

WHAT YOU SHOULD KNOW ABOUT
BIODIESEL IN NEW ENGLAND

BACKGROUND

Biodiesel is a domestically produced, renewable fuel that can be manufactured from vegetable oils (primarily soy beans) or recycled oils such as cooking oil. Biodiesel is safe, biodegradable, and reduces air pollutants such as particulate matter, carbon monoxide, hydrocarbons, and air toxics. However, emissions of nitrogen oxides increase with the concentration of Biodiesel in the fuel. Some biodiesel produces more nitrogen oxides than others, but some additives have shown promise in counteracting the increase. Biodiesel used in cars and trucks must meet the requirements of the American Society of Testing and Materials (ASTM) D6751 testing protocol.

BLENDING BIODIESEL WITH REGULAR
DIESEL

Blends of 20 percent biodiesel with 80 percent petroleum diesel – known as B20 – can be used in unmodified diesel engines or stationary boilers. Biodiesel can be used in its pure form (B100), but may require engine modifications to avoid maintenance and performance problems. Pure biodiesel can gel in cold weather, which can make B100 unsuitable for use in cold climates. Because biodiesel is a cleaner fuel, it is important to change the fuel filter a few times during the initial period of biodiesel use.

HEALTH AND ENVIRONMENTAL EFFECTS

Biodiesel is a renewable fuel. B20 reduces emissions of particulate matter and carbon monoxide by about 10 percent. It also reduces emissions of hydrocarbons (including some toxic air pollutants) by more than 20 percent. However, B20 increases emissions of nitrogen oxides by approximately two percent. B100 reduces emissions of particulate matter and carbon monoxide by 47 percent. It also reduces emissions of hydrocarbons by 67 percent. However, B100 increases emissions of nitrogen oxides by 10 percent. According to the US Department of Energy, biodiesel production and use, in comparison to petroleum diesel, produces 78% less carbon dioxide emissions. Although carbon dioxide is released when biodiesel made from soybeans is combusted, the annual production of soybean crops helps remove carbon dioxide from the atmosphere.

ESTIMATED COST OF BIODIESEL BLENDS

While costs vary by location, a B20 blend generally costs about 20 cents per gallon more than regular diesel fuel. B100 generally costs about \$1 more per gallon than regular diesel fuel. Biodiesel is being used in parts of every state in New England.

New tax incentives may help offset the cost differential between biodiesel and regular diesel. Under the new law, federal excise tax credit is offered to biodiesel blenders – entities that mix pure biodiesel with regular petroleum diesel fuel. The credit amounts to one penny per percentage point of biodiesel made from first-use oils (such as soybean oil) and a half-penny per percentage of biodiesel made from other sources (such as recycled cooking oil). In other words, an excise tax credit of \$1 per gallon is offered to certified biodiesel blenders of refined B100 biodiesel. Blenders can pass these cost savings to consumers through competitive pricing practices.

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BIODIESEL
FACTS

- ① Biodiesel is a renewable fuel that is usually refined from soybean oil
- ② Biodiesel can help reduce many air pollutants emitted by diesel engines
- ③ Biodiesel production and use, in comparison to petroleum diesel, produces 78% less carbon dioxide emissions

BIODIESEL SUPPLIERS, DISTRIBUTORS AND RETAILERS

(information from www.biodiesel.org)

BIODIESEL SUPPLIERS

Company	Location	Phone Number	Contact
Environmental Alternatives	1225 39 th St., Brooklyn, NY 11218	781-972-2156	Bob Lindenbaum
World Energy Alternatives	90 Everett Ave., Chelsea, MA 02150	617-889-7300 Order: 888-785-8373	Gene Gebolys

