



# Stakeholders Update

A Bi-Monthly Newsletter

November and December 2007

## Building a Hydrogen Economy in Virginia

Virginia Clean Cities teamed up with a diverse group of partners to submit a grant proposal in response to DOE's Hydrogen Education Development FOA.

Page 2

## Natural Gas Update:

Arlington adds 8 New CNG Transit Buses and continues the tradition of only alt fuel purchases.



Page 6

## President Bush Signs Energy Bill



President Bush signed the Energy Independence and Security Act of 2007 on December 19, 2007.

Page 3

## ASTM Subcommittee Passes New Specification for 20% Biodiesel

A biodiesel blend specification covering blends of six-to-20 percent biodiesel was passed out of ASTM International's D02 Subcommittee E.

Page 4

## Smith Launches Worlds Largest Electric Truck



Page 5

## Upcoming Events Highlight Alternative Fuels Growth

There are so many events in 2008 that focus entirely or heavily on topics related to alternative fuels. The annual biodiesel and alternative fuel and vehicles conferences should be the best yet!

Page 6

## 2008 Project Rundown

Virginia Clean Cities and the Hampton Roads Coalition are managing a half dozen alternative fuel projects for the Virginia Department of Mines, Minerals and Energy (DMME) and the US Environmental Protection Agency (EPA) in 2008 thanks to the many stakeholders who partnered to develop these projects or helped to secure grant money to implement them.

### Summary of Major 2008 Projects that May be of Interest:

- **Fleet Conversion:** We are looking for government or private fleets that want to make the conversion away from imported fossil fuels toward greater use of cleaner domestic alternatives like biodiesel, electricity, ethanol, hydrogen, natural gas and propane. The idea is to calculate the air quality benefits that would result from a given fleet's conversion to cleaner fuels and,

to a limited extent, greater focus on transportation energy conservation. Then take the conversion proposals "shopping" for political, financial and technical support to make them happen.

- **Policy Assessments:** It is an endless job to learn what our neighbors in Virginia and in other states are doing to move the alternative fuel ball down the field. You don't need to reinvent the wheel when other folks already have done that work. And two or more ideas sometimes can be combined into one better wheel. Let us know when you learn of a program that works for you or someone you know.
- **Retail E85 Fuel:** Yes, Clean Cities is still looking for petroleum distributors or retailers to provide E85 fuel that can be used in a flex fuel vehicle (FFV). This program aims to add a dozen E85 dispensers for the public in Virginia, Maryland and DC along the I-95 and I-64 corridors. We are hoping that some new partners might help to make this happen in 2008, including the Virginia Department of Transportation and the Navy Exchange Command.

- **Hydrogen:** See page 2 for more information on this project.
- **Clean School Bus USA:** The Environmental Protection Agency (EPA) is expected to award a cooperative agreement to use biodiesel blends, idle reduction and retrofitted diesel oxidation catalysts to improve air quality and increase use of locally produced biodiesel in the school bus fleets of Essex, Gloucester, King and Queen, Mathews and Middlesex.
- **Diesel Retrofits:** Clean Cities is most familiar with exhaust after-treatment devices that reduce air emissions from school buses, but similar equipment works just as well on other vehicles and off-road equipment. Also in this category are hardware, software and education paths to cleaner air and reduced oil dependence, including idle reduction, advanced auxiliary power units, engine retrofits and driver/operator efficiency training and electronics.

### Get Involved!

Let us know if you are interested in learning more or participating in any of these projects.

## BUILDING A HYDROGEN ECONOMY IN VIRGINIA

*The Virginia General Assembly passed resolutions in 2005 calling for the development of a Virginia Hydrogen Energy Plan (HJ711 and SJ 406). The Virginia Department of Mines, Minerals, and Energy tasked Virginia Clean Cities to work on elements of the resolutions. The Virginia Hydrogen Economy Roundtable, a forum created in 2002 comprised of representatives from more than thirty energy- and transportation-related industries, federal and Virginia government agencies, Virginia academic institutions, and non-governmental organizations, developed the Virginia hydrogen plan and hydrogen vision.*

*Virginia's Vision and Strategy for the Hydrogen Economy recommends actions to foster the development of a hydrogen economy in Virginia. Five actions are recommended as priorities to help focus Virginia's continuing efforts to build a hydrogen economy:*

