



**Virginia Clean Cities  
Hampton Roads Clean Cities Coalition  
Monthly Status Report – November & December 2006**



Dear Clean Cities Stakeholder,

MERRY CHRISTMAS and HAPPY NEW YEAR! Best wishes for a prosperous year in 2007 to all our stakeholders and partners! The past year proved to be an exciting and successful year for alternative fuels and vehicles in Virginia. Look for a 2006 recap in the next report.

**Virginia Farmer & Small Producer Biodiesel Forum Series Wraps Up**

The last two biodiesel forums in our 2006 funded series were held in Blacksburg and Petersburg, Virginia in late November/early December. Each of the biodiesel forums was different in some way, all with a diverse audience and line-up of presenters.

The following topics were covered throughout the series:

- Biodiesel overview (what is it, market update, who is using it, etc.)
- Oilseed crops & markets (for farmers or those interested in the ag economy)
- Piedmont's cooperative model (covered all of the amazing things they are doing, in addition to reactor design, their sustainability theme, etc.)
- How biodiesel is made (the basic chemistry, recipe)
- Methanol safety
- Sidestreams (what are the process sidestreams & what folks are doing with them)
- City Model for WVO collection and biodiesel production
- Community-based models for sustainable energy systems
- Biodiesel production safety
- Possible solutions for glycerol utilization
- Fuel quality/fuel testing
- Canola budget (for farmers to see breakdown of costs related to growing canola for biodiesel feedstock)
- Waste vegetable oil/straight vegetable oil diesel vehicle conversion
- Virginia producer incentive fund
- Transitioning fleets and equipment to biodiesel

As the series progressed, we learned a great deal about the challenges and successes of small-scale biodiesel producers. One of the most important revelations was the amount of legal, regulatory, safety, and quality control considerations a small-scale producer must take into account. In addition, many of the regulatory bodies that deal with each of these issues are still developing guidelines. While they continue to work on solutions, procedures and best practices, we are interested in hearing about your story. If you are a small-scale biodiesel producer, and have already jumped through the regulatory hoops, take a minute and send us your story so we can better advise the small-scale biodiesel production community. Or, if you are interested in potentially forming a cooperative in your area, send us your contact information. We are compiling a list of interested parties.

Missed the events, but would like to learn more? Visit our biodiesel webpage, which includes presentations, agendas, and resources: <http://www.hrccc.org/biodiesel.html>

**Items of interest this month:**

- Fairfax Plug-in Hybrid Conversion Complete!
- NBB Issues Winter Weather Advisory

- Recently released NREL study concludes that B20 has no net effect on NOx emissions
- Applying for Excise Tax Credits on Qualifying Alternative Fuels
- New Yahoo! Green Car Center Reports on Top 100 Cars by Green Rating
- JMU Wraps Up 2006 with Many Accomplishments
- Arlington County Puts Four CNG School Buses into Service as a New CNG Station Comes Online
- Charlottesville CNG Operational Update
- Honda Civic GX (CNG Sedan) Available for Borrow to Interested Stakeholders
- Study by DoE's Pacific Northwest National Laboratory Finds Current Electric Capacity is Enough to "Fill Up" Plug-in Vehicles Across Much of the Nation
- National Biodiesel Conference and Expo 2007: February 4-7
- EPA and SBA Partner to Help Small Business Trucking Firms Finance Fuel-Saving and Emissions-Reducing Upgrades Through SmartWay Program

## **Fairfax County Converts Car Into Plug-in Hybrid**

*Copy of News Released published by the Fairfax County Office of Public Affairs on December 06, 2006:*

On November 28, 2006, the Fairfax County Department of Vehicle Services and Hymotion completed a plug-in conversion installed into a Toyota Prius, making it one of the first governments in the country to possess a plug-in hybrid electric vehicle.

The conversion includes an extra battery pack that can be charged from a wall outlet and allows the car to travel approximately 30 miles without using the gas engine. Once the battery pack runs down, the car reverts back to its original hybrid mode.

"Fairfax County has won a national award for our comprehensive 20-year environmental plan and our use of new technologies, such as this hybrid plug-in vehicle, further demonstrating our ongoing commitment to using all of the tools at our disposal in protecting our environment," said Fairfax County Board of Supervisors Chairman Gerald E. Connolly.

