

# Alternative Fuels Vehicle Conversion

*Local access to state resources to increase deployment*



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## **SUPPORTED BY:**

VIRGINIA DEPARTMENT OF MINES, MINERALS AND ENERGY  
VIRGINIA DEPARTMENT OF GENERAL SERVICES  
VIRGINIA CLEAN CITIES AT JAMES MADISON UNIVERSITY

# Agenda



- **Virginia Energy Plan: Governor's alternative fuels goals**
- **Current Virginia alternative fuels activities**
  - Alternative Fuels Program
    - ✦ PPEA
    - ✦ Revolving Loan Fund
    - ✦ CMAQ Funds
- **CMAQ funds and alternative fuel vehicles**
- **Localities and CMAQ**
- **What other states are doing**

# Virginia Energy Plan



- **Accelerate the development of advanced vehicle technology and the use of alternative fuels vehicles in the Commonwealth**

VEP GOAL		CURRENT
100 VEHICLES CONVERTED BY OCTOBER 1, 2015	→	19 VEHICLES CONVERTED (19% OF GOAL)
300 VEHICLES BY END OF ADMINISTRATION	→	19 VEHICLES CONVERTED (6.3% OF GOAL)
DOUBLE ALTERNATIVE FUEL STATIONS TO 800 BY END OF ADMINISTRATION	→	441 STATIONS (10.25% OF GOAL)

# Virginia Activity



## Number of Commonwealth Fleet Vehicles Converted

19 Commonwealth Vehicles\*

<b>Agency</b>	<b>Number of Vehicles</b>	<b>Types</b>
Mines, Minerals, and Energy	9	CNG
General Services	8	4 CNG, 4 LPG
Corrections	1	1 CNG
Motor Vehicles	1	1 LPG

\* Does not include 1<sup>st</sup> application through CMAQ program

# Virginia's Alternative Fuel Fleet Program



- Program initiated by unanimous legislation in 2011 establish a plan providing for the replacement of state-owned or operated vehicles with vehicles that operate using natural gas, electricity, or other alternative fuels, to the greatest extent practicable, considering available infrastructure, the location and use of vehicles, capital and operating costs, and potential for fuel savings.
  - An Executive Order followed ordering an Alternative Fuels fueling station PPEA
    - ✦ 15 Proposals submitted
    - ✦ 2 selected and ultimately awarded
      - Compressed Natural Gas Solution – Clean Energy
      - Propane/Autogas Solution – Alliance Autogas
  - 0% interest revolving loan program
  - \$1.3 million annually from CMAQ funds over the six-year planning period
    - ✦ Covers incremental cost of Agency converting vehicle to alternative fuel
    - ✦ Up to an average of \$10,000 per vehicle

# CMAQ for Alternative Fuel Vehicles



## **Timeline**

**2010** – Local request to use CMAQ funds to cover ENTIRE cost of purchase of alternative fuel vehicles

**2011** – CTB denied localities from utilizing CMAQ funds to cover ENTIRE cost of purchase of alternative fuel vehicles

**2012** – CTB authorizes approximately \$1.3 million per year in CMAQ funds to cover INCREMENTAL cost for state agency fleet conversion

**2014 (July)** – Virginia receives formal approval from federal government to use CMAQ funds for fleet conversion

# CMAQ for Alternative Fuel Vehicles



## Locality Access to CMAQ Fleet Conversion funds

**REQUEST: Allow localities to access CMAQ funds to cover INCREMENTAL cost of local fleet conversion**

### State Benefits

Satisfies Governor's  
Alternative Fuel Priorities

Increased deployment =  
Increased infrastructure

Increased deployment = More  
favorable vendor terms

### Locality Benefits

Increased fleet conversion

Increased infrastructure  
deployment

Air Quality improvement

# Locality Interest



- Localities have been leaders in fleet conversion

<b>Locality</b>	<b>Number of Alternative Fuel Vehicles</b>	<b>Fleet Conversion</b>
Spotsylvania	36	Sheriff fleet has 31 light duty vehicles running on propane, and 5 school buses running on propane
Newport News	22	City has 22 propane powered vehicles in police and public works fleet
Chesapeake	37	City has 8 first response fire and rescue vehicles on propane, has 29 trash trucks on CNG
Arlington	29	City has 29 CNG transit vehicles at Arlington Rapid Transit
Richmond City	105	City has 9 light duty trucks and cars on CNG, Richmond transit has 72 buses on CNG, City has 24 trash trucks on CNG
Chesterfield	5	County Schools 5 school buses on LPG
Virginia Beach	5	City Schools have 4 heavy duty vehicles on CNG and 1 light duty vehicle
Gloucester	8	County Schools have 8 school buses on LPG
Williamsburg	16	Transit has 16 natural gas powered buses



# Locality Interest



## **Locality Interest in utilizing state resources for additional conversion**

**Richmond City** – Exploring additional natural gas vehicles for their extensive fleet, including additional stations, 30 police vehicles, and 7 sedans and trucks, this fiscal year.

**Chesterfield** – Exploring LPG for school buses, including 100 buses and 5 stations that the State fleet could use.

**Norfolk City** – Exploring use of CNG for a range of vehicles and propane school buses.

**Loudoun** – Exploring natural gas for its local government fleet. A State partnership built fast-fill CNG station at Dulles.

# What Other States Do with CMAQ



- Kansas has used \$3.4 million in CMAQ for 80% incremental cost of CNG and 80% of cost of stations.
- Ohio has used \$20 million for retrofit and re-powering engines, including CNG and propane.
- New York has used \$10 million in CMAQ for CNG stations, as well as CNG school buses, taxis, and vans.
- Illinois has provided \$14 million for alternative fuel vehicles and reimburses Chicago-area Class 2-8 trucks and buses for all-electric or CNG, electric taxis, and for CNG and EV stations.

# Alternative Fuel Vehicle Conversion



## Thank You

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