- *Educate Virginia's future workforce, focusing on K-12 education*
- *Leverage the research and development (R&D) potential of Virginia's academic institutions*
- *Invest in hydrogen demonstration projects with high visibility*
- *Foster partnership building*
- *Coordinate policies and incentives to drive the building of a hydrogen economy in Virginia*

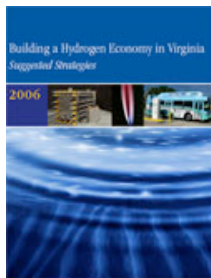
## H2 Updates and Plans

### Teacher Workshops

The National Energy Education Development (NEED) Program has completed four hydrogen workshops for Virginia teachers, using about \$75,000 in funding provided last session by the Virginia General Assembly and a grant from the Virginia Department of Mines, Minerals and Energy.

Workshops were conducted at the Science Museum of Virginia in Richmond, Nauticaus in Norfolk and at annual conferences of science and environmental educators in Williamsburg and Virginia Beach.

The Hydrogen Roundtable Education Committee met on Dec. 28 and recommended a search for additional funding to continue the hydrogen teacher workshops as the priority for this year's legislative session. Lawmakers also will be asked to support an increase in the jobs creation tax credit for hydrogen and other clean fuels and vehicles from \$700 to \$5,000 per new job.



You may recall that extending the eminent (2006) sunset of the credit to 2011 and amending the original language to make hydrogen an eligible "clean fuel vehicle" that qualifies for the jobs creation tax credit was the roundtable's legislative priority for 2006, when the Virginia roadmap of suggested strategies was completed and presented to members of the General Assembly.

### Search for Federal Grants

The hydrogen roadmap for the Commonwealth also recommends securing federal grant money to expand education initiatives and promote demonstrations of early market applications for hydrogen and fuel cell technologies. To that end, Virginia Clean Cities partnered with some impressive folks to apply for the Department of Mines, Minerals and Energy for a \$263,000 project to bring Hydrogen 101 education seminars to state and local government decision makers in Virginia, Maryland and DC. The application was submitted a day before the Jan. 3, 2008 deadline. Partners included some old hydrogen friends: C.J. Brodrick of JMU, Raj Choudhury of General Motors, Mike Ellis and Doug Nelson of Virginia Tech, and Mary Spruill of NEED; as well as some new hydrogen friends, including John Davis of MotorWeek, Greg Jackson at the University of Maryland, George Nichols and Leah Boggs at Clean Cities in DC, Catherine Padro of Los Alamos National Laboratory and Chris Rice, Maryland Clean Cities.

Speaking of hydrogen education and legislation, the Roundtable's own education committee chair and peripatetic lobbyist of state lawmakers Bob Brown was the subject of an article in the Dec. 10 Daily Press. Follow the link to read all about it: [http://www.dailypress.com/news/dp-news\\_10questions\\_1210dec10.0,1083111.story?page=1](http://www.dailypress.com/news/dp-news_10questions_1210dec10.0,1083111.story?page=1)

### New Reports: NREL Reports on Fuel Cell Buses

NREL recently published two reports on fuel cell buses in the United States. The first (<http://www.nrel.gov/hydrogen/pdfs/42249.pdf>) is an evaluation of fuel cell buses in service at AC Transit in Oakland, CA. The evaluation compares three fuel cell buses to new diesel baseline buses operating from the same bus depot. The 40-ft Van Hool fuel cell bus features an electric hybrid drive system by ISE Corporation with UTC Power's PureMotion 120 Fuel Cell Power System and

ZEBRA batteries for energy storage. During the data collection period (April 2006 - August 2007), the fuel cell buses operated more than 54,000 miles with an overall fuel economy of 6.17 miles per kg which equates to 6.97 miles per diesel equivalent gallon. For comparison, AC Transit's diesel buses average 4.03 miles per gallon.

The second report (<http://www.nrel.gov/hydrogen/pdfs/41967.pdf>) reviews past and present fuel cell bus technology development and demonstration. This review includes results from the DOE/NREL fuel cell bus evaluations as well as plans for the U.S. Federal Transit Administration's National Fuel Cell Bus Program. The primary focus is on descriptive comparisons of fuel cell transit bus operation in the U.S. and on industry's need to continue successful implementations of these advanced technologies.