Fairfax County sees great potential for fuel and emissions savings if this technology becomes widely commercialized since more than half the cars in the United States travel less than 25 miles on most days, according to James Gorbey, director of the Department of Vehicle Services.

Fairfax County's Board of Supervisors voted in June to join Plug-In Partners, a nationwide initiative to encourage automakers to develop and produce plug-ins. The organization, started in Austin, Texas, has attracted nearly 500 member governments, utilities and a variety of businesses and nonprofits.

"The addition of this plug-in hybrid electric vehicle supports one of the six priorities of the Board of Supervisors — Environmental Protection," said Mason District Supervisor Penny Gross, who chairs the board's Environmental Committee. "We are excited to be at the forefront of this initiative nationwide."

Fairfax County government has taken action in a variety of areas to improve air quality as part of the Board of Supervisors' Environmental Agenda: "Environmental Excellence for Fairfax County: A 20-year Vision," which is available at [www.fairfaxcounty.gov/airquality](http://www.fairfaxcounty.gov/airquality).

The vehicle is part of the county's motor pool and is available to employees traveling for business purposes. The conversion was designed, built and installed by Hymotion, an engineering company in Toronto, Canada.

*[ Dave DuVal, Fairfax County's fleet QC Superintendent, drove the Plug-in Prius to the EDTA conference held in Washington D.C. in late November. With some highway and city miles, plus about 55 cents worth of grid electricity, the Prius display showed the car averaged 77.9 mpg! ]*

## **NBB Issues Winter Weather Advisory**

*Copy of News Release published by the National Biodiesel Board on November 08, 2006*

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Nov. 8, 2006

### **National Biodiesel Board Issues Winter Weather Advisory** *Fuel Sampling Results Make Conditions Right for Caution*

#### **Petroleum Outreach, Fuel Quality Enforcement Program and State-by-State Quality Index are all part of NBB's Efforts to Enhance Biodiesel Quality**

**Jefferson City, MO.** – Fleet managers, petroleum distributors and other consumers should consider a biodiesel “winter weather advisory” in effect for the nation. The National Biodiesel Board (NBB) raised the advisory in response to fuel quality testing results that the trade association shared at an NBB-led industry meeting today.

“Ensuring that consumers have a high level of confidence in the biodiesel they purchase is a top priority for the National Biodiesel Board (NBB) and a key element for the industry’s continued growth,” said Joe Jobe, NBB CEO. “As the industry ramps up to meet the vast increase in demand for biodiesel, this growth simply cannot occur at the expense of fuel quality.”

The biodiesel industry’s commitment to fuel quality and consumer confidence is exemplified by a six-fold increase in the number of biodiesel producers completing the BQ-9000 voluntary certification program in a single year. The industry has also asked government agencies to adopt fuel quality standards for biodiesel and enforce them.

A national fuel quality testing project, co-funded by NBB and the National Renewable Energy Laboratory, found that one-third of biodiesel samples pulled between November 2005 and July 2006 were out of spec for incomplete processing. That’s the same issue that caused some filter clogging problems in Minnesota last year. Although fuel quality is always important, cold weather can amplify problems caused by out-of-spec fuel.

“NBB views these results as unacceptable,” Jobe said. “This underscores the need for enforcement agencies to take action against those who aren’t producing biodiesel that meets the existing standard, ASTM D-6751.”

As a result of issues in Minnesota last winter, NBB board members in June approved a comprehensive Fuel Quality Policy that directs NBB to work diligently with all state and federal agencies with authority to regulate fuel and enforce quality.

NBB’s Fuel Quality Outreach Program has made contact with all state Divisions of Weights and Measures, and encouraged them to adopt ASTM D-6751 into the laws that regulate fuel quality. Currently, half of the states have adopted the ASTM D-6751 specification as part of their fuel quality regulations, and an additional 13 states are planning to adopt the specification or are studying it. Ten states now proactively test biodiesel or biodiesel blends.

That list includes Minnesota, where all diesel fuel contains 2 percent biodiesel.

“All of the samples from the state’s biodiesel producers and terminals that we have collected and tested have met specifications,” said Mark Buccelli, director, Minnesota Department of Commerce Division of Weights and Measures. “We have set up a monthly schedule to collect samples at the biodiesel producers and terminals. We expect to see good results. Most of the terminals are testing every shipment of biodiesel that comes into their facilities.”

