



Frequently Asked Questions about **Bioheat**

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What is Bioheat?

Bioheat is petroleum based heating oil that is blended with some percentage of biodiesel (typically 2-20%). Biodiesel is a diesel fuel and heating oil alternative that is made from vegetable oil instead of petroleum oil. Bioheat works in any regular heating fuel application, such as home heating oil equipment, commercial boilers, and diesel generators, without any modifications. To maximize the benefits of using bioheat, our product is made from 20% biodiesel (80% regular heating oil).

Do I have to convert my equipment or do anything special to use Bioheat?

No. Bioheat will work in any standard heating equipment and does not need any special conversions, adjustments, or any other changes to standard operation procedures. All you have to do is put it in your tank!

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Why should I use Bioheat?

Using bioheat is an easy way to reduce your dependence on foreign oil, protect your health, lessen your impact on the environment, and lower your “carbon footprint.” It has also been shown to improve equipment efficiencies and reduce maintenance costs.

How does Bioheat help me reduce my dependence on foreign oil?

The United States imports around 60% of our petroleum oil. A lot of this comes from friendly countries like Canada, but we are getting increasingly more and more oil from countries that are ambivalent, and even hostile towards America. Switching to bioheat will assure that 20% of the fuel you consume was produced by American farmers, not extracted out of the ground by oil cartels and multinational oil corporations. For every five gallons of bioheat you burn, one gallon will be made from cleaner burning, renewable biodiesel.

Why is Bioheat better for the environment?

Bioheat burns cleaner than regular heating oil, reducing many air emissions by 15-20%. Bioheat reduces the demand for oil, and thus reduces the environmental impacts associated with drilling, transporting, and refining. The biodiesel component of bioheat is biodegradable, and bioheat breaks down more quickly than pure heating oil if there is a spill. Transitioning to biofuels will diminish the need for drilling in pristine natural treasures like the Arctic National Wildlife Refuge.

Why is Bioheat better for my health?

Burning heating oil produces toxic air emissions like carbon monoxide, particulates, and smog forming compounds. Bioheat reduces all of these emissions, thus making the air around your home healthier. Organizations like the American Lung Association and the Environmental Protection Agency are strong promoters of biodiesel because of the documented emission reductions that come from using it.

What is my carbon footprint, and how can Bioheat help me shrink it?

Carbon dioxide is the principal culprit for the global warming that we are experiencing. Carbon dioxide is a greenhouse gas, which is released into the atmosphere when we burn carbon based fuels. A person’s carbon footprint is a

measure of how much carbon dioxide they are adding to the atmosphere by using fossil fuels either directly or indirectly.

Biodiesel contains carbon, which is released as carbon dioxide when it is burned, but it is carbon that was already in the atmosphere, not carbon that was stored underground for millions of years. Plants absorb carbon dioxide from the atmosphere and store it in the vegetable oil that biodiesel is made from. When we burn it, we are just putting it back into the atmosphere. When we burn fossil fuels; however, we are adding carbon to the atmosphere that hasn't been there for millions of years. In the last 100 years humans have put enough carbon dioxide into the atmosphere to change the climate more swiftly and dramatically than it has ever changed before.

Can Bioheat really reduce maintenance costs?

Since bioheat burns much cleaner than regular heating oil it keeps heating systems working properly. Because biodiesel is a solvent, bioheat also keeps the fuel system cleaner. Since gunk does not build up on nozzles, burners, and filters, maintenance calls are reduced, and many routine services may be done on a longer time interval. Ongoing test with bioheat at the Warwick Public School District in RI have consistently shown almost no need for annual cleanings since switching to a 20% blend.

How much does Bioheat cost?

The price of bioheat varies with both the heating oil market and the biodiesel market. The heating oil market varies with global geopolitical situations and the demand for oil. The biodiesel market varies with the price of vegetable oil commodities like soybeans. At times biodiesel has actually been cheaper than heating oil, but the average, "rule of thumb," price difference has traditionally been that biodiesel fuels cost around one cent more for every percent of biodiesel that they contain (thus B20 is typically 20 cents more). Check this page for our current prices of heating oil and bioheat: <http://www.reliance.org/OilCoop.htm>

Can I make my own Bioheat with vegetable oil?

It is possible to make your own biodiesel out of vegetable oil (see our Guide to Biodiesel here: <http://www.reliance.org/pdf/GuidetoBiodiesel.pdf>), but it is not recommended that you pour homemade biodiesel in your heating oil tank. And you definitely don't want to pour straight vegetable oil into your tank! To work properly, the biodiesel must be thoroughly blended with heating oil to create a homogenous mixture. Pouring homemade biodiesel into your tank will result in a layer of biodiesel and a layer of heating oil. Once the two are mixed completely

they will not separate, but if they are not mixed properly you can have some problems.

What if I want more than 20% biodiesel in my Bioheat?

While we really wish it was possible to use more than 20% biodiesel in a heating oil blend (like we do in our diesel vehicles during most of the year), there are some problems that this can cause. First of all, the higher the blend of biodiesel, the higher the temperature at which it starts to freeze. Twenty percent biodiesel blends only increases the gel-point of the fuel 3-5 degrees, which is not too substantial, but pure biodiesel can start to cloud up at 20-40 degrees depending on what kind of vegetable oil it was made from. Even if your heating oil tank and system is protected from freezing temperatures, the truck and hose that gets the fuel to your system is not, making it impractical to deliver higher percentages of this fuel in the winter, even if you want it.

Higher percentages of biodiesel can also cause problems with cleaning out your fuel system. Most heating oil tanks have a layer of "sludge" on the bottom of them that is not disturbed by regular heating oil. Biodiesel will start to clean out this sludge, and in percentages below 20% it will clean it out without causing problems, but higher percentages will clean it out too quickly, resulting in clogged filters until the system is clean.

How do I get Bioheat?

Bioheat is purchased just like your regular heating oil is. Just tell your oil provider that you want bioheat.

Where can I learn more about Bioheat?

- One of the best sources for information about bioheat is the National Biodiesel Board. www.biodiesel.org/markets/hom/faqs.asp
- Read an article that the Boston Globe did about our program here: www.boston.com/yourlife/home/articles/2005/03/24/bioheat_gaining_steam_as_home_heating_option/
- A useful document that was written for oil distributors about bioheat produced by the Massachusetts Oilheat Council: www.massoilheat.org/Bioheat.pdf