

Stakeholders Update

A Bi-Monthly Newsletter

Special Summer Edition 2008

Get Your Fix!

The Coordinators from the SE Clean Cities region have created a new publication titled the SE Forward Fuels Fix

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DMME and Virginia Clean Cities win grant to raise awareness of hydrogen and fuel cell technologies.

First seminar scheduled for September 17.

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Three sets of biodiesel specs approved. Hopes are they will bolster automaker support.

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NGV Workshop Highlights the Business Case for Natural Gas Vehicles

On August 14, 2008, Virginia Clean Cities along with the Clean Vehicle Education Foundation hosted the "Compelling Case for NGVs" Workshop at the College of William & Mary's Sadler Center in Williamsburg, Virginia.

Workshop content included:

- NGVs 101 - A Market and Technology Overview
- Available Natural Gas Vehicles & Engines
- Fuel Station Development Considerations and Ownership & Operations Options
- Federal, State and Local Incentives and Grants
- Fleet Users Panel
- CNG Component Costs, Calculating Simple Payback & Life-Cycle Analysis

Presentations are now posted to the [website](#) on the NGV Workshop page. Other helpful resources include:

- [American City & County magazine supplement addressing NGV applications](#) (includes vendors list)
- [Available Natural Gas Vehicles and Engines](#) (OEM as well as SVM retrofit systems)
- [Federal Tax Incentives Summary Sheet](#)
- [Fact Sheet: Federal Incentive for Natural Gas Vehicles](#)
- [Fact Sheet: Federal Incentive for Alternative Fuel Infrastructure](#)
- [Fact Sheet: Federal Incentive for Alternative Fuel Use/Sale](#)
- [CNG Cylinder Safety Inspection Information](#)

Many thanks to all of the sponsors who made the workshop possible:

- NGVAMERICA
- Clean Vehicle Education Foundation
- William & Mary

- Clean Energy
- Air & Gas Technologies, Inc.
- American Honda
- Emissions Solutions, Inc.
- Bauer Compressors Inc.
- American Clean Skies Foundation
- BAF Technologies / BAF Equipment
- Greenfield Compression
- Universal Air Products Corporation





SE Forward Fuels Fix!

The *SE Forward Fuels Fix* is a quarterly “ezine” publication of the southeast DOE region Clean Cities coordinators. *The Fix* contains articles from each of the coalitions from VA, KY, TN, NC, SC, GA, AL, and FL discussing actions taking place throughout the Southeast related to alternative fuels and advanced transportation technologies.

The inaugural edition includes stories on projects from most of the designated coalitions, a public refueling stations “matrix” where you can find a current listing of public stations in each state broken down by all major types of alternative fuels, a pictures page with snapshots of recent happenings throughout the southeast, a “get to know the coordinator” piece, and a write-up from our regional leader providing input on southern or U.S. wide Clean Cities Program on-goings. The publication has something of a southern-fried flair, so watch out for terminology distinct to the southeast.

We hope you enjoy the publication! Visit the [publications page](#) on the Clean Cities website, or visit the website home for *The Fix* at <http://www.sealtfuels.org>.

The ezine was the idea of Jonathan Overly, of the East Tennessee Clean Fuels Coalition. He approached us for help, and we were happy to step up as we see a need for a publication that focuses on southeast-wide alternative fuels and advanced technology deployment projects.

This summer edition is our first stab at creating a useful information sharing mechanism. If you have suggestions or comments, please send them to us.

Additionally, we are in the process of creating a new look for the publication that gives it more of a professional feel. An official website home is also in the works.

One way we hope to include our stakeholders is through opportunities to contribute stories, features of impressive stakeholder projects, and advertisement opportunities. A rate card is available for those that wish to consider advertising in *The Fix*. Your message will be seen by 10,000 readers with a stake in moving forward with addressing our nations energy obstacles throughout the southeast.



Image Source: www.epa.gov/cleanschoolbus/

Clean School Bus Project Reaches Milestone

We have reached a project milestone: diesel exhaust after-treatment devices have been installed on school buses in the Dragon Run watershed. This is a time for celebration and recognition of some key supporters.