In addition, the biodiesel industry, through NBB, has done the following:

- Worked diligently with the Internal Revenue Service, Environmental Protection Agency, and state Weights and Measures bureaus on enforcing fuel quality

- Issued a bulletin to fuel suppliers advising them to take samples of fuel, ensure a certificate of analysis for every batch, and take other precautions
- Developed an online Fuel Quality Enforcement Guide [[www.biodiesel.org/resources/fuelqualityguide](http://www.biodiesel.org/resources/fuelqualityguide)] that provides guidance on actions for anyone who has concerns that a company might not be producing spec fuel
- Built strong participation in BQ-9000, the industry's voluntary quality control program

This winter, NBB has the following recommendations for fleet managers and other consumers:

- Work with a reputable supplier who will stand behind the product
- Report out-of-spec biodiesel to the proper authorities, which can be found in the State Fuel Quality Index [<http://www.biodiesel.org/resources/fuelqualityguide/states.aspx>]
- Buy fuel from BQ-9000 accredited producers or certified marketers, a list of which is available online at [www.bq-9000.org](http://www.bq-9000.org)

The BQ-9000 program, launched in late 2005, requires certified and accredited companies to possess a Quality Manual and Quality Control System and employ best practices in fuel sampling, testing, blending, shipping, storage, and distribution. This helps assure quality from plant gate to consumer tank.

Last year at this time, three companies had BQ-9000 accreditation. Today there are 17 accredited producers and certified marketers, representing more than 40 percent of the biodiesel production capacity on the market. Seven more are expected to be accredited by the end of the year.

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## **Recently released NREL study concludes that B20 has no net effect on NOx emissions**

NREL released a report in October 2006 titled "Effects of Biodiesel Blends on Vehicle Emissions." The objective of the study was to determine if testing entire vehicles vs. just the engines, on heavy-duty chassis dynamometer provides a better, more realistic measurement of the impact of B20 on regulated pollutant emissions. The following quote was taken from the Executive Summary:

"Based on the studies reviewed and new data reported here, there does not appear to be a discrepancy between engine and chassis testing studies for the effect of B20 on NOx emissions. Individual engines may show NOx increasing or decreasing, but on average there appears to be no net effect, or at most a very small effect on the order of  $\pm 0.5\%$ . The small apparent increase in NOx reported for engine-testing results in EPA's 2002 review occurred because the dataset was not adequately representative of on-highway engines. In particular, nearly half of the NOx observations included in the review were for engines from a single manufacturer (DDC). Newer engine and chassis studies, which on average show no B20 effect on NOx, are not representative samples either. However, considering all of the data available, we conclude that B20 has no net impact on NOx".

To view the full report, visit: <http://www.nrel.gov/vehiclesandfuels/nrbf/pdfs/40554.pdf>

## **Applying for Excise Tax Credits on Qualifying Alternative Fuels**

In order to apply for excise tax credits on qualifying alternative fuels, a seller or user of the alternative fuel must register with the Internal Revenue Service (IRS). IRS Form 637 is the application. To obtain the form, which was revised in October 2006 to include natural gas, visit the IRS's website: <http://www.irs.gov/formspubs/index.html> (click on "form and instruction number" and then scroll down the menu for Form 637).

The form identifies several classes of registrants that are designated by "activity letters," such as "M" for blenders of alternative fuels and "AL" for "alternative fuelers" who sell or use alternative fuels. M-registrants can qualify for the \$1.00 per gallon tax credit for "agri-biodiesel" made from feedstocks like soybean oil or the \$0.50 per gallon tax credit for biodiesel made from waste vegetable oil. Sellers and users of natural gas register as AL-registrants in order to qualify for the \$0.50 per gasoline gallon equivalent of CNG or LNG.

## **New Yahoo! Green Car Center Reports on Top 100 Cars by Green Rating**

The Yahoo! Green Center allows visitors to browse top cars by green rating and technology. A gas mileage impact calculator, federal and state purchasing incentives page, and an alternative fuels station locator are also included on the site. However, the EERE site still provides the most accurate and up to date information on federal laws and incentives and alternative fuels station location.

