



Overview

In 2011, the Greenwood County Sheriff's Office in Greenwood, South Carolina first started adding alternative fuel vehicles to their fleet. They converted nineteen Ford Crown Victoria patrol vehicles to run on propane before converting eighteen more over the next few years. This case study contains information pertinent to the original nineteen vehicles.

Program Participation

This project was funded in part with federal ARRA funds that the Palmetto State Clean Fuels Coalition secured for Greenwood County's propane conversions and infrastructure. This funding was the Carolina Blue Skies and Green Jobs Initiative funding led by Triangle Clean Cities Coalition and in partnership with Centralina Clean Fuels Coalition, Land-Of-Sky Clean Vehicle Coalition, and NC Solar Center. The grant for Greenwood County was \$116,215 of the \$12 million total award, with \$123,525 in cost share.

Project Motivation and Implementation

Greenwood County's primary goal for this project was to find a cleaner burning fuel that would provide cost savings and maintain vehicle performance. After securing grant funding, the County worked with Alliance AutoGas to install infrastructure, convert vehicles to propane with a Prins injection system that allows vehicles to operate on propane or gasoline, and implement training sessions for all county employees who may use the vehicles and fueling equipment.

The Palmetto State Clean Fuels Coalition assisted Greenwood County throughout the process; they sought funding, assisted with grant reporting and requirements, and helped with outreach efforts once the vehicles were deployed. Greenwood County did not encounter any significant barriers throughout the project's implementation.

Fleet Facts

Organization:

Greenwood County Sheriff's Office (SC)

Dept. of Public Works Fleet Maintenance Garage Supervisor:

Jimmy Brown

Industry Type:

Law Enforcement

Conversions Began:

2011

Vehicles Converted:

19

Estimated Petroleum Displacement:

19,791 GGE in 2012

23,693 GGE in 2013

Estimated Fuel Cost Savings Approximately:

\$46,000



Results

This project serves as an example of how a smaller sheriff's office can successfully transition their fleet to a cleaner, more economical fuel while garnering public support. Due to the drivers' enthusiasm and the fact that the fleet displaced more petroleum and saved more fuel during their first year operating on propane, Greenwood County decided to convert an additional eighteen patrol vehicles.

In total, this project displaced 19,791 GGEs of petroleum in 2012 and 23,693 GGEs in 2013, while also reducing emissions by 41.3 tons GHG in 2012 and 49.5 tons GHG in 2013. Over \$46,000 in fuel costs was saved in 2012 and 2013 as well, and the payback period for Greenwood County was calculated to be 5.3 years.

In terms of non-financial benefits, Greenwood County feels this project helped improve their public image significantly. More specifically, being part of the "Going Green Revolution" and seeking innovating ways to save the taxpayers money seemed to play a big role in their image boost.

Lessons Learned and Next Steps

Greenwood County's biggest takeaway from this project was the overwhelming acceptance of the drivers to alternative fuel training. In offering advice to other fleets looking to implement a similar project, Greenwood County recommends that prior to converting the vehicles, be sure to educate the drivers about the financial and environmental benefits to driving hybrid patrol vehicles and about any safety measures to alleviate concerns they might have.



For more information on this and other alternative fuel and advanced technology vehicle programs contact Jennifer Taraskiewicz, Coordinator at the Palmetto State Clean Fuels Coalition, via email at jtaraskiewicz@energy.sc.gov. The Palmetto State Clean Fuels Coalition is a designated Clean Cities Coalition by the U.S. Department of Energy.



For specific information regarding the Greenwood County project, contact Jimmy Brown, Department of Public Works Fleet Maintenance Garage Supervisor, by phone: 864.942.8598 or via email at jbrown@greenwoodsc.gov.