Breakthrough
a LibVenture company

Renewable Diesel vs. Biodiesel

Which is better for your transportation network?

Renewable Diesel

Renewable diesel is a fuel made from fats and oils, such as soybean oil or canola oil, and is processed to be nearly the same chemically as petroleum diesel.

RENEWABLE DIESEL

63%

*Renewable diesel, R100, reduces greenhouse gas emissions by about **63%** compared to petroleum diesel.*

According to the DOE for heavy-duty vehicles

Biodiesel

Biodiesel is manufactured from animal fats, vegetable oils, or recycled restaurant grease, and is renewable and biodegradable.

BIODIESEL

13%

*Biodiesel, B20, reduces greenhouse gas emissions by about **13%** compared to petroleum diesel.*

According to the DOE for heavy-duty vehicles

PROS + CONS

Renewable Diesel

+	−
Less likely to affect fuel lines and filters	The capital costs for production are significantly higher than biodiesel production
Performs better in cold temperatures	Not entirely free of tailpipe emissions, such as particulate matter, which can harm exposed communities
Produced domestically	May displace crops and cropland that could be used for food
Replacement fuel for vehicles	

PROS + CONS

Biodiesel

+

- Derived from a renewable source and can be produced domestically
- Widely available with blends of up to 5% sold across the U.S.
- Prevents premature fuel system wear and tear
- The cost of producing biodiesel is approximately the same as producing petroleum diesel
- No modifications are necessary for a vehicle to operate on biodiesel*

**Higher blend levels may have vehicle-specific limitations.*

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- The higher lubricity of biodiesel compared to petroleum diesel can clog fuel filters
- May displace crops and cropland that could be used for food
- Not entirely free of tailpipe emissions, such as particulate matter, which can harm exposed communities
- To prevent the development of mold, adherence to specific storage protocols is necessary.

RENEWABLE DIESEL VS BIODIESEL

comparison

	RENEWABLE DIESEL	BIODIESEL
PRODUCTION	Expected to triple by the end of 2023 from the current production capacity of 77,000 barrels per day	Largely concentrated in the Midwest and expected to be modest in the coming years
CONSUMPTION	There are 570+ fueling stations in California, and a growing presence in Oregon, Idaho, and Montana	Second-most used biofuel behind ethanol
MARKET OUTLOOK	Demand is predominantly driven by California, but the creation and adoption of state clean fuel standards are strengthening the market	Modest, but relatively flat unless RFS, LCFS, and state support create demand
PRICE TRENDS	Without market and economic incentives, the price is prohibitive	Similar to petroleum diesel

Want to learn more about alternative energies for your transportation network?

Schedule a CleanMile Demo

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