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Green Your Fleet! Fleet Manager Workshop, June 6, 2014, Laconia

Interested in saving \$\$ and reducing pollution?

Learn how to transform your fleet!

[REGISTER HERE!](#)

BREAKING NEWS.... Ryder Truck Keynote at Green Your Fleet! Granite State Clean Cities is pleased to announce that Tim Myhaver of Ryder Truck has agreed to be the event's keynote speaker. Ryder is a leader in fleet alternative fuels and emissions reductions. Lakes River Community College President Scott Kaliki and New Hampshire Senator Andrew J. Hosmer will offer the welcome and opening remarks.



Join us on June 6th in New Hampshire's beautiful lakes region to attend the state's largest alternative fuel vehicle workshop and exhibit. Get your fleet "greener" with tips on the latest in fuels and vehicle technology!

Dozens of vehicles will be on display!





[REGISTER HERE!](#)

Discussion Panels:

- *CNG and Propane-A Case for Gaseous Fuels*
- ***Biodiesel in ALL Fleets!***

Breakout Sessions:

- Idle Reduction in ALL Vehicles!*
- Inside Mercury's Marine Mechanic Training Lab***
- Rules and Regulations Affecting Vehicles and Fleets*
- Worry Free Transition to Propane***
- Getting your Fleet's Garage Ready for CNG Vehicles*
- Pre and Post Trip Processes in Fleet Management***
- Idle Reduction for All Vehicles*
- Medium- and Heavy- Duty Electric and Hybrid Electric Vehicles***
- Inside Lakes Region CC Mechanic Training*
- ***Hydrogen Vehicles- The Future is Closer than you Think!***
- *Biodiesel! NH's Renewable Fuel*
- Telematics and Route Optimization Software***

[REGISTER HERE!](#)

Event Sponsors:



Upcoming Events:

Natural Gas Vehicles - The Here and Now Technology, One-day Workshops:

- **May 20, 2014, Portland, ME** To register, click [here](#).
- **September 10, 2014, Lincoln RI** To register, click [here](#).
- **October 2, 2014, Concord, NH** To register, click [here](#).

Alt Energy Summit, September 13-14, 2014, Mt. Washington Auto Road, Gorham.

For more information and to register, click [here](#).

Save the date! NH Celebrates "National Drive Electric Week "(formerly National

Plug-In Day). September 20, 2014, State House Plaza, Concord. More information to follow.

News of Interest:

Vermont Idling Law to take effect on May 5th

If you celebrate Cinco de Mayo across the border, do it without the engine running! Vermont will be idle free as of Monday as the state's idling law goes in to effect. Restrictions and fines associated with violations can be found [here](#).



Stakeholders joined in the fun at Discover Wild NH Day on April 19th. Vehicle exhibit featured a Leaf, Focus EV, and propane and CNG vans.

GSCCC welcomes its newest stakeholder!

Lebanon School District has joined the Coalition. Visit their website at www.sau88.net.

Electric Vehicle Safety for Emergency Responders Online Course.

The National Alternative Fuels Training Consortium (NAFTC) is offering a limited number of firefighter scholarships to obtain FREE online Electric Drive Vehicle First Responder Safety Training.

For more information [click here](#).

FUNDING OPPORTUNITIES:

DES Diesel Emissions Reduction Rebate

Program The NH Department of Environmental Services is taking applications on a first come first served basis for diesel vehicle and equipment upgrades, including the switch to alternative fuel systems and idle reduction technologies. [Click here](#) for more information and to apply.

Notice of Intent to Issue Funding Opportunity Announcement "Alternative Fuel Vehicle Deployment Initiatives" (DE-FOA-0000951)

The Office of Energy Efficiency and Renewable Energy's (EERE) Vehicle Technologies Office (VTO) intends to issue a Funding Opportunity Announcement (FOA) entitled "Alternative Fuel and Advanced Vehicle Deployment Initiatives." This FOA intends to select projects that will create and implement high impact and highly innovative approaches to increase the acceptance and deployment of alternative fuels, within the following areas of interests:

- 1) Alternative Fuel Vehicle Demonstration and Enhanced Driver Experience Project;
- 2) Alternative Fuel Training activities for first responders, public safety officials, and critical service providers;
- 3) Incorporating Alternative Fuels into Emergency Response and Preparedness Operations.

Stay tuned.

EPA announces a \$9 million funding opportunity for the National Clean Diesel Funding Assistance Program

Request for Proposals closes June 17, 2014. For details, visit: www.epa.gov/diesel/prgnational.htm.

Zero Emission Cargo Transport

Demonstration Funding Opportunity designed to accelerate electric transportation technology into the cargo transportation sector. [Click here for more information.](#)

Question of the Month: *What emerging alternative fuels are under development or are already developed and available in the United States?*

Answer: Clean Cities coordinators and stakeholders are familiar with the most commonly used alternative fuels, which have been covered over the last several months in the Question of the Month "key terms" series. However, there are also several emerging fuels that are currently under development or already in use in the United States. Like other alternatives, these fuels can increase energy security, reduce emissions, improve vehicle performance, and stimulate the U.S. economy. In addition, some are considered alternative fuels under the Energy Policy Act of 1992

(http://www1.eere.energy.gov/vehiclesandfuels/epact/key_terms.html) and may qualify for federal and state incentives.

