EPA Grant helps Virginia Middle Peninsula schools reduce diesel exhaust pollution

On March 4, 2008, Virginia Clean Cities was notified of our Clean School Bus award on behalf of Virginia’s Middle Peninsula school districts. Our project was one of three funded during the 2007 round of funding. EPA released a press release on April 11, 2008 which contains more detail.

EPA Region 3 awarded almost $700,000 through the Clean School Bus USA grant program in an effort to clean up school bus diesel exhaust emissions. Virginia Clean Cities was one of this years grant recipients on behalf of the Middle Peninsula Schools (Gloucester, Middlesex, King & Queen, Essex, and Mathews Counties). On March 4, 2008, EPA awarded Virginia Clean Cities $143,068 to reduce diesel school bus emissions in order to improve the air quality for the student population of the four schools. The longer ride times for students (an hour or more), rural nature, and elongated geography of these county school districts make them prime candidates for school bus upgrades.

The funding will help reduce diesel emissions by installing diesel oxidation catalysts on 100 school buses, using biodiesel fuel in 198 buses, promoting reduced engine idling, and replacing an old diesel bus with a new cleaner burning alternative fuel propane bus.

"Breathing diesel exhaust can be harmful, especially for children with asthma,” said Regional Administrator Donald S. Welsh in an April 11, 2008 EPA press release. "We’re pleased that Hampton Roads Clean Cities is taking action so students can breathe cleaner air and live healthier lives.”

In addition to obvious clean air and health benefits, the Clean School Bus award supports or complements many components of the effort to preserve the sensitive Dragon Run watershed in Virginia’s middle peninsula. Virginia Clean Cities has been working on the Dragon Run Biodiesel Project since early 2007. You can read more about this project on our website: http://hrccc.org/biodiesel/dragonrunbiodiesel.html.

Project Update

- A “biodiesel buy-down” program has been implemented where school districts can receive up to $.06 per gallon to equalize the cost of the biodiesel blend chosen (B20 in most cases)
- Tank cleaning has been scheduled for schools fuel tanks to prepare for the biodiesel transition.
- Preparation is underway for the purchase of diesel oxidation catalysts (DOCs) that will be retrofit on 2004 model year school buses and older. The DOCs will significantly clean up diesel exhaust and therefore exposure of students and bus drivers, and are a cost effective way to clean up tailpipe emissions of older school buses that will be on the road three or more years.
- Virginia Clean Cities and interested school districts are investigating the purchase of a Bluebird Propane Powered Vision school bus.

The Virginia Coastal Management Program at the DEQ through a NOAA grant was the precursor to this project, and funded the work necessary to successfully pursue funding.
New Sponsor & Strategic Partner!

Osage Bio Energy, LLC recently committed to our highest membership level: Sponsor & Strategic Partner. Osage Bio Energy is headquartered in Glen Allen, VA, and was founded in January 2007 to pursue the development of the United States’ first major barrel to ethanol production facilities. Osage Bio Energy is the sister company of Osage, Inc., the largest independent distributor of motorfuel grade ethanol in the Southeast, with current throughput of approximately 100 MGPY.

According to John Warren, Director of Government Relations and Project Development (formerly the Director of the State Energy Division), Osage Bio Energy (OBE) is committed to operating as a sustainable, environmentally responsible company and will differentiate itself from traditional Midwestern corn-to-ethanol production companies in several key ways.

First, the ethanol will primarily be produced from regionally grown barley and will be an Advanced Biofuel as defined by the Renewable Fuel Standard (RFS). Barley requires less fertilization and prevents nutrient runoff in winter months, and is a winter crop.

Second, OBE has negotiated an exclusive agreement with KATZEN International, Inc. for exclusive use of KATZEN technology capable of producing ethanol from barley within a 200-mile radius of each plant site.

Third, OBE’s site selection model provides significant energy balance advantages over corn-based ethanol, especially in the Mid-Atlantic and Southeast. OBE is planning on partnering with existing steam producers, utilizing its own waste products for energy and procuring locally grown biomass, thus maximizing efficiency and environmental sustainability.

Join Us & Help Move Virginia Forward!

We have recently updated our site to include a description of membership levels and benefits. We count on a growing membership base to support the organization and its activities. Below is a description of our three membership levels and benefits. Join today and support our activities to help Virginia move to cleaner transportation options!

