



Clean Motion



HEADLINES

May 2007

- [Senate Energy Package Includes Incentives for Plug-Ins](#)
- [Seattle and Los Angeles Seek to Upgrade Bus Fleets](#)
- [Florida School District Chooses Biodiesel, Pennsylvania Opts for Hybrid School Buses](#)
- [Hartford Welcomes New England's First Fuel Cell-Powered Hybrid Bus](#)
- [BAE Systems to Offer Advanced Lithium-Ion Batteries in Next Generation Hybrid Buses](#)
- [Japanese Partnership Sets Sights on Manufacturing Lithium-Ion Batteries](#)
- [New York Times Testing State's First Medium-Duty PHEV](#)
- [Wisconsin Public Power Touts 100 MPG Prius PHEV](#)
- [Maryland Signs "Clean Cars Act"](#)
- [Congestion Pricing in the Big Apple? Mayor Bloomberg's PlanNYC 2030 Says "Yes"](#)
- [American Lung Association and EPA Reports Evaluate Particulate Matter Pollution](#)
- [Submit Your Clean Transportation Story](#)

NEWS

Senate Energy Package Includes Incentives for Plug-Ins

The Senate is preparing to debate its first big energy bill of the year with Majority Leader Harry Reid (D-NV) placing a comprehensive energy package Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007 (S. 1419) on the Senate calendar. The Senate is expected to consider this legislative package in mid-June. The bill is a comprehensive effort to increase the production and use of clean renewable fuels; protect consumers from price gouging; increase the energy efficiency of products; buildings and vehicles; promote research on and deploy greenhouse gas capture and storage options; and improve the energy performance of the federal government.

Included in S.1419 are several incentives to promote the research, development, demonstration and deployment of advanced technology vehicles such as plug-in hybrids:

- A provision requiring the Department of Energy (DOE) to study the feasibility of issuing credits for trading purposes to electric vehicles powered by renewable electricity.
- Authorization of \$60 million per year from 2008 to 2012 for research and development of lightweight materials for automobiles.
- The bill includes loan guarantees for fuel-efficient automobile part manufacturers, including the manufacture of electric drive technology.
- Establishes an Advanced Technology Vehicles Manufacturing Incentive Program which would provide federal grants to cover up to 30 percent of the cost of establishing, re-equipping or expanding a facility to manufacture advanced technology vehicles or components.
- Addresses battery research and development through an Energy Storage Competitiveness Program which establishes a research, development and demonstration initiative for energy storage including the following authorizations:

- Basic research program - \$50 million per year from 2008 through 2012
- Applied research program - \$80 million per year from 2008 through 2012
- Establishing energy storage research centers - \$100 million per year from 2008 through 2012
- The bill authorizes an Advanced Transportation Technology Program which provides \$60 million per year in electric drive technology demonstration grants from 2008 through 2012.
- In addition, the bill stipulates certain petroleum reduction goals for the federal fleet including:
 - 20 percent reduction in petroleum consumption (from 2005 baseline) by 2015.
 - 10 percent increase in alternative fuel consumption required annually.
 - Petroleum reduction can be achieved through the purchase of plug-ins, electric vehicles, hybrids and other alternative fuel vehicles.

According to a senior staffer in Senator Reid's office, the bill is likely to be taken up for consideration on the Senate floor in the second week of June.

Seattle and Los Angeles to Upgrade Bus Fleets

King County Metro Transit of Washington state has announced it will buy up to 500 new hybrid buses to add to its fleet of 214 hybrid buses. The purchase will be paid in part by a sales tax increase approved by voters to expand transit county-wide. With the passing of the ballot measure, Metro committed to buying 190 of the new buses over the next two years. The first 22 hybrid buses, built by New Flyer, using General Motor's hybrid drivetrain and an engine built by Cummins, will be in service by 2008.

An increase in public awareness of climate change, coupled with King County Executive Ron Sims' plan for the region to cut greenhouse gas pollution by 80 percent below current levels by 2050, has helped prioritize improvements to the County's public transportation fleet as part of the solution.