BIODIESEL DISTRIBUTERS

Company	Location	Phone Number	Contact
Connecticut			
Buckley Energy Group	PO Box 1141, Bridgeport, CT 06601	800-739-1852	Dean Petow
East Coast Petroleum	493 Willow St., Waterbury, CT 06720	203-574-4740	Laurie Orsatti
Taylor Oil Co., Inc.	285 Brownstone Ave., Portland, CT 06480	908-884-3813	John Cusack
Maine			
Frontier Energy	1160 Rte. 3, South China, ME 04358	207-445-5274	Joel Glatz
Downeast Biodiesel Co-op	Blue Hills, ME 04614	207-469-6234	Andrea Defrancesco
Massachusetts			
Alliance Energy Services, Inc.	555 South Canal St., Holyoke, MA 01040	413-538-8000	Stephan Chase
Dennis K Burke	284 Eastern Ave., Chelsea, MA 02150	617-884-7800	Ed Burke
Loud Fuel Co.	552 Thomas Landers Rd., Falmouth, MA 02540	508-457-6595	Kabraul Taha
Mass Biofuel	280 Milton Street, Ste. 1, Dedham, MA 02026	781-326-0051	Bob Warren
Packer Oil	Beach Road, Vineyard Haven, MA 02568	508-693-0900	Doug Seward
Taylor Oil Co., Inc.	176 Centre St., Holbrook, MA 02343	908-884-3814	John Cusack
New Hampshire			
CMF Development, LLC	31 Little Kate Rd., Conway, NH 03818	603-447-3646	Al Landano
Jesse E. Lyman, Inc.	48 Kearsarge St., North Conway, NH 03860	603-356-2411	Peter Donohue
Monadnock Energy Solutions	544 Lower Jaffrey Rd., Dublin, NH 03444	603-563-8301	Sean Macy
Rymes Heating Oil Inc	802 Soucook Ln., Pembroke, NH 03275	800-773-0309	
Rymes Heating Oil Inc	North Stratford, NH 03590	800-773-0309	
Rhode Island			
Construct Oil Co., Inc.	53B Harrington Ave., Warwick, RI 02888	908-884-3813	John Cusack
REC Fleet Fuel Services	9 Hylestead St., Providence, RI 02905	401-467-8773	Wendy Hawkins
Vermont			
Phillips Biofuel Sales, Co.	230 North Williston Rd., Williston, VT 05495	802-879-1699	Larry Phillips
Real Fuels of Vermont, Inc.	Milton, VT 05468	802-825-5945	Kaj Samson
Renewable Strategies, Inc.	PO Box 185, Shoreham, VT 05770	802-989-0476	Doug Patterson

BIODIESEL RETAIL FUELING SITES

Company	Location	Phone Number	Contact
Connecticut			
Santa Energy, Inc.	670 Ella T. Grasso Blvd., New Haven, CT 06519	203-782-0304	
Taylor Oil Co., Inc.	285 Brownstone Ave., Portland, CT 06480	908-884-3813	John Cusack
Maine			
Downeast Biodiesel Co-op	Blue Hill, ME 04614	207-496-6234	Andrea Defrancesco
Frontier Energy	1166 Rte. 3, South China, ME 04046	866-267-9293	Joel Glatz
Independence Fuel	7 Ocean Park Rd., Saco, ME 04072	800-228-1883	Garry Glatz
Solar Market	25 Limerick Rd., Arundel, ME 04046	207-985-0088	Naoto Inoue
Massachusetts			
Alliance Energy Services, Inc.	555 South Canal St., Holyoke, MA 01040	413-538-8000	Stephen Chase
Dennis K. Burke, Inc.	284 Eastern Ave., Chelsea, MA 02150	617-884-7800	Ed Burke
Dennis K. Burke, Inc.	410 Beacham St., Chelsea, MA 02150	888-785-8373	
Loud Fuel Co.	552 Thomas Landers Rd., Falmouth, MA 02540	508-457-6595	Kabraul Taha
Mass Biofuel	280 Milton St., Ste. 1, Dedham, MA 02026	781-326-0051	Bob Warren
Packer Oil	Beach Rd., Vineyard Haven, MA 02568	508-693-0900	Doug Seward
Taylor Oil Co., Inc.	176 Centre St., Holbrook, MA 02343	908-884-3813	John Cusack
New Hampshire			
Fleming Oil Company	99B Rte. 9, West Chesterfield, NH 03466	603-256-8157	Rick Fleming
Monadnock Energy Solutions	544 Lower Jaffrey Rd, Dublin, NH 03444	603-563-8301	Sean Macy
Monadnock Fuels	Keene, NH 03431	800-773-0309	
Redstone Variety	682 Eastman Rd., Conway, NH 03813	603-356-9888	John Roberts
Rymes Heating Oil, Inc.	Peterborough, NH 03458	800-773-0309	
Rymes Heating Oil, Inc.	Rte 106, Loudon, NH 03307	800-773-0309	
Rymes Heating Oil, Inc.	2 Main St., Antrim, NH 03440	800-773-0309	
Rymes Heating Oil, Inc.	Greenfield, NH 03047	800-773-0309	
Rymes Heating Oil, Inc.	905 Rte. 106 N., Loudon, NH 03307	800-773-0309	
Wildcat Service Station	Rte. 16, Jackson, NH 03846	603-383-6691	Don Chase
Rhode Island			
Construct Oil Co., Inc.	53B Harrington Ave., Warwick, RI 02888	908-884-3816	John Cusack
REC Fleet Fuel Services	9 Hylestead St., Providence, RI 02905	401-467-8773	Wendy Hawkins
Vermont			
Boise Citgo	Rte. 22A and Rte. 125, Bridgeport, VT 05734	802-758-2361	Joe Boise
Fleming Food Mart Shell Station	429 Canal St., Brattleboro, VT 05301	802-254-6095	Rick Fleming

