

BIODIESEL

Biodiesel is an advanced biofuel made from vegetable oils, animal fats, or recycled restaurant grease. Chemically similar to petroleum diesel, biodiesel can be used in diesel engines – no modifications necessary.

Meets strict fuel quality standards

Biodiesel is a highly refined product, held to rigorous chemical standards. Biodiesel producers must meet requirements from ASTM International, an impartial standards organization that verifies the fuel's quality. Blends with levels of biodiesel at B5 or less must meet the same requirements as petroleum diesel fuel.

Most biodiesel producers and suppliers are also registered with BQ-9000, a voluntary program from the National Biodiesel Board. BQ-9000 independently reviews each applicant's fuel quality control systems. Program applicants need to meet a strict set of best practices in fuel processing, testing, blending, and storage before approval.

Locally produced, readily available

Biodiesel is a local product, made and available here in Washington. At least five different biodiesel producers are located in the state. In addition to traditional fuel providers that carry biodiesel, drivers can also use over a dozen public fueling stations in Western Washington that currently offer biodiesel.

From farm to the fuel tank

Due to biodiesel's growing popularity in the Pacific Northwest, many Washington farmers choose to grow crops that can be made into plant oils, primarily canola. Since 2013, in-state canola production has increased by 40 percent to over 40,000 acres, making Washington the fourth largest canola producer in the United States. Canola is often planted in late summer or autumn to alternate with other crops, such as wheat, leading to improved soil, weed control, and even higher crop yields.

Better for people and the planet

Since biodiesel is made from renewable resources – namely used cooking oil and plants, such as canola – it is the cleanest liquid fuel available and can lessen our impact on climate change. B100 is shown to reduce greenhouse gas pollution by 50-80 percent compared to petroleum diesel.



Yellow fields are now a common sight in eastern Washington as more farmers use canola as a rotation crop.

Making the switch to biodiesel is also good for public health; using biodiesel results in reductions of several harmful pollutants, such as particulate matter, carbon monoxide, and hydrocarbons, particularly for vehicles made before 2010.

What is biodiesel?

Biodiesel is a liquid renewable fuel that is made from a variety of sources, such as vegetable oils, animal fats, and even recycled restaurant grease.

Biodiesel is often blended with petroleum diesel fuel into different concentrations; the most common in Washington State are **B5** (5% biodiesel, 95% diesel) and **B20** (20% biodiesel, 80% diesel).

Biodiesel benefits:

- Produced and available in Washington State
- Ready to use – no vehicle conversion required
- Emits less air pollution
- Can improve engine performance
- Safer to handle and store



Biodiesel is also safer to handle and store than petroleum diesel. Biodiesel is significantly less dangerous in the case of spills or other accidents because it's biodegradable, less toxic than salt, and has a higher flash point than other petroleum-based fuels, making it less flammable.

Biodiesel makes engines happy

Biodiesel burns better due to its higher cetane value and has more lubricity than petroleum diesel, allowing the engine's moving parts to run more smoothly. Engines powered by biodiesel don't sacrifice performance either: vehicles fueled with a B20 blend deliver comparable fuel efficiency, horsepower, and torque as vehicles with petroleum diesel.

Biodiesel also cleans engines. When first using the fuel, many of the engine's deposits from previous diesel use are flushed. Drivers may need to initially check their vehicle's filters to prevent clogs. But over the long-term, engines require only regular maintenance; in fact, biodiesel can even extend the life of an engine.

No waiting: drop-in ready

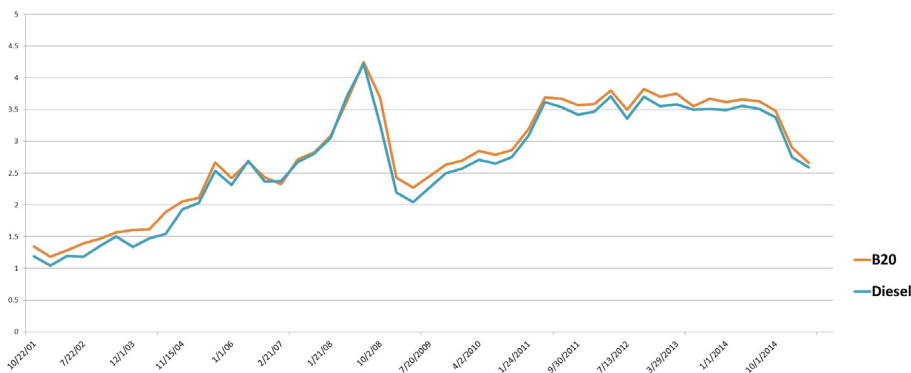
Perhaps the biggest perk of using biodiesel is its simplicity. Biodiesel is ready to power your vehicle right away - no engine conversions or additional infrastructure required. More than 80 percent of vehicle manufacturers approve of biodiesel use (up to B20) in their vehicles.

An investment in a clean energy future

The cost of biodiesel traditionally tracks closely with petroleum diesel prices. This means that the price of biodiesel is just as stable as other petroleum fuels. Although it usually costs a few cents more per gallon, biodiesel's multiple benefits outweigh the additional costs. As an increasingly important piece of Washington's economy, using biodiesel creates local industry opportunities and provides revenue for Washington farmers while reducing our impact on the environment.

Biodiesel (B20) vs. Diesel Prices

Price Per Gallon



Biodiesel prices have stayed consistent with diesel prices over the last 15 years.
Source: U.S. Department of Energy's Alternative Fuel Data Center

Considering a shift toward alternative fuels?

Let Western Washington Clean Cities be your guide.

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About Western Washington Clean Cities Coalition

Western Washington Clean Cities Coalition is a not-for-profit membership organization dedicated to expanding the use of alternative fuels and advanced vehicle technologies. We provide education, technical expertise, and networking opportunities to help our members transition from petroleum to more sustainable energy choices.

Biodiesel in Western WA:

Many Western WA Clean Cities members already know the benefits of biodiesel.

- City of Bellevue
- City of Olympia
- City of Redmond
- City of Seattle
- City of Tacoma
- Pierce Transit
- Puget Sound Energy
- Recology CleanScapes
- Saybr Contractors
- Washington State Department of Ecology
- Washington State Department of Transportation
- Waste Management
- U.S. EPA Region 10
- University of Washington