Coalition Stakeholder - $600 Annually
As a valued member of the Coalition, stakeholders receive our bi-monthly Coalition Updates electronically and are eligible to participate on the various project-specific Virginia Clean Cities standing committees. Coalition stakeholders enter into the alternative fuel network of private sector companies and public sector entities that all have a stake in the region’s improved air quality, national energy security, and local economic development.

Corporate Citizen - $1,800 Annually
Regional Corporations interested in promoting the Coalition mission or a specific outreach event receive all of the benefits of Coalition stakeholders and are eligible for press event support for petroleum conservation-related initiatives. Corporate Citizens may have company logo (with link to your company website) displayed on our website stakeholder page and in our newsletter, and receive limited grant application assistance.

Sponsor & Strategic Partner - $5,000 Annually
Sponsors are Coalition members with a high stake in the success of our endeavors. Sponsors receive all of the above benefits as well as prominent logo exposure on our website homepage and at the top of our bi-monthly newsletter. Sponsors also receive free advertising or exhibit space at Virginia Clean Cities outreach and educational events. Sponsors are eligible for selection to the Executive Committee to provide strategic leadership for the Coalition.

VCC holds Propane Vehicles Seminar

To download presentations, visit http://www.hrccc.org/propane.html

On Wednesday, April 23rd, Virginia Clean Cities held a propane vehicles seminar in coordination with James City County who hosted the event at the Community Center in Williamsburg. The Propane Research and Education Council sponsored the lunch meeting and sent one of their best, Greg Zilberfarb, to provide an overview of propane as a transportation fuel, new propane product offerings, and answer questions from the audience about safety, costs, and infrastructure. Mike Perticone of Clean FUEL USA traveled from Michigan to provide a great overview of the new dedicated Bluebird Propane Vision school bus.

It was an exciting meeting, and Virginia Clean Cities stakeholders learned a lot about the feasibility of propane as a transportation fuel and niche markets. With the federal tax incentives currently available for the vehicles, the infrastructure, and the fuel, propane appears to be an extremely cost effective option. There are tons of old and new options when it comes to propane including: shuttles, street sweepers, lawn mowers, pick-up trucks, and school buses.

For an overview of propane as a transportation fuel, visit http://www.eere.energy.gov/afdc/vehicles/propane_what_is.html

To find out which vehicles are available that are propane powered, visit http://www.eere.energy.gov/afdc/progs/vehicles_search.php

Field Day Planned

VCC teamed up with Virginia State University and the local Extension office to present a biodiesel-canola field day that will take place on Thursday, June 19 from 10 am to 1:30 pm in New Kent County. Visit http://www.hrccc.org/biodiesel.html for more info.

Visit our Join Us Section for more information and membership applications: http://www.hrccc.org/joinus.html
Upcoming Vehicle Releases Which May Qualify

- For a list of upcoming light-duty lean burn diesel vehicles available that will be for sale in the U.S., visit our website: [http://www.hrccc.org/taxincentives.html](http://www.hrccc.org/taxincentives.html)

Natural Gas Update

**Charter Bus Services of Virginia Purchases Natural Gas Transit Buses from Colonial Williamsburg**

Charter Bus Services of Virginia, Inc. out of Norfolk, Virginia recently purchased a total of 7 transit buses from Colonial Williamsburg. The company will receive four this month, and three next month for use on their downtown commuter park and ride routes. Currently, there is a significant fuel price savings when switching from diesel to natural gas. John Fitzgerald, President of Charter Bus Services, quotes this and the cleaner exhaust as the two primary reasons for the switch. The company is currently reviewing refueling options, and may add another CNG station to Hampton Roads. We will report more on this story next edition.

Virginia Natural Gas quotes the current retail pump price of natural gas is just under $2.10 per gasoline gallon equivalent. Alternatively, diesel fuel is hovering $4.20 per gallon - double that of CNG.

**Virginia Clean Cities and the Clean Vehicle Education Foundation Announce a Natural Gas Vehicles Workshop**

Virginia Clean Cities and the Clean Vehicle Education Foundation are hosting a Natural Gas Vehicles Conference on Thursday, August 14th at William & Mary in Williamsburg, Virginia. NGVAmerica will be providing sponsorship support for this event. Topics that will be covered include: natural gas overview, vehicles, fuel costs & stations, tax credit incentives and grants, fleet users panel, and payback analysis. A tour of the Colonial Williamsburg Foundation CNG refueling site is also scheduled.

If you are interested in participating and/or sponsoring this exciting event, please contact us.