Also looking to improve its bus fleet, the Board of Directors of the Los Angeles County Metropolitan Transportation Authority (LAMTA) recently approved the purchase of up to 100 new 60-foot compressed natural gas (CNG) buses from North American Bus Industries. Delivery of these new articulated buses will be completed by spring 2008.

The new buses can seat almost 50 percent more passengers (57 seats) than a standard 40-foot bus and will be used to improve service on the city's most popular bus lines. "This purchase reaffirms Metro's commitment to provide the best service for the bus riders of the Los Angeles region," says LAMTA Chair Board and Los Angeles County Supervisor Gloria Molina. LAMTA currently has a fleet of 2,500 buses of which 90 percent are fueled by natural gas. The Authority operates 275 articulated buses and plans to have another 20 in service by this summer.

Florida School District Chooses Biodiesel, Pennsylvania Opts for Hybrid School Buses

Florida's St. Lucie County School District is joining the biodiesel club with a decision to operate their 400-vehicle school bus fleet on soy-based biodiesel.

In an effort to keep budgets stable while prices continue to rise at the pump, transportation officials have turned to cleaner burning biodiesel as a solution. Presently, St. Lucie County is exploring the use of soy oil which is currently averaging 10 cents per gallon lower than traditional diesel. For a fleet that covers nearly 8 million miles a year, full cost savings are significant. Cost

isn't the only consideration for making the switch to biodiesel. Officials at St. Lucie know it will decrease harmful emissions and ultimately improve the air that many of its students breathe.

The Florida House of Representatives recently approved a bill that provides more than \$60 million for biofuels research. The legislation also establishes voluntary programs for districts to adopt environmentally preferable techniques. If biodiesel prices remain where they're at, the conversion of the St. Lucie school district bus fleet could set a timely example for state leadership in clean transportation.

In related news, Pennsylvania's Nazareth Area School District will become the first in the state to use a new hybrid school bus built by IC Corporation, the nation's largest school bus manufacturer and Enova Systems, a leading provider of hybrid-drive systems.

Through its Alternative Fuels Incentive Grant program, the Pennsylvania Environmental Protection Agency provided \$112,000 to help secure the bus, which will be operated by Jennings Transportation, a school bus contractor in Nazareth. The use of the hybrid bus is expected to improve fuel economy in the school district up to 70-100 percent, depending on the routes driven, and reduce harmful emissions by 90 percent. "The opportunity to be among the first in the nation to operate hybrid school buses is an honor. The students and community in Nazareth will benefit from the reduced fuel costs and reduced emissions," said Tom Ochs, owner of Jennings Transportation.

A total of 19 hybrid buses will be distributed to states nationwide by Advanced Energy, a non-profit organization that formed a buyer's consortium of school districts, state agencies and student transportation providers.

Hartford Welcomes New England's First Fuel Cell-Powered Hybrid Bus

The City of Hartford, Connecticut is now home to New England's first zero-emission fuel cell-powered hybrid bus. After several months on Hartford's free downtown shuttle route, the bus will operate on several other routes that serve the capital city and its surrounding towns.

The Greater Hartford Transit District contracted last year with UTC Power for the fuel cell-powered bus and two years of project support, including the use of a hydrogen refueling station located at UTC Power's headquarters in South Windsor, Connecticut. The bus was transferred to CTTRANSIT, Connecticut's state-owned bus system. Operation of the bus will be funded by the Connecticut Department of Transportation.

The project will test the bus in a range of typical transit scenarios, including at low and high speeds and on routes with steep grades. CTTRANSIT will also gather and analyze data on fuel economy, maintenance costs and overall reliability.

The benefits of the fuel cell-powered hybrid bus include a smooth and quiet operation, fuel efficiency that is expected to be two times better than a standard diesel-powered bus, and zero harmful tailpipe emissions. This means the bus will have an immediate and significant impact on reducing harmful emissions at the street level, ultimately improving the public health of the people of Hartford.

BAE Systems to Offer Advanced Lithium-Ion Batteries in Next Generation Hybrid Buses

Beginning in 2008, BAE Systems, a leader in the global defense and aerospace industry, will offer an advanced lithium-ion energy storage unit with its next-generation HybriDrive propulsion system for commercial hybrid electric buses.

