

## Overview

Buncombe County, N.C., strives to be a leader in utilizing alternative fuel and clean transportation to support the county's mission of reducing its carbon footprint while saving taxpayer dollars. County officials have researched various alternative fuels in the past, including propane autogas, which would not only significantly reduce harmful pollutants and greenhouse gas emissions compared to gasoline, but also cut the county fleet's fuel budget by thousands annually. The county's fleet includes a mix of gas-electric hybrids, electric vehicles such as the Chevrolet Volt and GEM electric car, and diesel vehicles. When a propane autogas program funding opportunity became available, officials spent even more time focusing on autogas as a viable option and ultimately decided to switch sheriff's office fleet vehicles to this practical clean fuel.

"As we started to look at the project, what we determined pretty quickly was that it was just a win/win. There really weren't any negatives in switching to propane autogas," said Buncombe County Sheriff Van Duncan.

"We were looking at two main things when it came to switching to alternative fuel vehicles," he said. "We wanted to boost our bottom line in terms of fuel cost savings, and also to have cleaner-burning cars on the road. Propane autogas was the practical fuel choice because, not only does it support these goals, there also isn't a noticeable difference in vehicle performance when converting these Crown Victorias from gasoline to autogas."

## Participating in the Southeast Propane Autogas Development Program

The county received grant funding under the Southeast Propane Autogas Development Program to convert 10 Ford Crown Victorias in the sheriff's fleet to propane autogas, as well as for the installation of a 1,000-gallon autogas fuel tank. They began switching vehicles to autogas in August of 2011 and the conversions were completed by February 2012.

The Program is helping to increase the use of clean propane autogas in the U.S. by converting more than 1,200 vehicles to autogas and implementing 11 autogas fueling stations in the region. Managed and administered by the Virginia Department of Mines, Minerals and Energy and Virginia Clean Cities (VCC) at James Madison University, the Program is comprised of public and private partnerships in 10 southeastern states, as well as Denver and Pittsburgh. The Program is made possible by funding from the American Recovery and Reinvestment Act and the U.S. Department of Energy's Clean Cities Program.

Propane autogas is the most widely used alternative fuel in the world, powering more than 18 million vehicles. Ninety-eight percent of the nation's autogas supply is domestically produced, so fleets running on autogas are helping to support U.S. energy security. Propane autogas is also 20 percent cleaner than gasoline, and U.S. fleets save more than \$1-per-gallon filling with autogas versus gasoline.

## Fleet Facts

Fleet Organization:  
**Buncombe County Sheriff's Office,  
North Carolina**

Sheriff:  
**Van Duncan**

Grant Coordinator:  
**Jeremiah LeRoy**

Industry Type:  
**Law Enforcement**

Began Running on Autogas:  
**August 2011**

Autogas Vehicles in Fleet:  
**10 Ford Crown Victorias**

Estimated Annual Autogas Usage:  
**17,089 gallons**

Est. Annual Fuel Cost Savings:  
**\$13,000**

Autogas Fueling Infrastructure:  
**One 1,000-gallon Autogas Tank**



# BUNCOMBE COUNTY SHERIFF'S OFFICE, NORTH CAROLINA

## Results

The Buncombe County Sheriff's patrol cars travel an average of almost 25,000 miles each year, and the fleet expects to use more than 17,000 gallons of propane autogas annually. Running 10 patrol cars on propane autogas, the sheriff's fleet expects to displace 20 tons of greenhouse gas emissions each year and save more than \$13,000 annually on fuel cost savings alone. Fleets like Buncombe County will save even more on fuel costs in 2013 with the recent extension of the 50-cents-per-gallon federal tax credit for alternative fuel.

Buncombe County Sheriff Van Duncan wasn't certain a gasoline alternative could deliver the same reliability for fleet vehicles when lives could depend on a deputy arriving at an emergency situation. However, he quickly became a believer after seeing the propane-powered patrol cars in action. According to Duncan, the only noticeable change in "performance" is that the "motor runs a little quieter." Deputies were also wary at first about possible loss of vehicle power operating on propane autogas instead of gasoline, but their concerns were also put to rest once they got behind the wheel of the new autogas cruisers.

The vehicles were outfitted with versatile bi-fuel Prins VSI autogas system. "The ability to switch back to gasoline is a tremendous option for law enforcement fleets," said Sheriff Duncan. "It's just one button on the center of the dash and you're back to running on gasoline. That provides our deputies with peace of mind—to know that in an emergency situation, you not only have a full tank of propane but also a backup full tank of gas, giving you an effective operating range of about 500-600 miles before you have to refill the car." The fleet can also switch the autogas systems from older vehicles to newer ones with similar engines, —an added benefit for law enforcement fleets that put a lot of wear-and-tear on their patrol vehicles. But for Sheriff Duncan, one of the most important advantages of running fleet vehicles on autogas is using an American-made fuel.

"It concerns me that relying on gasoline means sending a bunch of money overseas, and we don't exactly always know where that money gets funneled and where it goes," said Duncan. "Propane autogas is a domestic product that creates jobs right here in the USA—that makes you feel good."

## Working with Partner Vendors

The Alliance AutoGas network of vehicle conversion centers and fuel suppliers provides propane autogas vehicle conversions, fuel and ongoing support for Program fleets, including the Buncombe County Sheriff's Office. Certified Alliance AutoGas conversion center German MotorWerks in Asheville, N.C., performed the vehicle conversions, while Blossman Gas, the nation's largest independent propane supplier and Alliance AutoGas founder, installed the autogas fuel station and delivers year-round fuel supply.

"Buncombe County has had a very positive experience with our conversions to autogas," said Buncombe County grant coordinator Jeremiah LeRoy. "We have realized both cost savings and reduction in the overall carbon footprint for the county. Other fleets would be wise to research the benefits of propane autogas."

The sheriff's office has been so pleased with the performance of the autogas-powered Crown Vics, they're currently looking into obtaining funding for an additional 10 propane autogas vehicle conversions. For his part, Sheriff Duncan is volunteering his vehicle for the next propane autogas conversion. "We're going to push forward in upgrading our fleet, and I want to do mine next," he said. "Nothing says you believe in it like taking it on."

## For Additional Information

To learn more, visit [www.usepropaneautogas.com](http://www.usepropaneautogas.com) or email [info@usepropaneautogas.com](mailto:info@usepropaneautogas.com). North Carolina fleets interested in making the switch to autogas should contact Bill Eaker of the Land-of-Sky Clean Vehicles Coalition at [Bill@LandOfSky.org](mailto:Bill@LandOfSky.org).