**E85 Update**

**E85 Infrastructure Partner, Mid-Atlantic Petroleum Properties, Opens Two More E5 Stations**

Mid-Atlantic Petroleum Properties LLC has opened two more E85 dispensaries in the Capital Beltway area. Mid-Atlantic was the first company to receive a grant - for an E85 station in Georgetown - under the VA-MD-DC retail E85 grant project that Clean Cities manages for the Virginia Department of Mines, Minerals and Energy. The Congressional Sunoco in Rockville, MD was selling E85 for 70 cents per gallon less than regular unleaded on April 11. Mid-Atlantic also has opened an E85 dispenser at the Fredericktowne Chevron in Frederick, MD and is on track to open four more E85 dispensers in DC and Maryland before summer’s end.

Other fuel distributors also have inquired about financial assistance from this regional project funded by the U.S. Department of Energy and the states of Virginia and Maryland. They are considering the addition of E85 dispensers at existing retail gasoline stations in the Charlotte area, Gloucester County, Norfolk, Southampton County, Virginia Beach and York County.

Biodiesel Update

**Prince George High School Making Biodiesel as Learning Tool and to Help Save Money for School**

It’s always nice to hear about young leaders taking an idea and making it happen. Prince George High School students have done just that. It all started as a biodiesel research paper amongst three seniors, two of which were at our recent biodiesel seminar in Prince George County. After the project was complete, the seniors approached their manufacturing teacher, Randy Bullock, and asked if they could actually make the stuff they had been reading about. Randy had already been exposed to biodiesel through family, and was excited to take on the project.

They have been overwhelmed by the generosity of the community; most of the items needed for their “appleseed” reactor were donated by local business, including Noland. Thus far the group has produced 130 gallons of biodiesel using waste grease picked up from Prince George county schools. The group is hoping to use their product in the school buses, but are first aiming to expand their operations further by building a dedicated workspace on school property. The local progressive insurance has set up a fundraiser for the group and will match any funds donated. The Farm Bureau has also donated $2,000 toward the project.

Surprisingly, the group sent off one of their samples for ASTM testing and reported passing all parameters. If you wish to donate to their cause, contact us for more information.
Ethanol: A Scapegoat?

The presidential candidates aren’t the only ones getting pushed around by the media. Ethanol headlines lately suggest that the fuel is the root of all the current woes our country is suffering from, namely, high food prices, high fuel prices, and environmental degradation.

Let’s put the cart before the horse, and take a look at some basic facts. The following information was compiled by the USDA Trade and Biofuel Analysis Division which can be downloaded on our site: [http://hrccc.org/ethanol.html](http://hrccc.org/ethanol.html)

Issue: Commodity prices have risen sharply over the past 18 months, especially for wheat, corn, and soybeans, which is putting upward pressure on overall U.S. food price inflation. This has raised concerns from both U.S. and foreign customers with many citing U.S. biofuels production as the primary culprit.

Facts:
- Since September 2006, futures prices for wheat, corn and soybeans have roughly doubled, helping push food prices up in 2007 and 2008 at its fastest pace since 1990. The reasons behind the rise are complex and global in scope and NOT a simple case of growing U.S. biofuels production.
- Agricultural commodity prices and overall food inflation are higher due to a broad range of global factors that are occurring at the same time - forming “a perfect storm.” These include:
  - Unreleenting growth in foreign food demand especially in emerging markets whose economies and middle classes are growing rapidly and boosting their import demand for agricultural commodities.
  - Growing biofuels production in both the U.S. and abroad, such as the EU and Brazil.
  - Reduced supplies from foreign competitors, affected by bad weather and export restrictions. This has caused stocks of major exporters to decline to their lowest levels in decades.
  - Weak U.S. dollar and surging investment from hedge and index funds that are attracted to the favorable returns offered in commodities.
  - In the long term, agricultural commodity prices will remain higher than the previous decade. Although prices are expected to ease from current levels, many of the fundamental demand factors currently in place are expected to continue, especially strong foreign food demand.
- Wheat, corn, and soybeans are not the only commodities that have surged recently. A variety of industrial metals, petroleum, coffee and cocoa are among the many that have increased a comparable amount over the same period due to the impact of global market conditions discussed earlier.

Ethanol Myths & Facts

Source: [http://www1.eere.energy.gov/biomass/ethanol_myths_facts.html](http://www1.eere.energy.gov/biomass/ethanol_myths_facts.html)

MYTH: In terms of emissions, ethanol pollutes the same as gasoline or more

FACT: Ethanol results in fewer greenhouse gas (GHG) emissions than gasoline and is fully biodegradable, unlike some fuel additives.