The new battery features nanophosphate lithium-ion chemistry developed by A123Systems of Watertown, Massachusetts, one of the world's largest suppliers of high-power lithium-ion batteries. The new lithium-ion storage unit improves upon the current model used in the HybriDrive system in regard to its weight, which improves vehicle fuel economy and reduces emissions. In addition, the unit is self-monitoring. This makes it easy to service, reducing overall maintenance cost. Vice President of BAE Vehicle Systems Hank McGlynn says, "Our lithium-ion energy storage system offers better value through longer life, improved performance and reduced maintenance. It sets a new industry benchmark."

The company's trademarked HybriDrive system is currently in service in major cities across North America and logs nearly 65,000 miles a day. DaimlerChrysler's Orion VII hybrid transit bus utilizes BAE Systems' HybriDrive system exclusively. Three of the four largest hybrid bus fleets in the world today use the system as well.

More information on BAE Systems' new energy storage unit available at:
<http://www.na.baesystems.com/newsReleases/136%20-%20BAE%20SYSTEMS%20UNVEILS%20LITHIUM-ION%20BATTERY%20FOR%20HYBRID%20ELECTRIC%20BUSES.pdf>

Japanese Partnership Sets Sights on Manufacturing Lithium-Ion Batteries

A partnership between Mitsubishi Corporation, Mitsubishi Motors Corporation and GS Yuasa Corporation will establish a joint-venture company to manufacture large-capacity, high-performance lithium-ion batteries for use in electric vehicles.

Mitsubishi Motors plans to use the battery in the next generation of its Mitsubishi innovative Electric Vehicle (i MiEV) which is slated for production in 2010. The newly formed company also plans to supply batteries to other automakers for both electric and plug-in electric vehicle models, as well as for storage use in industrial applications.

GS Yuasa is currently the only mass producer of large lithium-ion batteries in Japan. The company develops 3.7V, 50Ah LEV-50 cells. The partnership will work towards enhancing GS Yuasa's battery cell-structure and electrode materials to improve energy and power densities in new batteries.

The partners will invest \$25 million during the first stage of development to install automated mass production equipment in GS Yuasa's Kyoto manufacturing plant with the goal of producing 200,000 batteries per year. Operations are scheduled to begin by 2009.

New York Times Testing State's First Medium-Duty PHEV

The New York Times will deploy NY State's first medium-duty plug-in hybrid electric vehicle (PHEV) as part of its New York City delivery fleet. The Dodge Sprinter plug-in prototype is being provided by a partnership between DaimlerChrysler, the New York Power Authority (NYPA), Electric Power Research Institute (EPRI) and Con Edison as part of a three year commercial fleet performance demonstration and technology evaluation process. The van will be operating between the Times printing plant in Queens, the Manhattan headquarters and another Times facility in Edison, NJ.

The Sprinter is equipped with a 220V charging system and a lithium-ion battery pack, and is capable of regenerative braking. This provides a 20 mile all-electric driving range, which will prove efficient during short-range trips in New York City when the van will operate for most of a day in zero-emission electric mode. When battery power becomes insufficient, a switch to the

clean diesel engine will provide the vehicle better fuel economy and lower emissions than a conventional diesel or gasoline-powered vehicle. The Times will house its PHEV at the Queens printing plant where the vehicle will recharge overnight, utilizing off-peak, low cost electricity from the power grid.

Other Sprinter PHEVS are being tested in Southern California and in Kansas City.

For more information about the Dodge Sprinter, please see:

<http://www.dodge.com/en/sprinter/index.html?pid=16043806&adid=83549454&rid=0&bid=2149234&mktprgm=&pref>

Wisconsin Public Power Touts 100 MPG Prius PHEV

Drivers tired of paying gas prices over \$3 per gallon are likely to be interested in a new vehicle making its way onto local roads. Wisconsin Public Power Inc. (WPPI), is utilizing a plug-in hybrid electric vehicle (PHEV) that gets nearly 100 miles per gallon. The modified Toyota Prius, sporting a license plate that reads "GAS SIPR", has been fitted with a larger, 5 kWh lithium-ion cell battery pack, can be charged when plugged into a standard wall outlet and has a 30 mile electric range before utilizing the Prius' standard, gas-electric hybrid operating system. The PHEV is the first to be added to a utility fleet in the Midwest.