You can see that most of the top greenest vehicles are hybrids: 7 of 10 are hybrids, while 2 of the top 10 are natural gas vehicles (**both are Honda Civic GX models**), and 1 is a gasoline vehicle. Honda and Toyota led the pack in the hybrid category with Honda manufacturing 3 of the top 5 greenest hybrids, and Toyota producing the other 2.

Yahoo's Green Rating measures a vehicle's environmental friendliness on a scale of 1 to 100. The higher a vehicle's Green Rating, the "greener" it is and the lower its harm to both human health and the health of the planet.

The Green Rating was developed in consultation with Environmental Defense, a leading nonprofit that finds practical ways to protect the planet. The Green Rating covers all the major environmental costs of a motor vehicle, including:

- Unhealthy smog that comes from tailpipes.
- Emissions of greenhouse gases that cause global warming.
- The fuel a vehicle consumes.
- Pollution from manufacturing the vehicle and its components.

Because all vehicles -- sedans, coupes, vans, SUVs, trucks, etc. -- are rated on a single 1 to 100 scale, you can use the Green Rating to find the most environmentally friendly vehicle that meets your needs. For example, a 3-point gain in Green Rating between SUVs that score 40 and 43, cuts pollution just as much as a 3-point Green Rating gain between compact cars that score 60 and 63.

You might already look at fuel efficiency when you compare vehicles. But since the Green Rating also reflects tailpipe emissions and other factors, it simplifies the task of weighing the many aspects of a car's environmental friendliness. Some car shoppers think that they need to buy a hybrid, use an alternative fuel or buy a small car in order to buy green. While such vehicles can indeed tread more lightly on the planet, the Green Ratings can help you make a greener choice no matter what kind of car you choose.

Visit the Yahoo! Green Center to learn more: [http://autos.yahoo.com/green\\_center\\_top100/?\\_ylt=ArbjGAbL8QYkUAv\\_MvmRWFJxJNIF](http://autos.yahoo.com/green_center_top100/?_ylt=ArbjGAbL8QYkUAv_MvmRWFJxJNIF)

## **JMU Wraps Up 2006 with Many Accomplishments**

James Madison University has built an impressive alternative fuels program over the years, and 2006 proved to be a fruitful one. JMU's alternative fuels and transportation efficiency related accomplishments include:

- Announcing the future implementation of E10 in all gasoline vehicles, so that EVERYTHING runs on one type of alternative fuel
- Establishing a student Chapter of the Society of Automotive Engineers
- Beginning the design and build of an SAE SuperMileage Car (single person vehicle designed to maximize fuel efficiency). JMU is hoping for the design to reach greater than 500 mpg.
- Researching aquatic species as an alternative feedstock for biofuel production. JMU has identified 2 fast growing strains, and are in the process of increasing production (and feeding them residual biomass) so they can evaluate them for oil/sugar content.
- Beginning JMU's Cellulosic Ethanol Research Program by culturing Trichoderma Reesei.
- Submitting ethanol permit applications to get proper authorization to begin distilling fuel ethanol at JMU
- Hosted an extremely successful Odyssey Day. Area students from four high schools participated in the event, and rotated to six exhibits from all areas of sustainability located across the JMU campus.
- Nearing construction completion of JMU's new AFV lab
- Speaking at numerous conferences and events across Virginia about biofuels

## Arlington County Receives Four CNG School Buses, Expanding Their Astounding Alternative Fuels Program

Arlington County recently put four CNG school buses into service, and completed construction of a new CNG station. The incremental cost of the CNG option on each of the four buses was funded through the U.S. Department of Energy State Energy Program Special Projects (Clean Cities) through the Virginia Department of Mines, Minerals, and Energy, to support the procurement of compressed natural gas (CNG) school buses by Arlington County Public Schools. More to come on Arlington's CNG program in the next stakeholder report.

### Charlottesville CNG Operational Update

Installation of Charlottesville's FuelMaker Time-Fill CNG station (3600 psig) was completed during summer 2006, and has been fully operational. The system can accommodate up to 4 vehicles at a time, however it is currently being used only by the two Thomasbuilt CNG school buses that were received last November.