The report summarizes overall accomplishments and explores implementation and operational experiences at three DOE/NREL evaluation sites. NREL's Technology Validation team evaluates fuel cell buses for the Hydrogen, Fuel Cells, and Infrastructure Technologies Program within the U.S. Department of Energy. All fuel cell bus publications can be found at this link: [http://www.nrel.gov/hydrogen/proj\\_fc\\_bus\\_eval.html](http://www.nrel.gov/hydrogen/proj_fc_bus_eval.html)

## Natural Gas Update

### Purchases in Virginia

Arlington Transit (ART) received eight new heavy-duty, 30-passenger, low-floor, handicap accessible, CNG buses manufactured by North American Bus Industries. Prior to the new additions, ART's operated a fleet of 30 small compressed natural gas ADA-accessible buses. "After the purchase of the first two diesel buses, ART committed to only purchasing alternatively-fueled buses. In an effort to be environmentally friendly, ART purchases buses fueled by compressed natural gas (CNG), making the entire fleet 'clean and green.'" (Source: TUG Tidbits, December 18, 2007)

## Biodiesel Update

### DEQ Publishes Virginia Biodiesel Environmental Compliance Primer

The Virginia Department of Environmental Quality recently posted new guidance material introducing the environmental regulatory obligations concerning biodiesel production: URL: [www.deq.state.va.us/osba/pdf/VDEQBiodieselPrimer2008.pdf](http://www.deq.state.va.us/osba/pdf/VDEQBiodieselPrimer2008.pdf)



## President Bush Signs Energy Bill December 19, 2007



On December 19, 2007, President Bush signed the Energy Independence and Security Act of 2007. The Energy Bill aims to help reduce oil dependency by increasing the supply of alternative fuels by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and setting a national fuel economy standard of 35 miles per gallon by 2020, which will increase fuel economy standards by 40 percent. The RFS bill signed mid-December represents an almost five-fold increase over current alternative fuel standards, and the fuel economy standards are the first statutory increase for automobiles since they were enacted in 1975. Key transportation related provisions are summarized in an excel spreadsheet created by NGV America, and can be downloaded at the following link: [www.ngvc.org/](http://www.ngvc.org/). A brief summary of key provisions discussed in the spreadsheet include:

- Corporate Average Fuel Economy (CAFÉ) Standards (secs 101-103): Between 2011 and 2020, raises fuel economy levels for light duty vehicles from present levels to a combined average (city and highway) of at least 35 mpg. Requires for a study of the potential for increasing the fuel economy for medium and heavy-duty commercial vehicles and work trucks, and for DOT to establish fuel economy standards following the study.
- Fuel Economy Credit Trading Program (sec 104): Expands current fuel economy credit trading program to allow manufacturers to earn and trade credits. Standards may be satisfied with traded credits, but is limited due to a cap on the number of miles per gallon that can be achieved through acquired credits.
- Labeling Requirements for Automobiles – AFVs (sec 105): DOT is required to develop a new system of rating vehicles making it easier for consumers to compare greenhouse gas emissions and fuel economy for vehicles. Requirements include labeling for fuel

economy, greenhouse gas benefits, and alternative fuel use, and for the labels to be a permanent and prominent display.