Although PHEVs are not yet commercially available, WPPI's converted vehicles demonstrate that plug-in vehicle technology is a solution that automakers can and should develop today using existing technology and no new infrastructure. WPPI also recognizes the potential for PHEVs to help make better use of the existing electric grid's capacity and to help control energy costs for all consumers. PHEVs would charge overnight, when electric demand is low.

"WPPI is committed to being a leader in helping to control energy costs for customers while aggressively pursuing conservation and energy efficiency," says President and CEO Roy Thilly. "As part of that commitment, we're working to put this innovative, proven technology on the road today."

Maryland Signs "Clean Cars Act"

As evidence of its long-standing commitment to state-wide environmental protection, Maryland Governor Martin O'Malley recently signed the Clean Cars Act which requires the state to adopt stringent automobile emissions standards imposed by California law rather than those used by the U.S. Environmental Protection Agency.

The new law requires a reduction of the average carbon dioxide emissions of new cars sold in Maryland beginning in 2010. As a result, current average fuel economy (27.5 miles per gallon for cars and 22.2 mpg for light trucks and SUVs) will be raised and standardized at 43 mpg. Automakers will have to reduce emissions an average of 30 percent across their entire fleets by 2016.

Further, car dealerships will be required to have a certain percentage of hybrid vehicles on their lots, including some zero emissions models. Motorists will not be able to bypass the rules by registering cars bought in another state, but they will not have to retrofit older cars either.

Automakers and car dealers have fought past attempts to pass the legislation, urging lawmakers to delay a vote to enable further study. Some say the added costs will discourage sales, hurt customers and do nothing to stop global warming. Charles Territo, spokesman for the Alliance of Automobile Manufacturers, said the main effect of the law will be to make it harder for customers to buy the large SUVs and pickup trucks that they want. "We think it will limit vehicle choice for

the people of Maryland," he said. According to expert estimates, the law will result in 4.4 million fewer tons of greenhouse gas emissions per year by 2020.

Text of the Clean Cars Act can be viewed at:
<http://mlis.state.md.us/2007RS/billfile/sb0103.htm>

Congestion Pricing in the Big Apple? Mayor Bloomberg's PLANYC 2030 Says "Yes"

In December 2006, New York City Mayor Michael Bloomberg challenged New Yorkers to generate ideas for achieving ten key sustainability goals for the city's future. Residents in each of the five boroughs responded and the result is the most sweeping plan to enhance New York's urban environment in the city's modern history. Focusing on five key dimensions of the city's environment-- land, air, water, energy, and transportation-- the city has developed the PLANYC 2030 plan to improve the quality of life for New Yorkers in addition to reducing greenhouse gas emissions by 30 percent.

In addition and connected to Manhattan's well-known traffic problem is the city's lesser-known public health problem: asthma hospitalization rates are more than twice the national average. Despite recent improvements in air quality, New York City still falls short of meeting federal standards set by the U.S. Environmental Protection Agency (EPA) for ozone and soot pollution. A key consideration of PLANYC 2030, and its most controversial proposal, is Mayor Bloomberg's endorsement of a three-year pilot congestion pricing plan to charge cars \$8 and trucks \$21 to enter Manhattan below 86th St. during peak travel hours. Some benefits of congestion pricing highlighted in the transportation element in the 2030 plan include:

- Reduced traffic congestion and improved travel times.
- Revenue generation dedicated to the SMART Authority, which would fund significant expansions and upgrades in transit across the city and the region.
- Transit investments would initially focus on neighborhoods with limited mass transit options and high concentrations of drivers.
- Encouraging mode shifting from cars will stem the amount of tailpipe pollution on city streets, helping the city meet goals reducing greenhouse gas emissions and achieving the cleanest air quality of any big city.

PLANYC 2030 includes 127 proposals that range from cleaning up brownfields, turning schoolyards into public playgrounds, and creating a public plaza in every community to eliminating the city sales tax on hybrid vehicles and retrofitting city buildings to improve their energy efficiency. These initiatives will cost city taxpayers nearly \$250 million in the next budget year and another \$1.6 billion in capital funds during the next 10 years.

