CASE STUDY

Location: New Orleans, LA
Company: Limousine Livery
Study: Propane

Limousine Livery is a luxury limousine service located in New Orleans, Louisiana. It provides chauffeur services in the greater New Orleans area for executives, professionals, business travelers, event attendees, and others. The company's fleet includes 65 vehicles, of which 20 are fueled by propane or liquefied petroleum gas (LPG). The propane-fueled vehicles include Lincoln Town Cars, Ford Econoline vans, and Ford Expeditions that can chauffeur executives in style while reducing the carbon footprint of the limousine business.

Decision Points

The Limousine Livery environmental policy is committed to minimizing their carbon footprint through alternative fuels and environmental practices. Thomas Dirks of Limousine Livery said, "We believe in green technology... Natural gas is a huge investment that the state of Louisiana has invested in and we believe in supporting this local resource." A majority of the propane produced in the United States (U.S.) is a byproduct of natural gas processing. As the natural gas boom spreads across the U.S., more propane will be available for use as an alternative fuel. When asked why the company chose propane specifically, Dirks said, "Propane is the cleanest alternative fuel in the area." The initial conversion to propane was assisted by an alternative fuels grant.

Fleet Facts

Limousine Livery has fleets in multiple locations and offers services worldwide. Its New Orleans fleet of 65 vehicles has 20 fueled by propane. The propane fleet travels over an average of 50,000 miles annually and is on course to use about 40,000 gallons of propane in 2012. Dirks estimates the fuel economy of these vehicles to be about 12 miles per gallon. The vehicles are often used for short trips and carry multiple passengers and luggage, which decreases fleet fuel economy. Since the carbon footprint of such services is relatively large, Limousine Livery uses propane to decrease any negative impacts of operation. The only downfall of operating this green luxury transportation company, Dirks said, is providing enough room for luggage accommodation while maintaining space to house propane fuel storage tanks. Overall Dirks said that the fleet operates very well but it is difficult finding vehicles that run only on propane. There are two common types of propane-fueled vehicles: dedicated and bi-fuel. Dedicated propane vehicles run solely on propane while bi-fuel vehicles use gasoline along with propane.

QUICK FACTS

Fuel Type: Propane (LPG)

Vehicles: Lincoln Town Cars, Ford Econoline vans (14 passenger), and Ford Expeditions

Annual Miles: 50,000

Annual Fuel Consumption: 40,000 gallons

Fuel Supply and Infrastructure

There are more than 2,600 propane fueling stations located around the U.S. However, Dirks noted that there was only one available fueling station in the area Limousine Livery serves. The propane is supplied by Alliance AutoGas/Blossman Gas. The limited number of fueling stations prevents the fleet from using as much propane as they wish. Dirks cited this as a challenge to the processes of conversion and expansion of propane as an alternative fuel.

Costs Considerations

Fuel economy can be a large part of the operating budget for fleets that operate based on customer convenience and delivery. Using propane has allowed Limousine Livery to use a fuel that is cheaper and cleaner than gasoline. They save an average of $1.25 per gallon of propane over a gallon of gasoline. When considering the fleet uses about 40,000 gallons of propane, this equates to an annual savings of $50,000 for operating a greener fleet.

It should be noted that propane has slightly higher energy content by mass when compared to gasoline. Some may prefer to compare alternative and conventional fuels on an equivalent energy basis. To do this, there is a term called gasoline gallon equivalent or GGE. Since the propane has slightly more energy the energy cost savings may not be the same as the price per gallon differences. The difference is not large and Limousine Livery is saving $0.90 per GGE of propane.

Limousine Livery luxury chauffeur services. Photo courtesy of YCS Transportation.

Maintenance and Satisfaction

Maintaining a luxury chauffer service fleet is a key part of the operation. When operating on an alternative fuel, these types of companies must invest in a proven technology that will not add to maintenance costs or detract from operator or customer satisfaction. When Dirks was asked about obstacles or maintenance issues he stated that all conversions and equipment are operating well and, "We are very satisfied with the use of propane in our fleet."

The company has not encountered any major conversion, maintenance, or safety issues with this fleet. Other fleets looking to switch to propane vehicles should know that propane is a cleaner burning fuel and has different properties compared to gasoline. Unlike gasoline, propane will not absorb into the engine oil which will lead to cleaner, longer lasting oil. This will reduce maintenance costs or intervals as well as extend engine life.

Summary

Starting or converting a fleet to use propane may require a capital investment, but savings will occur over the operation of the fleet. Limousine Livery sees savings every time it fills up one of its cleaner burning propane fleet vehicles. Limousine Livery is a prime example of a successful and satisfied propane fleet. In fact, Dirks says that the company would use more propane if there were more dedicated propane vehicles and fueling stations available. Propane use as a vehicle fuel has evolved over the years and is no longer just an alternative fuel for forklifts. It can even provide safety and satisfaction for use in a luxury chauffeur service.