Gloucester, Middlesex, King and Queen, and Essex Counties retrofit 71 total older model school buses with diesel oxidation catalysts in early August in order to clean up diesel exhaust emissions.

Another component of the grant program is a biodiesel buy-down program which aims to equalize the cost of biodiesel to that of petroleum diesel in order to encourage use and familiarize fleets with the alternative fuel. Gloucester County has been using biodiesel since 2007, and has served as a great example for the other school districts.

Numerous project partners and money from the Clean School Bus USA program of the U.S. Environmental Protection Agency and a grant from the Virginia Department of Environmental Quality made it possible.

We are currently working on a press event where we will feature the Dragon Run, the project partners and some elected officials. Perhaps you are working on a project with similar goals that we can include in the event. Let us know!



To learn more about diesel oxidation catalysts, please visit the EPA Clean School Bus site at <http://www.epa.gov/cleanschoolbus/>



Photo Source: www.chevrolet.com/fuelcell/

Hydrogen Seminars focus on Decision Maker Education

The Department of Mines, Minerals and Energy and Virginia Clean Cities received a Department of Energy grant to raise awareness of hydrogen and fuel cell technologies, provide examples of what state and local government can do, and show how decision makers can support the development and use of hydrogen and fuel cell technologies. The objectives of the project are to provide hydrogen and fuel cell technology learning opportunities through seminars, multi-media and video resources, technical support, and demonstrations to local and state government decision makers.

Half-day seminars will focus on three areas: 1) “hydrogen 101”; 2) discussing how state and local leaders can identify early market opportunities and applications and support a hydrogen economy in Virginia; and 3) field trips and demonstrations.

The first seminar will take place as a pre-conference workshop of the Commonwealth of Virginia’s Energy and Sustainability Conference (COVES). Workshop content will focus on:

- Our current energy system
- What is hydrogen?
- What is a fuel cell?
- Hydrogen production, storage, distribution, and use
- Environmental, energy, and economic implications
- Safety
- The future of hydrogen and fuel cells
- How local and state government can support emerging hydrogen markets
- Examples of hydrogen technology and emerging markets
- Drive the Chevrolet Equinox Fuel Cell Vehicle!

Who should attend? Decision makers and leaders in government, commerce and community: local and state agencies, leaders and staff involved in energy, environment, transportation, first response, emergency preparedness, code enforcement, conservation, communications, homeland security

Read about the many other exciting project elements, project partners, and opportunities on the [website](#).



Canola - Biodiesel Field Day

The Virginia Agricultural Council, USDA-CSREES-National Research Program, Virginia Tech, and Virginia State University demonstrated how farms can grow feedstock for fuel, extract oil, turn it into biodiesel, and make use of the biproducts

Virginia State University, under the leadership of Dr. Harbans Bhardwaj, has been working on a project utilizing locally-produced canola to manufacture biodiesel. Dr. Bhardwaj and partners have grown six acres of canola at two farmer's fields for two harvest seasons, harvested the seed, crushed and extracted the oil, evaluated the oil for traits, and converted the oil to biodiesel using a small portable reactor. The finished B20 has been used in two Kubota farm

tractors. All of this was demonstrated at an impressive field day held in Lanexa, Virginia.

The field day began with an introduction from Dr. Bhardwaj who explained the project and its goals, which are to diversify Virginia's agriculture, enhance the agricultural economy through production of value-added products and development of a self-supporting and sustainable farming system. After the introductions were complete, the host farmer demonstrated the process of harvesting the canola (picture shown above).

A demonstration of the BioPro 190 and the Fuelmeister, both small portable biodiesel reactors, was next on the agenda. Both representatives explained the process of taking the extracted oil, combining it with an alcohol and catalyst (lye and methanol in their case), and the reaction that produces the end products of biodiesel, glycerin, etc. Both reactors claim to produce the same end result, but one is much

more automated and also more expensive. There are still many precautions that must be taken prior to taking on the heavy job of producing biodiesel, many of which are documented in the [DEQ Biodiesel Environmental Compliance Primer](#).

The last agenda item was a discussion of how the canola meal can be used and a demonstration of an oilseed crusher which is used to extract oil out of soybean and canola seed.