- Consumer Education Program (sec 105): DOT consumer education program in cooperating with DOE and EPA on the benefits of improved fuel economy and using alternative fuels, and the greenhouse gas emissions of all vehicles.
- National Academy of Sciences Study (sec 107-108): The NAS is to study and report on the potential fuel economy improvements for light duty automobiles, and medium and heavy-duty trucks.
- Flexible Fuel and Alternative Fuel Vehicle Fuel Economy Credit (sec 109): Extends the current fuel economy credits for FFVs and dual-fuel AFVs which were previously set to expire in 2010, until 2019, and caps the maximum increase that may result at 1.2 mpg through 2014 after which it declines over time and expires in 2020. Section also adds biodiesel to the list of alternative fuels under the fuel economy incentive and provides B20 with the same level of credit as other dual-fueled vehicles.
- Improved Vehicle Technology: Electric Drive and Plug-in Hybrid Electric Vehicle Provisions (secs 131-136): Creates new federal programs to increase use of electric vehicles (includes HEVs and plug-ins).
- EPA Fleet Program – Credit Program (sec 133): Amends section 508 credit program to require DOE to develop credits for HEVs, plug-ins, FCVs, neighborhood electric vehicles and infrastructure.
- Advanced Vehicle Manufacturing Incentives (sec 136): Program to help manufacturers retool focusing on modifying facilities to produce more fuel efficient vehicles.
- Federal Fleets – Vehicle Acquisition Requirements and Petroleum Reductions (sec 141): Prohibits federal fleets from acquiring vehicles that are not low GHG emitting.
- Renewable Fuel Standards (secs 201-202): Requires 9 billion gallons of renewable fuel starting in 2008, increasing to 36 billion gallons in 2022. Larger share must be from cellulosic ethanol or advanced biofuels over time (21 billion in 2022).
- Renewable Fuel Studies (Secs 203-204): Requires DOE work with NAS and study impacts of RFS program, including impact on economic sectors.
- Anti-Backsliding (sec 209): EPA to study any adverse impacts that could occur from increased use of renewable fuels, and to promulgate new regulations to combat any adverse impacts on air quality.
- Biofuel Initiatives – Federal Support (secs 207, 221 – 248): New programs to advance biofuels use: loan guarantees, grants, studies and information programs, and bioenergy research centers. Includes numerous studies

on increasing biodiesel use, impacts of biodiesel blends on engines, progress of R&D on biofuel from algae.

- Biogas Study (sec 222): DOE to issue report on R&D challenges to increasing the amount of transportation fuel that's biogas or biogas blending with natural gas.
- Biogas & NGVs Study (sec 227): DOE to study how NGVs can be optimized for biogas.
- FFV Programs (sec 225): DOE required to study if optimizing FFVs to operate on ethanol will increase fuel efficiency.
- Fueling Station Franchise Agreements (sec 241): Prohibits future franchise agreements from restricting the ability of stations to sell E85.
- Renewable Fuel Retail Station Mandate (sec 242): Requires DOE issue an annual report on FFV penetration and feasibility of requiring motor fuel retailers to install E85 pumps in markets where FFVs account for 15 percent of motor vehicles.
- Renewable Fuel Infrastructure & Fueling Station Grants (sec 244): Provides infrastructure development grants for renewable fuel blends of more than 10 percent but not greater than 85 percent with gasoline and at least 10 percent if mixed with diesel.
- Federal Fleet Fueling Centers (sec 246): Requires federal fleet refueling centers to install at least 1 renewable fuel pump by Jan 1, 2010 and an annual report to Congress on implementation progress.
- Capital Complex E85 Station (sec 502): Provides \$640,000 authorization to pay for construction of E85 refueling station for the U.S. Capitol.
- Decoupled Utility Rate Structure (sec 532): Amends federal utility laws to require natural gas and electric utilities to include energy efficiency as priority in planning and to provide energy efficiency resources.
- Energy Storage Competitiveness (sec 641): Authorizes DOE to conduct research on energy storage systems to support electric drive vehicles, stationary applications, and electricity transmission and distribution. Funding authorized for four energy storage research centers.
- Lightweight Materials Research & Development (sec 651): DOE program to assess how vehicle weight can be reduced and improving fuel efficiency without sacrificing safety through the use of light weight materials.
- H-Prize (sec 654): Authorizes DOE program to competitively award cash prizes to advance research, development, demonstration, and commercial application of hydrogen energy technologies.
- CMAQ Funding (sec 1131): Does away with state share for '08-'09 CMAQ projects



## ASTM Subcommittee Passes New Specification for B20

A biodiesel blend specification covering blends of six-to-20 percent biodiesel was passed out of ASTM International's D02 Subcommittee E. Original Equipment Manufacturers (OEMs), regulators and customers have demanded the passage of a formal B20 blend specification viewing it as a key component in the universal acceptance of B20. The ballot, which was voted on during the semi-annual ASTM meetings in Phoenix, requires the biodiesel portion of B6-to-B20 must meet the standard for pure biodiesel prior to blending, and the finished blend must meet the widest specifications for either No. 1 or No. 2 diesel. Acid number and stability parameters were added to the blend specification to assure long-term stability. Ballots were also passed allowing for formal incorporation of up to 5 percent biodiesel into the existing specification for diesel fuel (ASTM D975) and home heating oil (ASTM D396). The biodiesel portion must meet ASTM D6751 prior to blending and the specification limits biodiesel content to 5 percent or below. The finished specification remains the same as currently in place for petroleum diesel. The current standard for pure biodiesel (ASTM D6751) was revised to address filter clogging above the cloud point with B20 and lower blends.