Despite an estimated total price tag of nearly \$32 billion, "This plan is the kind of bold thinking leaders across the country need to embrace if we hope to win the battle against traffic congestion," U.S. Transportation Secretary Mary Peters said in a statement.

Critics have already voiced their opposition to the plan, especially the congestion pricing initiative. Robert Sinclair, spokesman for AAA New York, said, "It would really be punitive on people who are struggling to make ends meet and trying to lead a middle-class lifestyle on an income that really does not support it." Still, many supporters approve of the scope of PLANYC 2030. Gene Russianoff, one of the city's leading transit advocates, lauded the mayor and called the initiative the "Holy Grail" of transportation proposals.

Bloomberg is undeterred by critics. "We can return this city to our children," he said. "And it will be stronger, healthier, cleaner, greener and greater than ever."

More about PLANYC 2030 is available at:

<http://www.nyc.gov/html/planyc2030/html/home/home.shtml>

American Lung Association and EPA Reports Evaluate Particulate Matter Pollution

The American Lung Association's recently released 2007 "State of the Air" report reveals that soot from diesel engines and other industrial sources is poised to become the nation's leading air quality problem. The report suggests that particulate matter (PM) pollution has worsened east of the Mississippi River while levels have improved in the West. "The increased particle pollution in the East is a particularly troubling trend, because exposure to particle pollution can not only take years off your life, it can threaten your life immediately," said association chairman Terri Weaver. Across the country, however, ground-level ozone has decreased from peak levels recorded in 2002.

In the preliminary version of its own annual "Air Trends" report, the U.S. Environmental Protection Agency (EPA) has reported reductions in PM and ozone nationwide. According to the agency, these two pollutants as well as other "criteria air pollutants" including nitrogen dioxide, sulfur dioxide, carbon monoxide and lead, have dropped by more than half since 1970.

Under the Clean Air Act, EPA is required to review and revise standards for criteria pollutants every five years. Environmental and public health groups questioned the EPA's decision to ignore the advice of its own scientific panel and not tighten the National Ambient Air Quality Standard (NAAQS) for fine particulate (PM_{2.5}) in 2006. The agency has since strengthened health standards for short-term exposures (PM₁₀). EPA Administrator Steven Johnson attributes national air quality improvement to tighter regulations on "tailpipes and smokestacks" stemming from the Clean Air Act and the EPA's efforts to improve the (PM₁₀) standard for short-term exposures.

Despite improvements in overall air quality in the United States, the American Lung Association stresses that "health problems associated with particulate matter, including respiratory ailments such as asthma and emphysema, are real and immediate, posing serious risks to millions of Americans." Their annual air pollution report card for U.S. cities and counties found that "F" grades doubled due to spikes in PM pollution from industrial and mobile sources. Researchers estimate that roughly 93.7 million people live in areas where they are exposed to short-term unhealthy levels of particulates, while more than 54 million people live in areas with year-round elevated PM levels.

The American Lung Association's State of the Air report can be accessed at:

<http://lungaction.org/reports/stateoftheair2007.html>

TELL US YOUR CLEAN TRANSPORTATION STORY

Submit Your Clean Transportation Story!

EESI's Transportation Program is eager to learn about your clean vehicle fleet/efforts. If you are in the process of procurement, or if you already operate heavy or light-duty vehicles that produce fewer emissions and consume less fuel than conventional diesel or gasoline powered vehicles, let us know

if we haven't heard – and told -- your story! We'll post this information on our website and include it in future editions of *Clean Motion*!

Send this information to Matt Johnston at mjohnston@eesi.org or call 202-662-1893. More information can be mailed to 122 C St., NW, Suite 630, Washington, DC 20001.

Clean Motion is a **free** monthly periodical providing an overview of current program and policy activities related to the deployment of low-polluting, energy-efficient transportation in the United States. Topics include technology developments, clean vehicle deployment, energy consumption, the environment, government policy, and public health. If there are issues we are missing and you think we should cover, please let us know.

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