Canola seed is dumped into mechanical press. Oil and cake are the two byproducts.



Fuelmeister Small Scale Biodiesel Reactor (L) and BioPro 190 Small Scale Biodiesel Reactor (R)

TAX CREDIT UPDATE

Several clean diesel vehicles are now eligible for the IRS Alternative Motor Vehicle federal tax credit. The 2009 Jetta TDI sedan and SportWagen qualify for \$1,300 tax credit, the three Mercedes BlueTEC models are eligible from \$900 for the ML to \$1,800 for the GL. Learn more at the [Diesel Technology Forum](#) site.

Hybrid Update



Photo Credit: [HRT](#)

Hampton Roads Transit Received 10 New Hybrid-Electric Buses and Launches the Region's First Express Bus Service

Ten new hybrid-electric buses with a blue and green color scheme and a surfer on his surf board were added to the Hampton Roads Transit (HRT) fleet in May. HRT unveiled the new shuttle and design for the Oceanfront's seasonal shuttle service, the VB Wave at a media event held on the boardwalk. The hybrids run between the oceanfront resort area to shopping hotspots around Virginia Beach, campgrounds, tennis courts, fun parks and the Virginia Beach Aquarium and Marine Science Museum.

HRT launched the region's first express bus service in June which they call the MAX or Metro Area Express. The service is designed to carry business commuters longer distances, more reliably and timely. Minimal stops, wireless capability, newer model buses with high-back seats and leg room, all make mass transit a more appealing option to business commuters. Another unique feature that helps alleviate the concern of having to leave work for an emergency is HRT's guaranteed ride program that promises a reliable rider back to your point of origin if an emergency arises.

Between January and April 2008, ridership on the MAX was around 130,058 which was 32% higher as compared to the same period last year.

Natural Gas Update

Charter Bus Services of Virginia Sees Big Savings During First Month of Service using CNG buses

John Fitzgerald, President of Charter Bus Services of Virginia, Inc., reported they spent \$6,000 in CNG fuel costs over the last month since putting their transit buses into service. This is compared to diesel fuel which would have totaled \$15,000!

E85 Update

Station Update - New E85 Stations Coming to VA-MD-DC

"Public" locations in Virginia (Most have restricted access)

Navy Exchange Quarters K
801 S. Joyce Street, Arlington, VA 22204
(703) 979-0405
Hrs: M-F: 5:30a-730p; Sat 730a-6p; Sun 930a-6p

Naval Station Norfolk
Bldg U-113 Bellinger Blvd, Norfolk, VA 23511
Access: (with base access privilege and ID)

Yorktown Naval Weapons Station
Bldg U-113 Bellinger Blvd, Yorktown, VA 23691
Access: (with base access privilege and ID)

AAFES Post Exchange Defense Supply Ctr
8000 Jefferson Davis Hwy, Richmond, VA 22134
Access with DSCR security clearance

"Public" locations in Maryland (Some have restricted access)

Chevron Service Center
3240 Fort Mead Road, Laurel, MD 20724
(410) 880-4740
Hours: 7a-7p M-F

Congressional Sunoco Opened April 2008
1467 Rockville Pike
Rockville MD 20852

Fredericktowne Chevron
1395 West Patrick Street
Frederick MD 21702
Opened April 2008

Quik-Mart Citgo Parole
2042 West Street, Annapolis, MD 21041
(410) 571-9676
Hours: M-F 530a-9p; Sat 7a-9p

Montgomery County Agencies
16640 Crabbs Branch Way
Gaithersburg, MD 20855
(240) 777-5730

(call ahead if first visit—waiver req'd)

"Public" locations in DC

Georgetown Chevron Opened June 2007
2450 Wisconsin Ave NW
Washington DC 20007
202-337-6277

Pending locations in Virginia

Country Store
Stop In Food Stores Inc
1220 Seminole Trail
Charlottesville VA 22901
(434) 973-1005

Pending VA locations continued

Oceana NAS
Virginia Beach VA

Naval Weapons Station Yorktown
Yorktown VA

Naval Station Norfolk
Norfolk VA

Pending locations in Maryland

Towncenter Chevron
12301 Middlebrook Road
Germantown MD 20874
Expected opening September 2008