All ballots passed need final approval from the Main Committee at the June 2008 ASTM meeting.

## "Jay's Garage" Webisodes

"Jay's Garage" webisodes are a great quick overview of alternative fuel vehicle technology. The link below reviews the Ford Plug-in hybrid, but also brings up all other alternative fuel segments they've done in the related videos section on the right: [www.jaylenosgarage.com/video/video\\_player.shtml?vid=191255](http://www.jaylenosgarage.com/video/video_player.shtml?vid=191255)



Department of the Treasury  
Internal Revenue Service

## IRS Issues List of Vehicles that Qualify for the Alternative Motor Vehicle Credit

Certain large trucks, buses or other heavy duty vehicles running on alternative fuels can claim a credit of up to \$32,000, or \$12,000 for certain large hybrid trucks or other heavy hybrid vehicles. "Qualified Alternative Fuel Motor Vehicles (QAFMV) are powered solely by alternative fuels, such as compressed natural gas, liquefied natural gas, liquefied petroleum gas (propane), hydrogen and any liquid that is at least 85 percent of the volume of which consists of methanol. Vehicles powered by a combination of an alternative fuel and a petroleum-based fuel may qualify for a reduced credit."

The list of qualified vehicles is on the IRS web site at <http://www.irs.gov/businesses/article/0,,id=175456,00.html>. The credit is taken on the same form as the light-duty credit, IRS Form 8910.

The IRS has an excellent search engine on their site so if you forget the form or the credit amount try their search engine.

## Renewable Energy Growth Boosted in New AEO

DOE's Energy Information Administration (EIA) is now projecting renewable energy to experience 23% faster growth between now and 2030 than previously anticipated. The EIA's latest "Annual Energy Outlook" foresees renewable energy providing 12.2 quadrillion Btu (quads) of energy by 2030, up from only 9.9 quads in last year's outlook. For comparison, total U.S. energy use was 100 quads in 2006 and is projected to increase to 123.8 quads by 2030. The EIA projections include hydropower, which is expected to increase from 2.89 quads in 2006 to 3 quads in 2015, staying level after that. In contrast, biomass energy is projected to increase from 2.97 quads in 2006 to 5.52 quads in 2030, an 86% increase, while "other renewable energy" is projected to increase from 0.88 quads in 2006 to 2.49 quads in 2030, a nearly threefold increase. And this is just the EIA's



reference case, often characterized as the "business as usual" case; a full EIA report examining alternative scenarios will be released early in 2008. Source: [www.eere.energy.gov/news/archive.cfm/pubDate=%7Bd%20%272007%2D12%2D19%27%7D](http://www.eere.energy.gov/news/archive.cfm/pubDate=%7Bd%20%272007%2D12%2D19%27%7D)

## May AFVi National Conference and Expo

Be sure to arrive early for the Alternative Fuels and Vehicles national conference in Las Vegas May 11-14 so you can attend a Sunday afternoon session moderated by Virginia Clean Cities and the Hampton Roads Coalition. Indeed there are two Sunday afternoon sessions, both from 1-4 p.m., new product rollouts by OEMs, followed by an opening reception at 6:30 p.m. sponsored by General Motors.

There is a session on plug-in hybrids concurrent with the Clean Cities moderated session: "Not Your Father's Gas Station: Financing alternative refueling infrastructure and making it public." It is difficult and costly to build the refueling infrastructure necessary for vehicles powered by biodiesel, CNG, electricity, ethanol and hydrogen, so it is a no-brainer to get the most bang for the buck by making ALL alternative refueling stations available to the public. This session's speakers and panelists will tell us about their success in winning funding support for alternative fueling stations; new grant funding directions to expect in the near future and how everyone can win when precious alternative refueling infrastructure to service government and private commercial fleets is made available to the public.

