

# COMMERCIAL LAWN SERVICE REAPS BENEFITS OF PROPANE-FUELED MOWERS

Lower cost of propane, sustainability resonate for Chicago's Competitive Lawn Service

## AT A GLANCE

### Industry

Commercial lawn care

### Company

Competitive Lawn Service, Inc.,  
Downers Grove, Ill.

### Challenge & Solution

Save fuel costs, decrease environmental impact, and become one of the first entirely propane-fueled commercial lawn care companies in the United States through retrofitting entire fleet of commercial mowers, trimmers, blowers, and work trucks.

### Benefits of Propane

- Estimated 30 percent savings in fuel costs.
- Estimated fuel savings of \$2,500 per month when all commercial mowers have been converted to propane and all work trucks have been converted to propane autogas, within five years.
- More secure on-site refueling of commercial mowers, trimmers, blowers, and work trucks.
- Roughly 50 percent fewer greenhouse gas emissions compared with gasoline, plus significant reduction of ozone and particulate matter.
- Monthly oil changes required, compared with weekly oil changes for gasoline-fueled commercial mowers, saving 6 quarts of oil and one hour of shop time per mower.



Jack Roush of Roush CleanTech fuels the first-in-the-country Ford F-350 propane autogas conversion truck with undermount tank being delivered to Competitive Lawn Service, Inc., in December 2009.

Working toward having what he believes to be the first entirely propane-fueled commercial lawn maintenance service in the country, Eric Hansen, president of Competitive Lawn Service, Inc., based in Downers Grove, Ill., has begun retrofitting his company's commercial mower fleet. During the last two years, Hansen has reaped benefits from propane, including reduced costs, maintenance convenience, and the ability to offer customers a more environmentally friendly, sustainable solution.

Hansen has six propane-fueled commercial mowers among a fleet of 30, while five of his work trucks are fueled by propane autogas, fuel for on-road vehicles. He plans to have both fleets completely converted within five years; once the conversion is complete, he estimates his business will save about \$2,500 each month. That translates to payback on his investment in new and retrofitted commercial mowers and trucks in less than two years.

"Propane costs less than gasoline or diesel fuel, it costs less to maintain propane-fueled equipment, and it's better for the environment, all without sacrificing performance," Hansen says. "It just makes sense to use it in every piece of equipment I can."

### Shifting to propane-fueled mowers

As Hansen began to research propane conversion options for his commercial mower fleet, he learned he could convert his existing Kawasaki engines to run on propane for about \$1,000 per commercial mower with quick payback.

Hansen realized he would need a refueling source, so he worked with United Propane, a Heritage Propane company, to install a fueling station at Competitive Lawn Service, which bought about 1,500 gallons of propane in 2009. Hansen plans to use between 5,000 and 10,000 gallons in 2010 as he adds additional commercial mowers as well as trucks to his fleet. The on-site propane refueling system is more secure, making it easier to track fuel usage, while simultaneously eliminating theft, spillage, and loss.

Another benefit: Hansen's lawn equipment requires far less maintenance since the switch to propane. Competitive Lawn Service's commercial mowers typically run 25 to 35 hours per week and required weekly oil changes. With propane, the same commercial mowers run for a month, or about 100 hours, before they require an oil change, saving 6 quarts of oil and an hour of shop time per month per commercial mower.

Hansen also has answered his customers' call for an environmentally friendly lawn maintenance option. Studies show that propane-fueled commercial mowers produce almost 50 percent fewer greenhouse gas emissions than a similar commercial mower running on gasoline,<sup>1</sup> and significantly reduce other polluting emissions such as ozone and particulate matter. This has given the company a competitive advantage, particularly with commercial customers.



#### Expanding to propane-autogas-fueled trucks

After enjoying success with his new propane-fueled commercial mowers, Hansen considered the trucks that transport those commercial mowers to and from customer sites. He began with a Ford F-350 pickup truck operating on propane autogas that uses a liquid fuel-injection system. His commercial mowers use vaporized propane. As a result of Ford's partnership with Roush CleanTech, the propane-autogas-fueled trucks realize no reduction in power and less than a 10 percent reduction in fuel economy, a cost recouped by a 50 percent reduction in fuel cost. These trucks are built to last 300,000 miles, a longer lifespan than gasoline-fueled counterparts, further reducing fleet costs. Also, by deploying propane-autogas-fueled trucks to move lawn equipment and personnel from job to job, Hansen will eliminate 1,340 kilograms of greenhouse gas emissions per vehicle per year and save an additional \$300 to \$400 per month in fuel and maintenance costs.

#### Employee support builds fast

The switch to propane-fueled equipment has required minimal training time for Hansen's employees. Hansen holds quarterly training sessions on propane fueling. As a result, his employees have become relative refueling and equipment experts.

Shifting to propane has made financial and environmental sense for Competitive Lawn Service. Propane reduces fuel and maintenance costs for commercial mowers while propane autogas does the same for the fleet of trucks that transport mowers, personnel, and equipment. Customers' increased awareness of their carbon footprint has helped to make the fuel a market differentiator. Considering the ease of refueling and minimal employee training, those benefits will continue to compound for Competitive Lawn Service.

*The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.*

<sup>1</sup> Energetics Inc., *Propane Reduces Greenhouse Gas Emissions: A Comparative Analysis* (Washington, D.C.: Propane Education & Research Council, 2009).



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