- Today, on a life cycle basis, ethanol produced from corn results in about a 20 percent reduction in GHG emissions relative to gasoline. With improved efficiency and use of renewable energy, this reduction could be as much as 52 percent.

- In the future, ethanol produced from cellulose has the potential to cut lifecycle GHG emissions by up to 86 percent relative to gasoline.

MYTH: Wheat, corn, and soybeans are the primary culprit.

FACT: Wheat, corn, and soybeans are not the only commodities that have surged recently. A variety of industrial metals, petroleum, coffee and cocoa are among the many that have increased a comparable amount over the same period due to the impact of global market conditions discussed earlier.

MYTH: Ethanol cannot be produced from corn in large enough quantities to make a real difference without disrupting food and feed supplies.

FACT: Corn is only one source of ethanol. As we develop new, cost-effective methods for producing biofuels, a significant amount of ethanol will be made from more abundant cellulosic biomass sources.

- Future ethanol will be produced increasingly from cellulose found in crop residues (e.g. stalks, hulls), forestry residues (e.g., forest thinning, wood byproducts), energy crops (e.g. switchgrass, sorghum), and sorted municipal wastes. Some promising energy crops grow on marginal soils not suited for traditional agriculture.

- The U.S. Departments of Energy and Agriculture’s Billion Ton Study found that we can grow adequate biomass feedstocks to displace approximately 30 percent of current gasoline consumption by 2030 on a sustainable basis - with only modest changes in land use. It determined that 1.3 billion tons of U.S. biomass feedstock is potentially available for the production of biofuels - more than enough biomass to meet the new renewable fuel standard mandated by EISA.

MYTH: Ethanol has a positive energy balance, and this balance is constantly improving with new technologies.

FACT: Biofuels have the potential to significantly reduce global GHG emissions associated with transportation, but-as with all types of development-controls are needed to protect ecologically important lands.

- In Brazil and elsewhere, laws have already slowed deforestation, and for the past decade China has converted marginal croplands to grassland and forests to control erosion.

- Links between U.S. ethanol production and land use changes elsewhere are uncertain. It can’t be assumed that increases in U.S. ethanol production will lead to increased crop production abroad. Since 2002, during the greatest period of ethanol growth, U.S. corn exports increased by 60 percent and exports of Distiller’s Dried Grains (DDGs) also increased steadily. In part, improvements in U.S. corn yield have enabled simultaneous growth in corn and ethanol production.

- GHG emissions will decrease dramatically as biofuels of the future are increasingly made from cellulosic feedstocks and as the associated farming, harvesting, transport, and production processes increasingly use clean, renewable energy sources.

Ethanol Helping Keep Gas Prices Low?

Source: [http://www.ethanolrfa.org/](http://www.ethanolrfa.org/)

The Renewable Fuels Association testified on May 7, 2008 before Congress’ Subcommittee on Energy and Air Quality. RFA President discussed the positive impact ethanol is having on prices at the pump and pointed out that removing 4.5 billion gallons of ethanol from the market would increase gas prices by up to 31 percent in the short term and 13 percent in the longer-term.
Get Your Own Prius PHEV Conversion Kit

Source: http://www.a123systems.com/hymotion/products/N5_range_extender

Hymotion is currently establishing and certifying a 123 Green CHIP (Certified Hymotion installation partner) dealer network in major cities around the country. Initial Green CHIP dealers will be located in Boston, Washington, DC, Minneapolis, Seattle, San Francisco and Los Angeles.

Individual consumers can now purchase a 123 Hymotion L5 Plug-in Conversion Module designed to convert Toyota Prius HEVs into Plug-in HEVs (PHEVs) that can achieve up to 100 mpg for 30-40 miles. The product is designed for Toyota Prius model years 2004-2008. The specifications listed on Hymotion’s website include:

- ~ 5 kWh pack
- 4.5 hour charge time
- Up to 100 mpg for 30-40 miles within electrically assisted driving range
- Meets strictest emissions standards in U.S.
- Crash tested to federal new vehicle standards
- $9995 - includes 3 year standard warranty and installation

Biodiesel Seminar Highlights Continued Interest in Biodiesel as well as Concerns

Virginia Clean Cities teamed up with the South Centre Corridors RC&D Council to host a biodiesel seminar in Prince George County, Virginia. The seminar format was very similar to the 2007 fuel quality seminars held throughout Virginia. Dennis Sulick of the Virginia Biodiesel Refinery provided a “biodiesel 101” presentation and answered questions about feedstock, cloud point, and the manufacturing process. Al Christopher provided a fuel quality housekeeping presentation that discussed blending and storage considerations as well as necessary steps to take prior to transitioning to biodiesel. Roger Kelly, one of the first to transition their entire fleet (Gloucester schools and county) to a biodiesel blend, spoke candidly about their transition and the issues encountered during the first winter while ULSD was coming online. Buddy Stewart, another trendsetter, also spoke about their petroleum reduction resolution and biodiesel transition. Prince George High School teacher, Randy Bullock, and students discussed their biodiesel production project and shared their future goals of producing enough for use in Prince George school buses.

