

CASE STUDY: IREDELL COUNTY SHERIFF'S OFFICE

BACKGROUND

When local gasoline prices topped \$4.50 in 2011, the Iredell County Sheriff's Office in North Carolina began looking for an alternative fuel that could offset their gasoline consumption but provide the same performance as gasoline. After reading about a law enforcement agency in South Carolina that successfully switched to propane autogas through the Alliance AutoGas complete program, the sheriff's office chose autogas for its environmental, economical and practical benefits. Autogas vehicles will help the sheriff's office cut fuel and maintenance costs and reduce emissions, all without sacrificing the performance and dependability of their cruisers. Alliance AutoGas trained Iredell County's mechanics to perform the autogas conversions, installed convenient onsite autogas fuel stations, and educated deputies on how to safely refuel and operate their new autogas vehicles.

PROGRAM SNAPSHOT

The Iredell County Sheriff's Office received partial funding for their conversion program through a North Carolina Solar Center Clean Fuel Advanced Technology grant. The grant provides assistance for emissions-reducing initiatives in North Carolina, covering up to 80 percent of project costs. The sheriff's office used seized assets from their drug interdiction program to match the grant funds.

"What better way to put dirty money to good use than to clean up the air in our community with green cruisers?" said Sheriff Phillip Redmond.

Iredell County completed their first 13 vehicle conversions without placing further strain on their budget, and the sheriff's office has since predominately used seized assets from their drug interdiction program to convert 16 more vehicles to run on autogas.

WORKING WITH ALLIANCE AUTOGAS

Mechanics from the sheriff's office were trained through the Alliance AutoGas program as certified conversion technicians. They installed the autogas systems in-house, utilizing the bi-fuel Prins Vapor Sequential Injection (VSI) system from Alliance. Alliance founding partner Blossman Gas implemented onsite autogas stations for the sheriff's office and will provide an ongoing autogas supply.

Captain Mike Phillips praised his Alliance AutoGas point person Steve Whaley for always being an available resource. "If we have a question or some kind of an issue, or what we perceive to be a problem, I just call him and it is handled," said Phillips. "It has really been very smooth, and there have been no issues. He has worked really well with us."

RESULTS AND AUTOGAS BENEFITS

Iredell County has seen immediate fuel savings since converting their fleet vehicles. Autogas is historically \$1.00 per gallon cheaper than gasoline with 90 percent of the fuel efficiency. Phillips estimates the sheriff's office is saving 40 to 50 percent on annual fuel costs. The bi-fuel autogas cruisers also have a large autogas fuel tank in addition to the gasoline capacity, so deputies don't have to refuel as often and are able to spend more time on the road, not at a fueling station.



Mike Phillips
Police Captain
Statesville, NC

FLEET STATISTICS

FLEET TYPE: Law Enforcement

PERCENT OF FLEET RUNNING ON AUTOGAS: 15%

AUTOGAS VEHICLES IN FLEET: 29

TOTAL ESTIMATED ANNUAL SAVINGS: \$152,000

ADDITIONAL VEHICLES SLATED FOR AUTOGAS CONVERSION: 21

ANTICIPATED ANNUAL USAGE (gallons of gasoline displaced): 87,900 gallons

ANNUAL MILEAGE (per vehicle): 40,000 - 50,000

AUTOGAS FUELING:
Onsite autogas fueling infrastructure, including one 1,000-gallon autogas tank

TIME OPERATING ON AUTOGAS: 8 months

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RESULTS AND AUTOGAS BENEFITS (CONTINUED)

Since autogas is high-octane and burns cleaner than gasoline, autogas vehicles often require less maintenance. Many autogas fleets report that their vehicles require fewer oil changes and have an extended engine life. Deputies can drive an additional 2,500 to 5,000 miles before having to send their car to the shop.

Vehicle performance is a top priority for the sheriff's office, since deputies depend on their cruisers to carry out their essential daily duties across the state, including inmate transport and crime scene investigations. Iredell was especially pleased with the bi-fuel Prins autogas system, which runs primarily on autogas, but can also be switched over to run on gasoline in a pinch. This feature gives officers peace of mind, as they don't have to worry about running out of fuel if the autogas tank happens to run low out of autogas fueling station range.

"We felt the bi-fuel system was our best option because we could continue to run on gas when needed. That is why we decided to go that route," said Captain Mike Phillips. The Prins vapor system can also be moved from one vehicle to another with the same engine type, so when an autogas cruiser is retired, the system can continue to power another vehicle.

Iredell County deputies report their autogas vehicles perform just as well or better than their former gasoline-powered cruisers. "I think everyone that has an autogas vehicle enjoys it," said Phillips. "And there are other officers here who say they want an autogas cruiser."

Since autogas vehicles produce 20 percent fewer harmful pollutants than gasoline or diesel vehicles, Iredell County is doing its part to ensure cleaner air for the community. The sheriff's autogas fleet is also boosting the nation's economy and energy security, since 90 percent of the U.S. autogas supply is made in America.

MOVING FORWARD

By switching to autogas, the Iredell County Sheriff's Office serves the community while saving taxpayers money. The sheriff's office has set a goal of converting a total of 50 autogas cruisers, and expects to save more money with each additional autogas-powered vehicle on the road.

Iredell plans to utilize its autogas vehicles in other areas of county services, and to promote the use of the alternative fuel in high-mileage fleets. Already, the Iredell County Area Transit has followed the example of the sheriff's office by converting four passenger vans to run on autogas.

"I know more fleets like ours will be shifting to autogas in the future as they discover what a smart choice it is for light- and medium-duty vehicles," said Phillips. "It's not often you don't sacrifice power and range with an alternative fuel. With autogas, you get the benefit of driving green in a high-performance vehicle."

Captain Phillips and Sheriff Redmond hope to continue using drug interdiction funds to underwrite the conversion of several more propane autogas cruisers, which will assist the sheriff's deputies in their fight against crime in Iredell County. "Running our fleet on propane autogas goes hand-in-hand with the sheriff office's mission to clean up the community and create a better environment for future generations of Iredell County—literally and figuratively," said Phillips.

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