The May 11-14 conference schedule is on the website of conference owner, the Alternative Fuel Vehicle Institute: [www.afvi.org/NationalConference2008/schedule.html](http://www.afvi.org/NationalConference2008/schedule.html)

## DTF Webinars on Clean Diesel

The Diesel Technology Forum hosted the third in its series of webinars on clean diesel retrofit on December 5: "Diesel Retrofit Projects – Lessons Learned." The webinar was recorded in its entirety and is available by visiting <http://www.dieselforum.org/resources/webinars/>





## U.S. EPA Demonstrates Hydraulic Hybrid UPS Delivery Vehicle

Source: <http://www.epa.gov/region09/air/hydraulic-hybrid/>

EPA and the United Parcel Service (UPS) have developed a hydraulic hybrid delivery vehicle to explore and demonstrate the environmental benefits of the hydraulic hybrid for urban pick-up and delivery fleets. The demonstration vehicle is a 24,000 pound UPS package car, fitted with an EPA-patented full-series hydraulic hybrid drive integrated into the rear axle. The vehicle competed in the Michelin Challenge Bibendum in China with other advanced technology vehicles and received the top overall ranking among all commercial hybrid vehicles (delivery vehicles and urban buses).

In laboratory tests, the city fuel economy of the hydraulic hybrid UPS vehicle is 60% to 70% increased miles per gallon compared to a conventional UPS truck. The CO<sub>2</sub> emissions of the demonstration UPS vehicle are more than 40% lower than a comparable conventional UPS vehicle. The hydraulic hybrid vehicle also achieves approximately 50% lower hydrocarbon and 60% lower particulate matter in laboratory tests. This prototype vehicle has also demonstrated modest reductions in NO<sub>x</sub> emissions. Optimized production vehicles are expected to have larger NO<sub>x</sub> reductions. Hydraulic hybrids are able to capture and reuse 70-80% of the otherwise wasted braking energy.

## The Cost of Biofuels

Source: <http://pubs.acs.org/cen/coverstory/85/8551cover.html>

David Pimentel and Bruce Dale present two views on whether corn ethanol and, eventually, ethanol from cellulosic biomass will efficiently deliver national security.



## Smith Launches World's Largest Electric Truck in USA

Source: <http://www.smithelectricvehicles.com/products.asp?p=n&itemid=174>

Smith, a manufacturer of commercial electric vehicles, is launching its unique zero emission truck in the North American market.

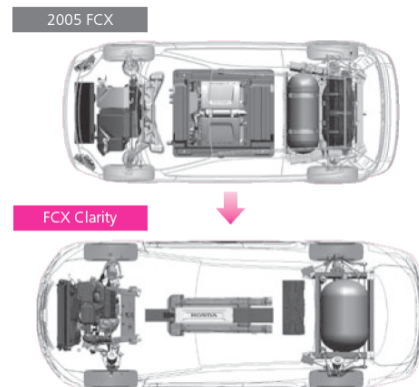
The robust Smith Newton is the world's largest high performance electric truck, weighing in with a Gross Vehicle Weight (GVW) of over 24,000 lbs. A rack of suitcase-sized, 278 volt batteries and a 120kw motor quickly propel the vehicle up to its top speed of 50 mph. In fact, Newton can accelerate from 0-30 mph faster than the equivalent diesel-powered truck.

Fully charged, the vehicle has a range of up to 150 miles, while the regenerative braking system returns power to the batteries every time the vehicle slows or stops.

## Fuel Cell Powertrain in the Honda FCX Clarity is Significant Advancement over Predecessors

Source: <http://www.greencarcongress.com/2007/12/fuel-cell-power.html#more>

Honda's production fuel cell vehicle, the FCX Clarity, introduced at the Los Angeles Auto Show and due to begin limited leasing in the spring, represents significant advancements in all areas of the powertrain from Honda's earlier fuel cell vehicles. The FCX Clarity utilizes Honda's V Flow Stack in combination with a new compact and efficient lithium-ion battery pack and a single hydrogen storage tank to power the vehicle's electric drive motor. The fuel cell stack operates as the vehicle's main power source.



## Biomethane - Most Efficient Biofuel?

Source: [http://www.checkbiotech.org/green\\_News\\_Biofuels.aspx?infoId=16478](http://www.checkbiotech.org/green_News_Biofuels.aspx?infoId=16478)

Tom Evans (Renewable Zukunft) put forward a simple model as a measure of renewable fuel efficiency – the Mini Test, to show how far the little car will travel on a hectare's worth of fuel. Biodiesel fares worst taking a Mini just over 20,000km (5030 miles/acre). Bioethanol manages just over 30,000km/ha (7540 miles/acre). Then there is a marked jump to synthetic biodiesel, a next-generation biofuel produced from gasified biomass and converted to liquid fuel via the Fisher-Tropsch Process: it carries the Mini over 70,000km (13,960 miles/acre).