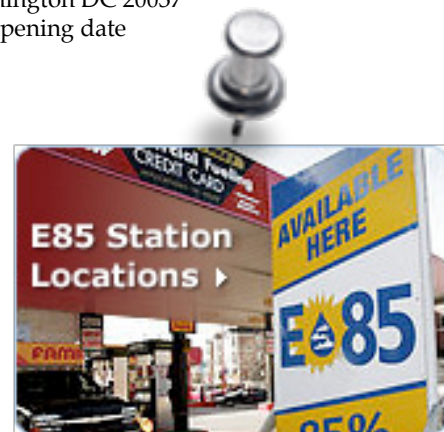
Germantown Chevron
20510 Frederick Road
Germantown MD 20876
Expected opening August 2008

Montgomery County
8710 Brookville Road
Silver Spring, MD 20724

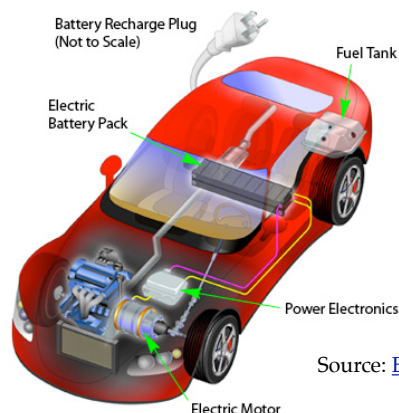
Perry Point
Rt. 40 and Rt. 222
Perryville, MD 20724

Pending locations in DC

Watergate Chevron
2643 Virginia Ave. NW
Washington DC 20037
No opening date



Grant money still available!



Source: [EERE](http://www.eere.energy.gov)



Source: [ASTM](http://www.astm.org)



Source: [Flex Fuel U.S.](http://www.flexfuelus.com)

EPRI, GM, Dominion Collaborate on Plug-in R&D

Source: <http://my.epri.com/> and <http://www.dom.com/news/elec2008/pr0619.jsp>

Dominion is one of 34 utilities to team with the Electric Power Research Institute (EPRI) to facilitate integration of plug-in hybrid vehicles (PHEVs) seamlessly into the grid.

This collaboration is part of a larger energy conversation plan Dominion released in July which is expected to save customers more than \$1 billion over 15 years. A key component of the plan is the installation of "smart grid" technologies that will enhance the electric distribution system to meet increasing demand and expectations of customers. Expected investments are projected at \$600 million to replace all existing electric meters with Advanced Metering Infrastructure (AMI).

Other programs included in the plan include incentives for: construction of Energy Star® homes, installation of energy-efficient lighting, energy audits, residents who allow Dominion to cycle their air-conditioners and heat pumps during peak demand periods, power cost monitors, heat pump upgrades, improve HVAC units, and refrigerator turn-in program.

Dominion estimates 12 million tons of carbon dioxide emissions will be avoided over the 15 years, and electricity savings could reach 2.6 million megawatt-hours by 2013 as a result of the improvements.

To read the environmental assessment of plug-in hybrids, visit the [EPRI](http://www.epri.com) website

ASTM Approves Biodiesel Blend Specs

Source: http://nbb.grassroots.com/08Releases/ASTM_final/



The long-awaited ASTM specifications for biodiesel blends were voted on and approved by the ASTM

International D02 Main Committee in late June.

Three key sets of biodiesel specifications that should bolster automaker support include changes to the existing B100 biodiesel blend stock specification (ASTM D6751), specifications to include up to 5% biodiesel in conventional petrodiesel specification (ASTM D975) and a new specification for blends of between 6 percent to 20 percent for on and off road diesel.

A blend specification for B20 blends has been requested for numerous years by automakers. The spec should help engine manufacturers in design and testing of engines to optimize performance.

A fourth set of ASTM specifications were also approved for inclusion of B5 in heating oil.

EPA Approves E85 Conversion

Source: http://www.eere.energy.gov/afdc/progs/ddown.php?afdc/WHATS_NEW/816/

On May 14, 2008, the EPA issued a Certificate of Conformity to Flex Fuel U.S., LLC for the conversion of specific 2006 model year Chrysler and Dodge vehicles to operate on E85.

