

Clean Cities Update April 2014!

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[Green Your Fleet! REGISTRATION IS OPEN!](#)



Register today for the Green Your Fleet! Fleet Manager Workshop, June 6, 2014, Laconia.

[REGISTER HERE!](#)

This all day event is a *NO MISS!* New



Hampshire's beautiful lakes region will host the state's largest alternative fuel vehicle exhibit. Get your fleet "greener" with tips on the latest in fuels and vehicle technology!

[REGISTER HERE!](#)

Sessions include ***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*** and more!

[REGISTER HERE!](#)

Upcoming Events:

Local Energy Solutions Conference, April 12, 2014, Tilton. Click [here](#) for more information.

CNG and Propane 1st Responders Training, April 12, 2014, Pittsford, VT. 8 a.m. to 5 p.m. Vermont Fire Academy Pittsford, Vermont. Click [here](#) for more information.

CALSTART Northeast Regional HTUF Fleets Workshop & Ride and Drive. April 16, 2014, Queens, NY. Click [here](#) to register.

Massachusetts Clean Cities Coalition Meeting, April 17, 2014, Boston, MA.
RSVP stephen.russell@state.ma.us.

Alternative Clean Transportation (ACT) Expo, May 5-9, 2014, Long Beach, CA.
For more information and to register, click [here](#).

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:

White Mountain Biodiesel featured on *Motorweek!*



The syndicated show is featuring the Mt. Washington Cog Railway's locomotives, fueled with biodiesel produced at White Mountain Biodiesel's facility in North Haverhill. New Hampshire's contribution to the show's "Clean Cities Success Stories."

Click [here](#) to see the spot.

GSCCC welcomes its newest stakeholders!

Dead River Company, of Manchester, has joined the Coalition. Visit their website at www.deadriver.com.

C&J Bus Lines of Portsmouth has joined the Coalition. Visit their website at www.ridecj.com.



C&J road trip to NHDOT and NHDES. Stakeholder C&J Bus Lines gave state employees an opportunity to learn about the Van Hool TD925 which holds 40% more passengers than standard buses. Best of all, the double decker bus uses about the same amount of fuel as its "vertically challenged" counterpart.

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:

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.

QUESTION OF THE MONTH

Question of the Month: *What are the key terms to know when discussing biodiesel fuel, vehicles, and infrastructure?*

Answer: It is important to know how to "talk the talk" when it comes to biodiesel and the associated vehicles and infrastructure. Becoming familiar with the terms below will help you better understand the fuel so you can ask the right questions and make informed decisions.

Fuel

Biodiesel is a domestically produced renewable fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant grease. Biodiesel is considered an advanced biofuel under the Renewable Fuel Standard (<http://www.afdc.energy.gov/laws/RFS>) and is the only such fuel that is commercially available nationwide.

Neat biodiesel, also known as **B100**, is biodiesel in its pure, unblended form. B100 is considered an alternative fuel under the Energy Policy Act (EPA) of 1992. B100 fuel is often blended with petroleum diesel. Blends are represented in shorthand as BX, where the "X" is the

percentage of biodiesel in the fuel. For example, B2 is 2% biodiesel and 98% petroleum diesel. All blends of biodiesel result in emissions reductions and petroleum displacement, as compared to conventional petroleum diesel.

Popular blends include:

B20 is the most common biodiesel blend in the United States because it offers a good balance of cost, emissions reductions, cold-weather performance, materials compatibility, and ability to act as a solvent. While B20 is not considered an alternative fuel under EPA Act

1992, covered fleets (fleets subject to EPA Act and related regulations) may earn EPA Act credits for the use of blends of B20 or above.

B5 is another common blend that can be used in most diesel passenger vehicles and trucks without violating the vehicle warranty.

Vehicles Types

Biodiesel and conventional diesel vehicles are one in the same. Biodiesel blends can be used in most compression-ignition diesel vehicles without any engine modifications. However, operators should check their warranty to best understand what blend is optimized for their vehicle. The National Biodiesel Board maintains a list of automakers and engine manufacturers' positions on biodiesel blends in their vehicles, specifically the biodiesel blends supported and encouraged by vehicle manufacturers (<http://www.biodiesel.org/using-biodiesel/oem-information/oem-statement-summary-chart>).

Fuel Production

Biodiesel is produced by converting oils and fats into chemicals called **long-chain mono alkyl esters**, also referred to as **fatty acid methyl esters**, through a process called **transesterification**. The feedstock reacts with a **short-chain alcohol** (e.g., methanol) in the presence of a **catalyst** (e.g., sodium hydroxide) to produce biodiesel and **glycerin**, a co-product. Raw oils, such as straight vegetable oil or waste vegetable oil, that have not been converted to biodiesel through this process should not be used in vehicles, as they can cause engine damage and void warranties.

Specifications and Standards

ASTM International sets specifications for fuels,

including biodiesel. Biodiesel used as engine fuel should meet the following standards:

- **ASTM D6751:** Specification for B100, found here: <http://www.astm.org/Standards/D6751.htm>.
- **ASTM D7467:** Specification for B6-B20, found here: <http://www.astm.org/Standards/D7467.htm>.
- **ASTM D975:** Specification for B0-B5, found here: <http://www.astm.org/Standards/D975.htm>.

The National Biodiesel Accreditation Program, **BQ9000** (<http://www.bq-9000.org/>), is a voluntary accreditation program for fuel producers and marketers that combines the ASTM standards with a quality systems program.

Fueling Infrastructure Components

A biodiesel station includes many of the same components as a diesel station, including the **fuel storage tank(s), dispenser(s), and hanging hardware** (e.g., hoses, nozzles).

Prior to introducing biodiesel, station managers should thoroughly clean existing components. This is because of the "**cleaning effect**" of biodiesel, which can dissolve accumulated sediments, cause contamination, and plug filters.

When building or converting existing infrastructure to handle biodiesel, it is important to check for compatibility with biodiesel or biodiesel blends. Underwriters Laboratories (UL) continues to test fueling equipment, including dispensers, aboveground storage tanks, underground storage tanks (USTs), piping, coatings, sumps, and heating equipment for use with biodiesel and biodiesel blends. UL-listed B20 equipment is available from Husky, OPW Fueling Components, Veyance Technologies, Franklin Fueling, and Gilbarco Veeder-Root—in fact, all new dispensers sold by Gilbarco Veeder-Root as of 2014 are UL listed for B20. Equipment vendors can also provide information about the compatibility of their products. In addition, the U.S. Environmental Protection Agency (EPA) published *Guidance on Compatibility of UST Systems with Ethanol Blends Greater than 10 Percent and Biodiesel Blends Greater than 20 Percent* (<http://www.epa.gov/oust/compend/biofuels-compat-guidance.pdf>), which outlines how UST owners and operators can demonstrate compliance with EPA requirements.

Additional information on biodiesel fuel, vehicles, and infrastructure can be found on the Alternative Fuels Data Center Biodiesel page (<http://www.afdc.energy.gov/fuels/biodiesel.html>) and on the National Biodiesel Board website (<http://www.biodiesel.org/>).

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