To date, no operational problems have been experienced, and bus drivers have noticed a difference in tailpipe emissions and smell as compared to the diesel buses.

*Fuel Costs and Usage:* Charlottesville's fuel costs for the CNG buses averaged \$1.52/gasoline gallon equivalent (GGE) over the summer-fall seasons. Diesel over the same period averaged \$1.75 per gallon.

The buses & refueling station were being procured as a result of a 2004 grant award to the City of Charlottesville through the US Department of Energy's State Energy Program Special Projects and the Virginia State Energy Office at the Department of Mines, Minerals, and Energy.



The City of Charlottesville takes environmental action seriously, and the acquisition of these buses is but one program headed up by the City's Environmental Administration Office to improve air and water quality in this beautiful city at the foothills of the Blue Ridge Mountains. Other initiatives include increased use of hybrid electric vehicles in the city fleet, certifying a brand new transit facility to green standards, actively pursuing resource conservation opportunities in city and school building through energy performance audits, replacing petroleum-powered golf carts with electric ones at municipally-owned golf courses, and investigating the use of biodiesel by the City's operations.



## Virginia Clean Cities Wants to Share its Honda GX Compressed Natural Gas Vehicle with You!

Virginia Clean Cities just received a new 2006 Honda GX from American Honda. Honda loans the vehicle to Virginia Clean Cities for demonstration purposes. If you are interested in possibly adding compressed natural gas to your fleet, and *are a Virginia Clean Cities stakeholder*, you are eligible to borrow the GX for a negotiated period of time.

Contact Chelsea Jenkins for more information: [cjenkins@hrccc.org](mailto:cjenkins@hrccc.org)

Find information below about the newly designed 2006 Honda GX and the Honda, FuelMaker, and Clean Cities "Clean Connection" promotion. If you would like to learn more about the GX, test driving, or scheduling a presentation, please contact us.



**Natural Gas is a Great Choice**

- Wide applicability (autos, trucks, buses, forklifts, etc.)
- North American fuel supply
- High well-to-wheel efficiency
- Fuel cost < gasoline
- Fuel distribution network established (pipelines)
- Wide range of infrastructure possibilities
- SULEV / ILEV / AT PZEV capable
- Low carbon fuel
- Proven performance, known costs

## 2006 Civic GX

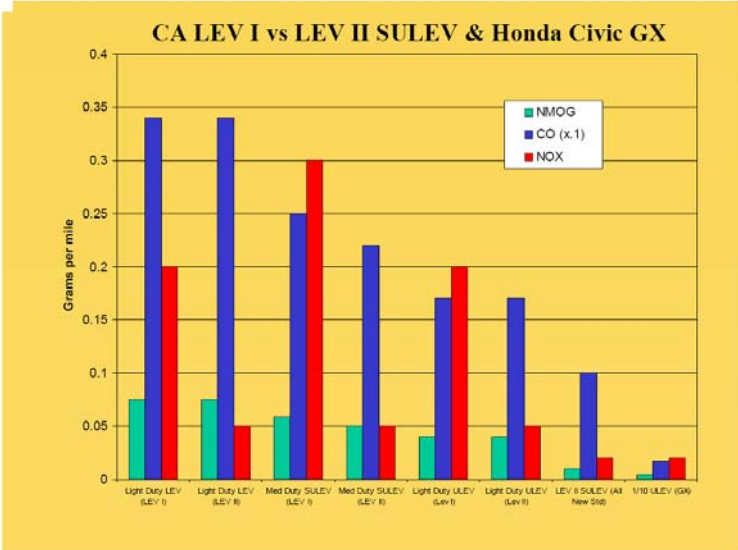
### "Still.. The Natural Choice"

- Compact-Size Category
- Range – 200 Miles
- MPG - 28 City / 39 Hwy
- 8 GGE Fuel Tank @ 3600 PSI
- 5-Star Safety Rating
- Front, Front Side and Side Curtain Airbags
- Anti-Lock Brakes
- Cleanest I.C. Vehicle
- 50 State – SULEV Tier II Bin 2
- CARB Rating- AT PZEV
- 100K Mile+ Tune-Ups Interval
- 10K Mile Oil Change Interval
- Warranty
  - 3 Year/36,000 Mile
  - 15 Year/150,000 Mile Emissions Warranty (CA)

