

# MICHIGAN-BASED DISTRIBUTION COMPANY SEES STRONG ROI WITH BI-FUEL FLEET

## A PROPANE AUTOGAS CASE STUDY

**L**ake Michigan Mailers is a leading data, documents, and distribution company with facilities in Michigan and Indiana. The company services clientele across the U.S., Canada, and U.K. in addition to local businesses, schools, and government offices. The family owned and operated company has provided data and document management, mail assembly, and other business support services for 35 years.

Headquartered in Kalamazoo, Mich., the company's fleet averages about 15,000 miles per month, picking up mail and printed materials to be assembled for distribution or online storage. The fleet typically travels within a 12,600-square-foot radius each day, with service vans returning to the company's headquarters each evening for refueling and storage.

### THE ALTERNATIVE FUEL ANALYSIS

When Michigan's gasoline prices rose 7.7 percent between September 2011 and September 2012, Lake Michigan Mailers began exploring alternative fuel options in order to reduce its reliance on gasoline.

An outside consultant was hired to analyze Lake Michigan Mailers' fleet usage and make an alternative fuel recommendation that wouldn't compromise vehicle performance. Electricity, compressed natural gas, ethanol, and propane autogas were compared based on ease of conversion, total cost-of-ownership, range and fuel price, in addition to infrastructure. Across the board, propane autogas quickly proved the best alternative fuel option for their needs.

"Not only did propane autogas fulfill all of our requirements, but the study showed

it would give us the fastest return on our investment," said David Rhoa, president of Lake Michigan Mailers. "When we saw the results, we were absolutely convinced that propane autogas was the most viable option for our needs."

The company's analysis also highlighted some of the challenges a small business like Lake Michigan Mailers can face when choosing an alternative fuel. With electric, range was limited to about a 100-mile radius, much too short for the amount of travel the company's fleet did in a day. As for CNG, the infrastructure costs were too high for a company its size. The lack of refueling options available with E85, and the fact that gasoline stations in Michigan have drastically reduced ethanol blends, didn't provide enough flexibility to meet their fleets' needs.

### OVERCOMING INCREASED OPERATING COSTS

Before spending the time and resources to convert the entire fleet to bi-fuel with propane autogas, Rhoa worked with Icom North America to integrate propane autogas into the existing fleet by upfitting one Ford E-150 van with Icom's JTG II

#### COMPANY

Lake Michigan Mailers  
Kalamazoo, Mich.

#### CHALLENGE & SOLUTION

Reduce fuel expenses while maintaining vehicle performance by adding bi-fuel capabilities to part of the company's 30-vehicle fleet and introducing on-site propane autogas refueling.

#### RESULT

By using propane autogas as its primary fuel, and with on-site refueling capabilities, Lake Michigan Mailers estimates that its saves about 12 cents per mile driven compared with gasoline.

CASE STUDY  
LAKE MICHIGAN MAILERS  
KALAMAZOO, MICH.

bi-fuel system. The propane liquid injection conversion system enables vehicles to run on either propane autogas or gasoline.

The company currently uses propane autogas as the primary fuel 99 percent of the time, using gasoline only as a backup in case drivers forget to refill their propane autogas tank at the end of the day or run a longer route. Within the first nine months of 2012, Lake Michigan Mailers reported a 50 percent decrease in fuel expenses. Rhoa estimates that the company saves approximately 12 cents per mile using propane autogas compared with gasoline.

“We call it the ‘propane effect,’” Rhoa said. “Despite a seven percent increase in [the price of] gasoline, with propane the total fuel expenditure dropped. We were still driving the same, if not more miles, but were spending less on fuel with the switch.”

The cost to upfit one of Lake Michigan Mailers’ Ford E-150 vans to bi-fuel was about \$6,300. However, fuel savings with propane autogas on one bi-fuel vehicle quickly made up for the initial cost.

“The savings on a single bi-fuel vehicle running 25,000 miles typically covers the conversion cost within the first year,” Rhoa said. “After that, the bi-fuel vehicle essentially pays back dividends to the company over the next three years.”

Since its preliminary trial, Lake Michigan Mailers has converted five more Ford E-150 vans to bi-fuel with one more on the way, bringing the company’s alternative fuel fleet to seven. When the company’s conversion project is complete in June 2014, Rhoa says 22 out of the company’s 30 vehicles will be converted to bi-fuel.

“The decision to switch more of our fleet to bi-fuel in the future was a no-brainer after we saw the cost savings of converting the initial vehicle,” said Rhoa. “All indications are that we are on pace to hit those return on investment goals.”

### PROPANE AUTOGAS PROVIDES CONVENIENCE, PROVEN PERFORMANCE

To accommodate its growing bi-fuel fleet, Lake Michigan Mailers installed an on-site propane autogas refueling station. In June 2012, AmeriGas, the nation’s largest propane company, installed a 1,000-gallon propane autogas tank and fueling pump at the company’s Kalamazoo facility.



On-site propane refueling stations are compact and easy to install with costs comparable to those associated with installing a gasoline refueling station. According to Rhoa, the refueling process is very similar to gasoline, and by eliminating employee time spent filling up at convenience stores, drivers spend more time on the job, resulting in greater cost savings.

“The filling time is the exact same with gasoline and propane autogas,” Rhoa said. “In fact, our drivers are saving time because they’re not leaving the property and waiting in line to fill up at a gasoline station. When they leave the facility they’re full and ready to go.”

Driver feedback with propane autogas has been very positive, according to Rhoa. In fact, employees have noticed better acceleration with the fuel and report no reduction in performance, torque, or horsepower. Staff members have also been impressed by the environmental benefits of propane autogas. Reduced emissions and a greener carbon footprint have become an important part of the company’s sustainability platform, but Rhoa says both the economic and environmental benefits ultimately drive the company’s commitment to propane autogas.

“Though propane autogas is a part of Lake Michigan Mailers’ sustainability program, it was not the environmental green, but the monetary green, that ultimately led us to choose and stick with propane autogas,” said Rhoa.

For more information about Lake Michigan Mailers, visit [barcodemail.com](http://barcodemail.com).

#### FOR MORE INFORMATION

To learn more about propane autogas and the Propane Education & Research Council, visit [autogasusa.org](http://autogasusa.org).

Propane Education & Research Council / 1140 Connecticut Ave. NW, Suite 1075 / Washington, DC 20036  
P 202-452-8975 / F 202-452-9054 / [propanecouncil.org](http://propanecouncil.org)