

Commonwealth Alternative Fuel Vehicle Program

Timeline

- General Assembly - 2011 Session
 - House passed HB2282
 - Commonwealth to develop a plan to move to alternative fuel vehicles
- July 12, 2011
 - Governor signs Executive Order 36
 - Instructs DGS and DMME to conduct Public-Private Solicitation (PPEA) for an alternative fuel solution
- July 22, 2011
 - Commonwealth Alternative Fuel PPEA Released
- October 21, 2011
 - 15 Proposals received through PPEA Process
 - 2 Selected to move forward

Propane

Alliance Autogas

What is Propane?

- Produced from natural gas processing or crude oil refining.
- Compressed to approx. 300 psi where gas becomes a liquid.
- Transported on transport truck to fueling location.
- Stored on vehicle in pressurized fuel tank.
- Liquid turns back to a gas when pressure is released.

Timeline

- March 8, 2012-Chapter 199 approved by the General Assembly establishing an Alternative Fuel Vehicle Conversion Fund for state-owned vehicles.
- April 18, 2012- \$4 million CMAQ-TERMS funds recommended by VDOT to CTB in the Draft FY 13-18 SYIP
- June 20, 2012- CTB approved the FY 13-18 SYIP that includes UPC T11802 with a total of \$9 million in CMAQ-TERMS funds over the 6 year period as the CTB's contribution to the fund; total program estimate \$25,740,000.
- October 2, 2012
 - Contracts Awarded
 - Compressed Natural Gas Solution – Clean Energy
 - Propane Autogas Solution – Alliance Autogas

Propane Domestic



- 68%** US Natural Gas Processing
- 30%** US Petroleum Refineries
- 2%** Canadian and Other Imports



Storage & Transport



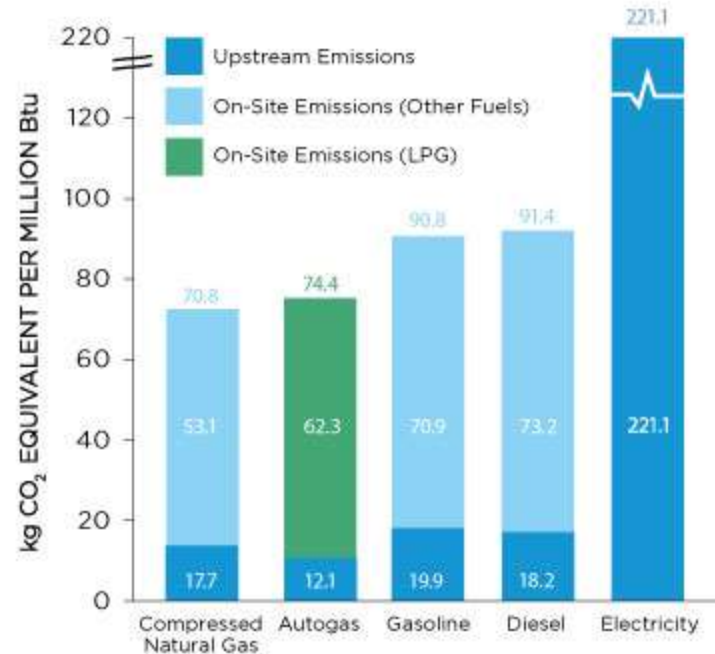
Residential & Commercial
Industrial & Agricultural
Autogas Fleets