Below we have listed a few emerging alternative fuels, their characteristics, and their benefits:

- **Biobutanol (butyl alcohol):**
 - **Composition and production:** Biobutanol is a 4-carbon alcohol that can be produced from the same feedstocks as ethanol, including corn, sugar beets, and other biomass wastes.
 - **Use as a transportation fuel:** Biobutanol can be blended with other fuels for use in conventional gasoline vehicles.
 - **Benefits:**
 - Domestically produced from various feedstocks
 - Produces fewer emissions than gasoline
 - High energy content
 - Blends well with gasoline and ethanol
 - Can be produced using existing ethanol production facilities with some modifications
 - Less soluble in water than ethanol, thus less likely to cause a sludge build-up in fuel tanks
- **Drop-In Biofuels:**
 - **Composition and production:** Drop-in biofuels are hydrocarbon fuels that are substantially similar to petroleum-based gasoline, diesel, or jet fuels. They can be produced from various biomass feedstocks, such as crop residues, woody biomass, dedicated energy crops, vegetable oils, fats, greases or algae.
 - **Use as a transportation fuel:** Drop-in biofuels are in an early stage of development,

with several commercial plants in the United States and abroad. The focus is aimed at eventually replacing gasoline, diesel, and jet fuel.

- **Benefits:**
 - Domestically produced from biomass feedstocks
 - Produces fewer emissions than conventional fuels
 - Compatible with existing engines and infrastructure
 - Can be used as replacement fuel for diesel, jet fuel, and gasoline
 - Can be produced from various feedstocks and production technologies at stand-alone plants or those located alongside petroleum refineries where drop-in fuels can be inserted into the refinery process
- **Methanol:**
 - **Composition and production:** Methanol, or wood alcohol, has similar chemical and physical fuel properties to ethanol. Methanol can be produced using various feedstocks, including carbon-based feedstocks, such as coal. However, natural gas is currently the most economical feedstock.
 - **Use as a transportation fuel:** In the 1990s, 100% methanol and 85% methanol/15% gasoline blends (M85) were used in compatible vehicles, similar to ethanol flexible fuel vehicles (FFVs) on the market today. The National Renewable Energy Laboratory is currently researching ways to use methanol for fuel cell vehicles.
 - **Benefits:**
 - Domestically produced
 - Produces fewer emissions than conventional fuels
 - Low production costs
 - Improves safety compared to gasoline due to lower risk of flammability
- **Renewable Natural Gas (Biomethane):**
 - **Composition and production:** Renewable natural gas (RNG), also known as biomethane, is pipeline-quality gas that is fully interchangeable with fossil natural gas. RNG is essentially biogas (also known as swamp gas, landfill gas, or digester gas) that has been

processed to purity standards. Biogas is typically composed of 50-80% methane, 20-50% carbon dioxide, and trace gases such as hydrogen, carbon monoxide, and nitrogen. It is produced by decomposing organic matter, such as sewage, animal byproducts, and agricultural, industrial, and municipal solid wastes.

- **Use as a transportation fuel:** Renewable natural gas can be used in existing natural gas vehicles without modification.
- **Benefits:**
 - Can be produced domestically at facilities alongside landfills, sewage treatment plants, or livestock operations. This allows for the systems to use the biogas as a renewable power source to run their operations.
 - Reduces emissions by capturing methane, a potent greenhouse gas, and keeping it from being released into the atmosphere
 - Reduces the cost to landfills to comply with U.S. Environmental Protection Agency combustion requirements
 - Reduces landfill, sewage, and livestock wastes and odors, produces nutrient-rich fertilizer, and requires less land than aerobic composting
- **xTL Fuels (Fischer-Tropsch):**
 - **Composition and production:** Synthetic liquid transportation fuels, otherwise known as xTL fuels, are produced through various conversion processes. These processes convert fuels from carbon-based feedstocks to yield various fuels, such as gasoline, diesel, ethanol, and methanol. In particular, the Fischer-Tropsch process produces liquid fuels from coal and natural gas. Coal can also be converted into liquids through liquefaction.
 - **Use as a transportation fuel:** Much like drop-in biofuels, xTL fuels can replace conventional petroleum diesel for use in vehicles without modifications to the engine or fueling infrastructure.
 - **Benefits:**
 - Can be produced domestically using the United States' vast coal reserves and natural gas

- Reduces greenhouse gas emissions
 - Fischer-Tropsch diesel emits little or no particulate emissions due to its low sulfur and aromatic content, as well as its reduced hydrocarbon and carbon monoxide emissions
 - Compatible with current diesel and gasoline powered vehicles and fueling infrastructure
 - Provides similar or better vehicle performance than conventional fuels
 - Converts relatively inflexible energy sources, such as coal or biomass, into useful transportation fuels
- **Dimethyl ether (DME):**
 - **Composition and production:** DME is a non-toxic, colorless gas that can be easily liquefied to a biodegradable synthetic liquid fuel. It is produced from various feedstocks, such as natural gas, coal, biomass, or even carbon dioxide.
 - **Use as a transportation fuel:** DME can be used in conventional diesel engines and stored in similar vehicle storage tanks to those used for propane fuel.
 - **Benefits:**
 - Domestically produced
 - Emits no particulate matter, no sulfur oxides, and very low levels of nitrous oxides and carbon dioxide
 - Provides similar or better vehicle performance than conventional fuels due to the high cetane number
 - Easy to store and transport, and liquefies at low pressure, removing the need for costly, high-pressure storage containers

More information on emerging alternative fuels can be found on the AFDC Emerging Alternative Fuels page (<http://www.afdc.energy.gov/fuels/emerging.html>). We encourage you to check out this page, as it was recently updated with new content.

For more information on DME, please see SAE International's presentation *DME from Natural Gas or Biomass: A Better Fuel Alternative*

<http://www.sae.org/events/qim/presentations/2013/greszler>

[_anthony.pdf](#)

Clean Cities Technical Response Service Team
technicalresponse@icfi.com
800-254-6735

NH Department of Environmental Services
29 Hazen Drive
PO Box 95

Concord , New Hampshire 03302

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