ENERGY SECURITY

Biodiesel is a domestic source of energy. Increased use of clean, domestically produced fuels helps reduce reliance on petroleum from overseas, which is good for national security as well as energy security.

FEDERAL AND STATE REQUIREMENTS AND BIODIESEL

The Energy Policy Act of 1992 (EPA Act) requires that federal fleets (and some other large fleets) acquire a certain percentage of alternative fuel vehicles (AFVs) in order to help reduce reliance on petroleum-based products. Specifically, EPA Act requires that in 2000 and beyond, 75 percent of light-duty vehicle acquisitions in federal fleets be AFVs (note: there are exemptions for law enforcement, emergency, and military vehicles). Executive Order 13149 requires any federal agency with a fleet of 20 or more vehicles in the United States to reduce annual petroleum consumption by 20 percent by 2005 compared to 1999 consumption. Biodiesel is helping many federal fleets meet these requirements. In addition, the use of biodiesel might help power generators located in Massachusetts and Connecticut earn renewable energy credits.

PURCHASING BIODIESEL

The infrastructure to bring biodiesel to consumers is emerging at a rapid pace. Currently, there are several suppliers of biodiesel, approximately twenty blenders and distributors of biodiesel, and a similar number of biodiesel retail fueling sites in New England. Suppliers work with a network of distributors to provide biodiesel to a variety of locations across the country and throughout New England. Biodiesel is available for retail sale at a growing number of refueling stations in New England. The National Biodiesel Board tracks suppliers, distributors, and retail providers of biodiesel. For the most current list visit: www.biodiesel.org

USING BIODIESEL IN NEW ENGLAND

A number of organizations in New England are using biodiesel. While not a comprehensive list, the following is a sampling of where biodiesel is being used in New England.

CONNECTICUT - The state DOT has been using B20 for three years. Using biodiesel could help generators earn renewable energy credits under the state's requirements for green power.

MAINE - Biodiesel is used in home heating applications, organic and traditional farming applications, and by individual motorists. Both LL Bean and Maine DOT are using biodiesel. In addition, the City of Bangor is using biodiesel in a number of city vehicles.

MASSACHUSETTS - Biodiesel is used in home heating applications and by individual motorists throughout the state. Otis Air Force Base, Harvard University, the University of Massachusetts at Amherst, NSTAR, the Cities of Medford and Cambridge, and the Town of Brookline are using biodiesel. Harvard University has expressed an interest in running its new Blackstone Street Power Generator on a blend of biodiesel. Like Connecticut, using biodiesel could help generators earn renewable energy credits under the Massachusetts requirements for green power.

NEW HAMPSHIRE - The Mount Cranmore ski resort, the New Hampshire DOT, Keene State, and Pease Air Force Base are using B20. Rymes Propane and Oils, Inc. sells B20 at five filling stations in the state (located in Antrim, Peterborough, Keene, Greenfield, and Loudon). New Hampshire recently eliminated the state fuel tax on biodiesel/diesel blends containing at least 20 percent biodiesel.

RHODE ISLAND - Biodiesel has been used in water taxis, tour boats, and school boilers. Warwick is using a blend of biodiesel in school buses.

VERMONT - The University of Vermont runs its buses on B20. Biodiesel is used in diesel vehicles as well as in home and institutional heating applications in parts of the state.

For More Information

US Environmental
Protection Agency
New England Office
www.epa.gov/ne/eco/diesel

US Department of Energy
Office of Energy Efficiency
and Renewable Energy
(Clean Cities Program)
www.eere.energy.gov/cleancities/

[www.eere.energy.gov/afdc/
altfuel/biodiesel.html](http://www.eere.energy.gov/afdc/altfuel/biodiesel.html)

US National Biodiesel
Board
www.biodiesel.org

Canadian Renewable Fuels
Association
[www.greenfuels.org/
biodieselsuppliers.html](http://www.greenfuels.org/biodieselsuppliers.html)