Company: ThompsonGas
Industry: Propane retail and delivery
Location: Frederick, Maryland
Vehicles: (10) Ford F-750 trucks; (5) Ford F-550 trucks equipped with ROUSH CleanTech systems
Fueling: Onsite propane autogas station

Challenge

As one of the fastest growing propane retailers in the country, ThompsonGas has doubled down on its commitment to operate more propane autogas vehicles. In 2020, ThompsonGas established [Thompson AutoGas](#) to focus on moving its entire fleet to propane autogas. In 2021, ThompsonGas added propane bobtail delivery trucks.

By the Numbers

- 130 propane autogas vehicles.
- 10,000 to 50,000 miles per vehicle traveled annually.
- 70% fuel savings.
- 60% lower cost of ownership.
- Zero maintenance issues.

Fleet Background

Founded in 1946, ThompsonGas provides propane services to more than 250,000 residential and commercial customers nationwide. The Frederick, Maryland-based company ranks as the sixth largest propane retailer in the United States.

Initially, ThompsonGas received several propane autogas vehicles through an acquisition. The vehicles proved so successful that the company established a goal to add new propane vehicles each year as vehicles within the fleet are replaced. With the latest addition of 10 new Ford F-750 delivery trucks equipped with ROUSH CleanTech fuel systems, ThompsonGas now operates 130 propane vehicles in its 1,400-vehicle fleet, with more on order.

ThompsonGas Walks the Walk

ThompsonGas' vehicles are used extensively, including for delivery, service and sales routes. "We have customers that operate vehicles fueled by propane autogas. We want to walk the walk and show our customers that we believe in propane and its technology, too," said Monte McLeod, director of autogas at ThompsonGas.

Vehicles that run on propane autogas emit fewer greenhouse gases, smog-producing hydrocarbons and particulate emission than conventional fuels. In fact, 24 new Ford class 4-7 propane vehicles emit less nitrogen oxide than one class 4-7 diesel vehicle between model years 2007 and 2010.

The Ford 7.3L V8 engine paired with the ROUSH CleanTech propane fuel system is certified to the low nitrogen oxide level of 0.05 g, making it 75% cleaner than the Environmental Protection Agency's most stringent heavy-duty engine standard. The new trucks on order for ThompsonGas are now certified to the optional ultra-low nitrogen oxide level of 0.02 g, which is 90% cleaner than the strictest heavy-duty engine standards.

Propane autogas is a nontoxic fuel that poses no harm to groundwater or soil, so customers can be assured that ThompsonGas' vehicles are gentle on the environment.

Everyone Wants One

The propane retailer's propane trucks retain equivalent horsepower, torque and towing capacity as gasoline and diesel counterparts. Drivers, technicians and fleet managers at ThompsonGas enjoy their power and reliability. "I get asked about our autogas trucks all the time," said McLeod.

Driver Mark Draughn "loves his truck" because it travels long distances on daily routes, is easy to fuel and handles well. Draughn says he can't tell the difference in drivability, with the exception of the dramatically reduced noise level, which is about half compared to a diesel engine. This allows him and other drivers to better focus on the road.

The safety features that come with a ROUSH CleanTech propane system are unparalleled, helping drivers feel comfortable and confident while they drive. That's because they are designed with redundant safety features that aren't present on traditionally fueled vehicles to ensure system integrity under conditions like impact and heat.

Better for Business

According to McLeod, propane autogas vehicles are easy and reliable to operate and help fleet managers meet their primary goal of maintaining the lowest possible total cost of

ownership. ThompsonGas' district manager, Michael Hoffman, agrees. "We've enjoyed the lower cost of fuel along with no issues mechanically. The vehicles have done extremely well, allowing us fewer fueling interruptions throughout the day and enabling us to get to our customers more quickly," said Hoffman.

ThompsonGas experiences a 70% fuel savings compared to diesel. Historically, propane autogas costs about 50% less per gallon than diesel.

Propane vehicles don't require complex aftertreatment systems or the timely regeneration that follows when dealing with diesel vehicles. Since the fuel burns clean through the engine, fleet managers report savings of 30 to 50% on filters and fluids. Propane vehicles have no cold-start issues and warm up quickly, saving time and money on equipment and staff.

Technicians and drivers at ThompsonGas felt supported throughout the transition to propane vehicles. There were no burdensome changes to make to their maintenance buildings or diagnostic systems. ROUSH CleanTech propane fuel systems are compatible with Ford IDS (integrated diagnostic system) equipment, which is the same software that Ford dealerships use on commercial vehicles.

Known to have the lowest cost of ownership compared with all fuel types, ThompsonGas' propane vehicle cost per mile is 60% lower compared with its diesel-powered models. Hoffman estimates that its propane vehicles will last 250,000 to 300,000 miles, with very simple maintenance requirements. Lower fuel costs, reduced maintenance and a low total cost of ownership allow the company to run its business more efficiently.

More than Just a Propane Retailer

ThompsonGas' leading business principles are trust, service and taking care of its employees. Those principles have guided the company's decision to commit to a fully propane-fueled fleet.

In 2022, ThompsonGas sent several propane trucks from its fleet to Florida to support Hurricane Ian relief efforts. "When gasoline and diesel simply aren't options in emergency situations like Hurricane Ian, propane is the go-to fuel to keep important life- and business-saving machinery running. ThompsonGas' clean-operating propane vehicles supported the cleanup efforts to get communities in Florida back on their feet sooner," said McLeod.

Fueling with Autogas

Propane autogas is a safe, domestically produced fuel with a robust infrastructure and economic and environmental efficiencies. It's a leading alternative fuel in the United States thanks to its scalability, abundance and affordability. The [Argonne National Laboratory's](#)

[AFLEET](#) tool estimates that propane vehicles can reduce life-cycle greenhouse gas emissions by up to 15%. Almost 20,000 fleet vehicles with ROUSH CleanTech propane fuel systems have been deployed across the U.S. and Canada.

Propane stations cost less than any other type of station, including diesel, gasoline, CNG and electric. They're also easier to maintain. Outside of routine maintenance, propane autogas fueling infrastructure doesn't require additional costs after installation.

While propane autogas offers multiple affordable options for infrastructure setup, including onsite, delivery and public fueling stations, adding onsite fueling infrastructure was easy for a propane supplier like ThompsonGas. The company's onsite infrastructure includes a dispenser, pump and storage tank built on a skid for ease of installation. Skids are modular and scalable so the infrastructure can grow with customers' autogas needs. All equipment is built and installed to NFPA 58 code guidelines.

"ThompsonGas recommends that all propane marketers should be driving vehicles with the fuel they sell not only for the fuel savings and environmental benefits, but also that it shows they really believe in the fuel," McLeod said.

###

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 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](https://www.ROUSHcleantech.com) or by calling 800.59.ROUSH.

(Case study completed in 2023)

ROUSH CleanTech:

Chelsea Uphaus
Chelsea.Uphaus@roush.com
734.466.6710

Media:

Gregg Voss
gvoss@tsncommunications.com
224.542.9530