## Interior Features

### "A Bigger Small Car"

- 90.9 Interior Volume ft<sup>2</sup>.
- 6.0 Trunk Volume
- New Aero Look
- Fit & Finish
- NVH Improvement
- Quieter A/C / Heat Fan
- Flat Floor without Tunnel
- Micon Cabin Air Filter
- Cruise Control Standard
- AM/FM CD Player
- Integrated Antenna
- Larger Instruments
  - Tachometer Standard
  - Twin LCD Tripmeter
- Illuminated Switches
  - Power Mirror Control
  - Power Window
- More Comfortable Wider Seats
- Side-Impact Airbags
- New Headrests F & R
- Sport Steering Wheel
- Sporty Features & Style



**Honda / FuelMaker / Clean Cities - "Clean Connection"**

**Goal: Add Value for Clean Cities Stakeholders & Coordinators**

- Exclusive to Clean Cities Stakeholders & Coordinators**
- Enhanced \$\$ for FuelMaker Purchases**
  - \$900 per small FuelMaker unit from FuelMaker (original discount \$800)
  - \$2,800 per large FuelMaker unit from FuelMaker (original discount \$2,600)
  - \$1,400 per Block of 4 NGV GXs from Honda (original discount \$1,100)
- Incentive Increased by 10% - 20% over Standard Honda / FuelMaker Discount!**
- Easy Access to Program Information Online at: [www.fuelmaker.com/ccpromo](http://www.fuelmaker.com/ccpromo)**
- Questions? Contact Your Regional Support Office or Call Paula Hebert of FuelMaker (800-898-3835)**

## Study by DoE's Pacific Northwest National Laboratory Finds Current Electric Capacity is Enough to "Fill Up" Plug-in Vehicles Across Much of the Nation

Excerpt copied from the National Plug-in Partners Hybrid Campaign Blog. Posted Thursday, December 14, 2006.

RICHLAND, Wash. – If all the cars and light trucks in the nation switched from oil to electrons, idle capacity in the existing electric power system could generate most of the electricity consumed by plug-in hybrid electric vehicles. A new study for the Department of Energy finds that "off-peak" electricity production and transmission capacity could fuel 84 percent of the country's 220 million vehicles if they were plug-in hybrid electrics.

Researchers at DOE's Pacific Northwest National Laboratory also evaluated the impact of plug-in hybrid electric vehicles, or PHEVs, on foreign oil imports, the environment, electric utilities and the consumer.

"This is the first review of what the impacts would be of very high market penetrations of PHEVs, said Eric Lightner, of DOE's Office of Electric Delivery and Energy Reliability."It's important to have this baseline knowledge as consumers are looking for more efficient vehicles, automakers are evaluating the market for PHEVs and battery manufacturers are working to improve battery life and performance."

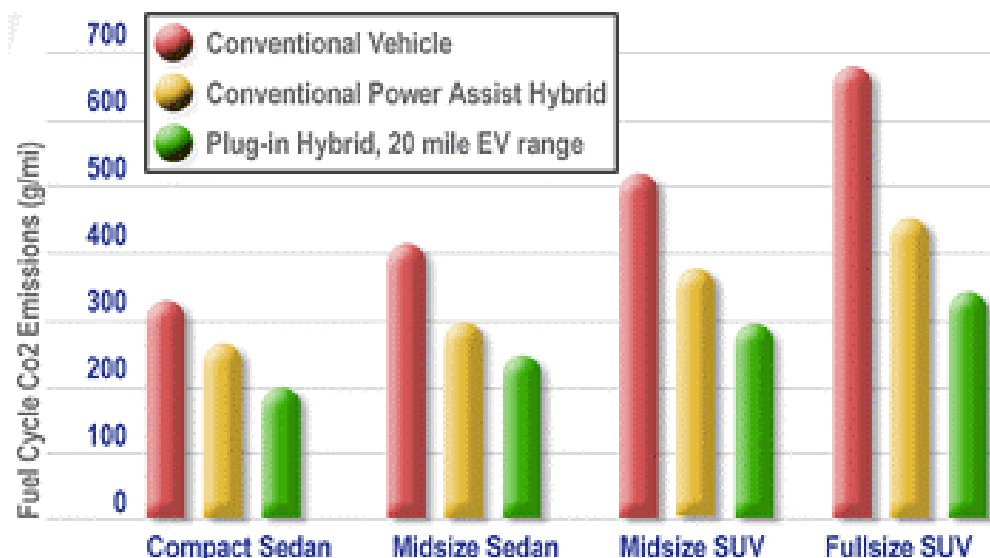
Current batteries for these cars can easily store the energy for driving the national average commute - about 33 miles round trip a day, so the study presumes that drivers would charge up overnight when demand for electricity is much lower.