But biomethane, which is upgraded biogas made from anaerobically fermented crops, slurry or organic waste, tops the chart at nearly 97,000km/ha (24,390 miles/acre) almost five times as much as biodiesel. Compared to second-generation biofuels, such as cellulosic ethanol or biomass-to-liquids, biogas is a mature technology. But merely pointing at the 'land use efficiency' of a fuel is not enough. The exercise needs to take into account many other questions, such as the lifecycle emissions, fuel production costs, scaling options, the need for adapted fuel distribution infrastructures and vehicle modifications.

## Subscribe to the "Ethanol Good News Network"

Subscribe by contacting Elizabeth Hilpiper, EPIC Comm. Coordinator @ [ehilpiper@EPICinfo.org](mailto:ehilpiper@EPICinfo.org)

EPIC is fighting back at the negative press on ethanol that seems to be gaining momentum in the mainstream media. The "Ethanol Good News Network" communication is a biweekly communication published M-F afternoons.

# Virginia Clean Cities and the Hampton Roads Clean Cities Coalition

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.



## Calendar of Upcoming Events

### Alternative Fuel and Advanced Technology Vehicle Related Events

#### 2nd Annual Ethanol Finance Conference

January 23-24, 2008  
New York, NY

[www.euromoneyseminars.com](http://www.euromoneyseminars.com)



#### ABA Renewables Teleconference

January 16, 2008

12:00-1:30 pm ET

\$25 fee to participate

ACORE, in collaboration with the American Bar Association's (ABA)

Renewable Energy Resources Committee will host a teleconference entitled "Emerging Capital Sources for Renewables."

[www.acore.org/renewableenergyinfo](http://www.acore.org/renewableenergyinfo)

#### Sustainable Biodiesel Summit

February 2-3, 2008  
Orlando, FL

[sustainable-biodiesel.org](http://sustainable-biodiesel.org)



#### National Biodiesel Conference & Expo

February 3-6, 2008  
Orlando, FL

[biodieselconference.org/](http://biodieselconference.org/)  
2008

#### Virginia Corn, Soybean and Small Grains Conference

February 7, 2008

Williamsburg, VA

Email Dick Atkinson

[soybean@visi.net](mailto:soybean@visi.net) or Molly Pugh [mollypugh@cox.net](mailto:mollypugh@cox.net)

for more information

#### WestStart CALSTART's Clean Heavy-Duty Vehicle Conference

February 20-22, 2008

San Diego, CA

<http://www.calstart.org/programs/chdvc/2008index.php>

#### Energy Independence Days

March 3-4, 2008

Washington, DC

Focused on the policy

level of promoting

alternative energy use.

Contact us for more info.

#### Joint Meeting of the Tidewater Area Fleet Managers Association and Old Dominion Chapter of National Association of Fleet Managers

March 19, 2008

Location TBA

Focus: Idle-reduction

Email Chelsea for more

details about the meeting

at [cjenkins@hrccc.org](mailto:cjenkins@hrccc.org)

#### NHA Annual Hydrogen Conference and Expo

March 30-April 4, 2008

Sacramento, CA

[hydrogenconference.org](http://hydrogenconference.org)

#### Environment Virginia 2008 Commonwealth: Accelerating Solutions in a Rapidly Changing Virginia

April 1-3, 2008

Lexington, VA

[environmentva.org](http://environmentva.org)



#### Alternative Fuels & Vehicles National Conference & Expo

May 11-14, 2008

Las Vegas, Nevada

[afvi.org/nationalconference2008](http://afvi.org/nationalconference2008)



#### World Biofuels Markets

March 12-18, 2008

Brussels, Belgium

[worldbiofuelsmarkets.com](http://worldbiofuelsmarkets.com)

#### 24th Annual International Fuel Ethanol Workshop & Expo

June 16-19, 2008

Nashville, TN

[fuel ethanolworkshop.com](http://fuel ethanolworkshop.com)

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