

Propane Autogas Fleet Case Study

CITY OF NEWPORT NEWS, VA

Overview

The City of Newport News in Virginia, named one of America's Top 50 Green Cities by *Popular Science Magazine*, is committed to implementing environmentally and economically sustainable practices to enhance quality of life for current and future residents. As part of the city initiative, Newport News Vehicle Services Director Bob McElheney says he is always looking for ways to reduce vehicle emissions and fuel costs. When McElheney first learned about the environmental and cost-savings benefits of autogas, he knew that propane autogas was a natural fit for Newport News.

Program Participation

Newport News is one of more than 35 public and private fleets participating in the Southeast Propane Autogas Development Program (SPADP). In 2011, the city applied for and was awarded funding assistance through SPADP to convert some of the city vehicles to run on propane autogas, a clean, affordable and domestically produced alternative fuel. Newport News selected 12 Ford Crown Victorias and 10 Chevrolet Silverado 2500 trucks to be converted to autogas. Vehicle conversions began in October 2011 and all conversions were completed within six weeks.

"Autogas is a good fit for our fleet," says McElheney. "We're saving on fuel costs, reducing vehicle emissions, the infrastructure cost is lower than for other alternative fuels, and vehicle performance has actually improved. We were fortunate to receive some funding assistance with SPADP. However, because of the significant fuel savings we're seeing with autogas, we intend to purchase more propane autogas-capable vehicles in the future."

Working With Vendor Partners

Alliance AutoGas, a nationwide network of autogas fuel providers and certified conversion centers, is providing the vehicle conversion equipment, performing the conversions, installing the fueling stations, and providing training for fleets in the Program. Conversion center Baker Equipment performed all of the vehicle conversions for Newport News, and Alliance AutoGas partner Phillips Energy installed a 1,000 gallon autogas tank with fuel dispenser at the fleet's home base. The city entered into a fuel contract with Phillips, who implemented the autogas station at no upfront capital cost. "The infrastructure was set up within about two day's time," according to Christopher Perry, fleet administration manager for the city.

McElheney was pleased with the conversion process and their experience with Baker Equipment, stating that "any minor issues we had were quickly addressed by Baker, with safety always being their top priority." Phillips Energy, a fuel provider in the Alliance AutoGas network, provides the city with an ongoing, year-round autogas fuel supply, and both organizations "have played large parts in the overall program's success," according to McElheney.

Fleet Facts

Fleet Organization:
City of Newport News, VA

Vehicle Services Director:
Bob McElheney

Industry Type:
Public Safety & City Services

Began Conversions:
October 2011

Autogas Vehicles in Fleet:
12 Ford Crown Victorias
10 Chevy Silverado 2500 Trucks

Estimated Annual Autogas Usage:
18,000 Gallons

Est. Annual Fuel Cost Savings:
\$22,000

Autogas Fueling Infrastructure:
1,000-gallon Autogas Tank
with TRAK Fuel System



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Results

The city is saving a significant amount on fuel by switching to propane autogas. Currently, Newport News pays less than \$2 per gallon of autogas while the price of gasoline continues to rise across the nation. Even with a 10 percent reduction in range with autogas, the city is still saving approximately \$1 per gallon compared to gasoline. With these 22 vehicles using approximately 18,000 gallons of autogas each year, the city expects to save about \$22,000 annually on fuel costs.

Additionally, the autogas vehicles have already eliminated more than 6.6 tons of greenhouse gases, and since 98 percent of our nation's autogas supply is produced in North America, the city is displacing thousands of gallons of imported oil by utilizing a domestically produced fuel.

Fleet operators are satisfied with the driving performance and safety of their autogas vehicles, citing the importance of reliable transportation to servicing the city's various needs. "Phillips Energy trained our drivers at the beginning of the process, and we are satisfied with the vehicle safety and the convenience of fueling at our home base," McElheney notes. "One of the key benefits of bi-fuel autogas vehicles is the extended range they provide, which is especially useful for long distance travel."

Since autogas is stored at much lower pressure than fuels like compressed natural gas (CNG) or liquefied natural gas (LNG), autogas fuel tanks are lighter and less bulky than those for other fuels. Also, since Alliance AutoGas vehicle conversion technology is certified by the U.S. Environmental Protection Agency, vehicles are able to retain the original manufacturer's warranty.

City officials were so pleased with the conversion experience and the fuel cost savings that they plan to convert more vehicles in the future. The city has also committed to converting an additional four Ford F-150 trucks under the grant. Apart from the Program, the city is purchasing upfit packages to enable the conversion of 12 Ford F-250 trucks to run on gaseous alternative fuels like autogas.

"We were able to quickly incorporate the autogas vehicles into our fleet and begin experiencing all of the environmental, cost savings and other benefits of autogas. We made the right decision to convert our vehicles, and we certainly look forward to doing more in the future," McElheney concludes. "We're happy with the vehicles, the technology, reducing our fleet's emissions and the lower fuel costs, which will benefit both our city government as well as Newport News residents."

About This Program

The Southeast Propane Autogas Development Program is comprised of public and private partnerships throughout 10 southeastern states, Denver and Pittsburgh. Over its four-year span, the Program will work with over 35 public and private fleets to put more than 1,200 clean autogas vehicles on the road and implement more than 35 autogas fueling stations. Supported by funding from the American Recovery and Reinvestment Act and the U.S. Department of Energy's Clean Cities Program, it is managed and administered by the Virginia Department of Mines, Minerals and Energy and Virginia Clean Cities at James Madison University.

Virginia fleets interested in learning more about propane autogas should contact Alleyn Harned, executive director of Virginia Clean Cities, at 540-568-8896 or aharned@vacleancities.org.