Seminar participants that had also been using biodiesel also shared their experience. It was apparent through the panel discussion and participant experience that one must educate themselves on the proper method of transition to biodiesel. Cleaning tanks was often cited as a step overlooked which caused problems in some of the fleets discussed.

2008 Ford order Bank Scheduled to Close May 30 for Roush Dedicated Propane F-150 (and F-150)

The all-new Roush dedicated Propane F-150 is ready for purchase at dealers listed on the propane truck website (www.propanetruck.us). Contact your Roush regional sales manager. Hurry, though, the order bank closes on May 30th. Note the last day for retail customers to purchase an F-150 is May 30 (not just propane).

Earth Day Events Bring Big Crowds

This year, there seemed to have been more Earth Day events or at least more hype surrounding them. Virginia Clean Cities formally participated in two events, one at the Defense Supply Center Richmond, and one at Mt. Trashmore in Virginia Beach. One of our stakeholders, Hampton Roads Hydrogen, was on site in Virginia Beach to show off their “Hampton Roads Hydrogen Hydrogenator” which claims to save fuel and reduce emissions. We reported on DSCR’s installation of E85. The fuel is available to all that have base clearance. We noticed the lunchroom placard boasting of their achievement!

AFVi Conference Draw Big Crowd

The 2008 Alternative Fuels and Vehicles Conference attendance was the largest in the 14-year history of the event. There were a variety of sessions and presentations to address most participants’ information needs. The ride and drive and expo hall were extremely impressive. Attendees got the chance to drive a variety of alternative fuel vehicles including CNG, hybrid, hydrogen fuel cell, electric, propane, and plug-in hybrid electric vehicles. There were AFVs that have been around for quite some time as well as models that aren’t even available for sale yet. To download presentations, view attendees and exhibitors, and look at photos, visit a http://afvi.org/NationalConference2008/
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

Calendar of Upcoming Events

Alternative Fuel and Advanced Technology Vehicle Related Events

Alternative Fuels & Vehicles Conference
May 11-14, 2008
Las Vegas, NV
Presentations now available!

Regional Ethanol Impacts Workshop
May 27, 2008
9:30 am - 3 pm
Hosted by the Metropolitan Washington Alternative Fuels Clean Cities Partnership
http://www.mwcog.org/calendar/ (Click on Regional Impacts Workshop)

Climate Change Seminar
May 31, 2008
Jacksonville Center, 220 Parkway Lane South, Floyd, VA
www.aecp.org

Virginia Wind Energy Collaborative State Wind Symposium
June 18-19, 2008
James Madison University, Harrisonburg, VA
www.vwec.cisat.jmu.edu/conf/

Canola - Biodiesel Field Day
Demonstration of canola harvest, canola seed crushing for oil, conversion of oil into biodiesel, use of biodiesel in farm machinery.
June 19, 2008
10 am - 1:30 pm
Davis Farm, 9194 Hill Farm Road, Lanexa, VA
Visit www.hrccc.org/biodiesel.html

Clean Air & Energy Independence Conference
June 18-20, 2008
Asheville, NC
www.naftc.wvu.edu/

Natural Gas Vehicles Conference
August 14, 2008
William & Mary, Williamsburg, VA
www.hrccc.org

GreenGov Conference 2008
August 14-15, 2008
Washington, D.C.
www.performanceweb.org/CENTERS/EN/Events/E112/

2008 Commonwealth of Virginia Energy and Sustainability (COVES) Conference
September 17-19, 2008
Greater Richmond Convention Center, Richmond, VA
www.vsbn.org

Virginia Environmental Assembly
September 27, 2008
Virginia Commonwealth University, Richmond, VA
www.venva.org/events/index.htm

AFV Day Odyssey
October 3, 2008
Hampton Roads, VA
www.nationalafvdayodyssey.org/

NAAEE 37th Annual Conference
October 15-18, 2008
Wichita, Kansas
www.naaee.org/conference/2008-conference

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.