The certificate allows the conversion of up to 100 vehicles that are part of the model year 2006 Chrysler test group #6CRXV05.7VE0. Models included in this test group are the 2006 Dodge Magnum, Magnum AWD, and Charger with certain 5.7L engines as well as the 2006 Chrysler 300/SRT-8 and 300 AWD with the same 5.7L engine.

The Flex-BOX SMART KIT is technology Flex Fuel U.S., LLC uses to allow EPA approved vehicles to run on a combination of gasoline and ethanol. Read more about the system at <http://flexfuelus.com/>



STAKEHOLDER SPOTLIGHT

Clean Cities is a government-industry partnership designed to reduce petroleum consumption in the transportation sector by advancing the use of alternative fuels and vehicles, idle reduction technologies, hybrid electric vehicles, fuel blends, and fuel economy. Virginia Clean Cities is one of almost 90 coalitions across the U.S. that help meet the objectives of improving air quality, developing regional economic opportunities, and reducing the use of imported petroleum.

Sponsors & Strategic Partners



Coalition Stakeholders



JOIN US! Visit <http://www.hrccc.org/joinus.html>

Calendar of Upcoming Events

Alternative Fuel and Advanced Technology Vehicle Related Events

2008 Commonwealth of Virginia Energy and Sustainability (COVES) Conference

and

Hydrogen: Promising Energy Security

September 17-19, 2008
Greater Richmond Convention Center,
Richmond, VA
www.hrccc.org
Test drive the GM Equinox Fuel Cell Vehicle!

HRAEE 5th Annual Environmental Education Conference

September 11, 2008
Virginia Aquarium
Email Holly Carson at
holly.carson@norfolk.gov

Algae Biofuel Summit 2008

September 17-19, 2008
New Delhi, India
www.algaebiofuelsummit.com/

Woody Bioenergy in Virginia: Rural Focus

September 4, 2008
Abington, VA - South West Virginia Higher Education Center
[Agenda](#) and registration available online <http://www.cnr.vt.edu/woodybioenergy/RegistrationForm.html>

Northern Virginia Community College AFV Day Odyssey

September 20, 2008
NOVA's Alexandria Campus
11 am - 3 pm
Email Heather Neikirk for more information at
hneikirk@nvcc.edu

National Hydrogen Association Fall Forum: Hydrogen from Renewables

September 22-24, 2008
Golden, Colorado
<http://www.hydrogenassociation.org>

Virginia Environmental Assembly

September 26 & 27, 2008
Virginia Commonwealth University, Richmond, VA
<http://www.vcnva.org/vea/2008veassembly.html>

Woody Bioenergy in Virginia: Urban/Suburban Focus

September 29, 2008
Petersburg, VA - Virginia State University
[Agenda](#) and registration available online <http://www.cnr.vt.edu/woodybioenergy/RegistrationForm.html>

31st World Energy Engineering Congress Conference and Expo

October 1-3, 2008
Washington, DC
<http://www.energycongress.com>

Dragon Run Day

October 11, 2008
10 am - 4 pm
Gloucester, Virginia
Thousand Trails Campground

TAFMA Meeting sponsored by VaCC - Topic TBD

October 15, 2008

NAAEE 37th Annual Conference

October 15-18, 2008
Wichita, Kansas
www.naaee.org/conference/2008-conference

Green Living Expo

October 5, 2008
Norfolk, Virginia
Email Donna Agresto-Seavey at
donna@sinclairstations.com

Green Living and Energy Expo

November 7-8, 2008
Roanoke, Virginia
<http://www.aecp.org/Expo/overview.shtml>

Electric Drive Transportation Association Conference & Expo

December 2-4, 2008
Washington DC Convention Center
<http://edta.orchidsuites.net/sites/conf2008/>

2009 National Biodiesel Conference & Expo

February 1-4, 2008
Moscone Center West, San Francisco, CA
<http://www.biodieselconference.org/2009/default.asp>

If there is an event our readers may enjoy, please send an email to Chelsea at cjenkins@hrccc.org so we can add the event to our calendar and our website.