Propane

Lower Emissions

TOTAL CARBON EMISSIONS FOR VARIOUS FUELS

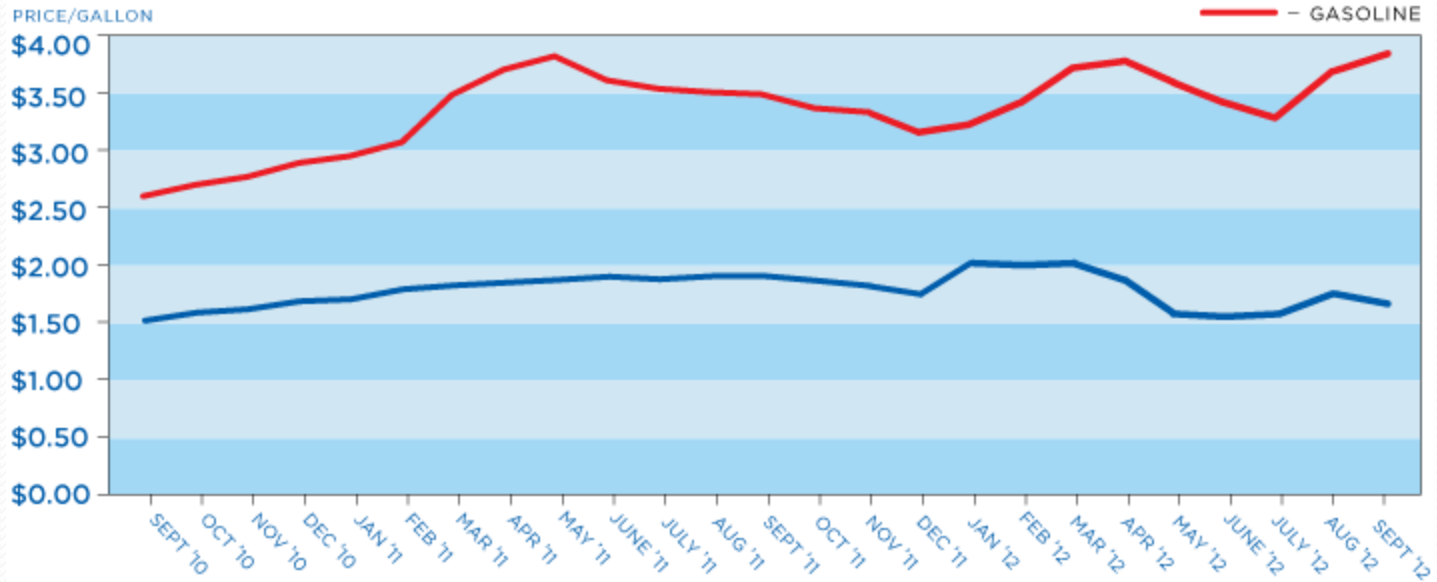
2009 PERC Study sourcing 2009 EPA and GREET Model



Propane

Lower Fuel Costs

AUTOGAS VS GASOLINE PRICES



Note: The average cost of autogas reflects the 50-cent-per-gallon federal tax credit through the end of 2011.

Propane Fueling Locations

1. Blossman Propane Gas/Weyers Cave, VA
2. Blossman Propane Gas/Powhatan, VA
3. Blossman Propane Gas/Bedford, VA
4. Blossman Propane Gas, Berryville, VA
5. Blossman Propane Gas, Gordonsville, VA
6. Tidewater Imports/Virginia Beach, VA
7. Phillips Energy/Gloucester, VA
8. DGS OFMS / Richmond, VA

Natural Gas

Clean Energy

What is Natural Gas?

- Naturally occurring hydrocarbon gas mixture located underground in rock formations or other hydrocarbon reservoirs.
- Transported via pipeline all over the country
- Compressed to Approx. 3,000 psi and stored on vehicle in pressurized fuel tank.

Natural Gas Clean Energy

CLEANER

Compressed Natural Gas (CNG) and Liquefied Natural Gas (LNG) are two of the cleanest burning alternative fuels available. Natural gas vehicles (NGVs) emit up to 30% less greenhouse gas than gasoline or diesel vehicles.

Natural Gas Clean Energy

CHEAPER

The use of natural gas fuel reduces costs significantly for vehicle and fleet owners. Natural gas averages up to \$1.50 or more less per gallon than diesel or gasoline (depending upon local markets).

Natural Gas Clean Energy

ABUNDANT

North America has at least a 120-year supply of natural gas, according to a June 2008 study. There are more than 13 million NGVs worldwide, with about 112,000 on U.S. roads today. 25% of all new transit buses currently on order nationwide are natural gas-powered.

Natural Gas Clean Energy

DOMESTIC

98% of natural gas consumed in North America is domestically-produced. Increasing use of NGVs reduces our dependence on foreign oil and enhances our nation's energy security.



Natural Gas Fueling Locations

1. Richmond Virginia – Open Now
2. Dulles, Virginia – Spring 2013
3. Wythe, VA – Late 2013
4. Norfolk, VA – Late 2013

Program Details

- Contracts provide no-cost infrastructure, maintenance and training and tiered pricing for vehicle conversions and fuel
- Program applies to the entire state fleet of 15,000+ vehicles – agency conversion plans due December 1, 2012
- To start, most of the vehicles to be converted will be:
 - CNG- Compact cars, $\frac{3}{4}$ and 1 ton pick ups , Cargo Vans, some heavy duty vehicles
 - Propane- $\frac{3}{4}$ and 1 ton pick ups , Cargo Vans

Program Funding Options

- DGS will maintain a \$4 million revolving loan program. Agencies can apply to this fund for vehicle conversion loans. DGS will loan funds to state agencies for vehicle conversions.
- CMAQ funds will be used in nonattainment and maintenance areas for either conversion or incremental replacement cost differences between alternative fuel vehicles and gas/diesel fueled vehicles.
- CMAQ funding is statewide funding and does not impact the MPO CMAQ commitment.
- Funding for conversions or incremental replacement costs is in the SYIP and will be \$2.7million for the first year and \$1.25million for the remaining 5 years, totaling \$8.95 Million. Differences between gas and alternative fuels (approximately half) will be banked and used in a loan program after original funding has been expended.