"Since gasoline consumption accounts for 73 percent of imported oil, it is intriguing to think of the trade and national security benefits if our vehicles switched from oil to electrons," added PNNL energy researcher Rob Pratt. "Plus, since the utilities would be selling more electricity without having to build more plants or power lines, electricity prices could go down for everyone."

Lightner noted that "the study suggests the idle capacity of the electric power grid is an underutilized national asset that could be tapped to vastly reduce our dependence on foreign oil."

The study also looked at the impact on the environment of an all-out move to PHEVs. The added electricity would come from a combination of coal-fired and natural gas-fired plants. Even with today's power plants emitting greenhouse gases, the overall levels would be reduced because the entire process of moving a car one mile is more efficient using electricity than producing gasoline and burning it in a car's engine." *more*

*PNNL is a DOE Office of Science laboratory that solves complex problems in energy, national security, the environment and life sciences by advancing the understanding of physics, chemistry, biology and computation.*



Electric Power Research Institute



Looks as though auto manufacturers are picking up on the consumer interest and demand of plug-in hybrid electric vehicles:

Toyota announces in July it will develop a new plug-in hybrid: <http://www.csmonitor.com/2006/0720/p02s01-ussc.html>

GM plans a plug-in hybrid: <http://www.iht.com/articles/2006/06/23/business/plugin.php>

## **National Biodiesel Conference and Expo 2007: February 4-7**

The 2007 National Biodiesel Conference will be held in San Antonio, Texas, February 4<sup>th</sup> – 7<sup>th</sup> at the Henry B. Gonzalez Conference Center.

To find out more about the conference, visit <http://www.biodieselconference.org/2007/>.

## **U.S. EPA's SmartWay Transport Partnership is Using SBA Lending Programs to Help Small Trucking Companies Save Fuel and Reduce Pollution**

The Small Business Administration and EPA's SmartWay program have developed a partnership to help small business trucking firms to finance fuel-saving and emissions-reducing upgrades.

To learn more about the program, visit: <http://www.epa.gov/otaq/smartway/documents/420f06903.pdf>

The SBA*Express* and SBA Community*Express* financing programs offer expedited loan approval. To view the announcement, or to read more about these programs and more, visit the SBA website: <http://www.sba.gov/va/>.

The EPA SmartWay Transport Partnership website features a savings calculator designed to help truck owners compare the costs and estimate fuel savings associated with various technologies: <http://www.epa.gov/otaq/smartway/calculator/loancalc.htm>.

## **Calendar**

January 10, 2007	Old Dominion Chapter of the National Association of Fleet Administrators Meeting
January 17	WAFA heavy-duty CNG presentation, Fairfax, Virginia
February 4-7	Nat'l Biodiesel Conference & Expo, San Antonio, TX <a href="http://www.biodieselconference.org/2007/">http://www.biodieselconference.org/2007/</a>
February 22	Shenandoah Waste Solutions Forum's Innovative Environmental Technologies Symposium, Rockingham County Fairgrounds, Harrisonburg, 8 am to 5 pm. Topics include cost effective nutrient management solutions; conversion of poultry litter to value-added resources by pyrolysis; the role of innovation and synergy on the dairy farm; anaerobic digestion of poultry litter.
March 1-2	USDA's 83rd Agricultural Outlook Forum: Agriculture at the Crossroads – Energy, Farm & Rural Policy, For more information, visit: <a href="http://www.usda.gov/oce/forum">www.usda.gov/oce/forum</a>
April 1-4	Alternative Fuels & Vehicles National Conference & Expo 2007, Anaheim, CA <a href="http://www.afvi.org/NationalConference2007/">http://www.afvi.org/NationalConference2007/</a>

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