



BIOFUELS



Biofuels are liquid fuels made from biomass. The two most common types of biofuels are ethanol and biodiesel. Biofuels can be blended with petroleum fuels like gasoline and diesel or used on their own. In both cases, less gasoline and diesel are consumed.

ETHANOL:

A liquid fuel made from plant starches and sugars that is commonly blended into gasoline. Most ethanol in the U.S. is distilled from corn. 95% of the gasoline used in the U.S. is E10, meaning that it is 10% ethanol. E85 is another blend of gasoline and ethanol that has between 51% and 83% ethanol.

Flexible Fuel Vehicles: Vehicles that still have a combustion engine but can operate on gasoline and any blend of gasoline and ethanol up to 83% ethanol are called flexible-fuel vehicles. As of 2017, there were over 21 million flexible fuel vehicles in the U.S.

BENEFITS OF ETHANOL:

Economy: In 2019, ethanol production accounted for 68,600 direct jobs in the United States.

Emissions: The lifecycle emissions for corn based ethanol are 34% less than gasoline or diesel and research for new lower-carbon biomass options for creating ethanol is ongoing.

Availability: Low-level blends of ethanol such as E10 do not require special equipment and are widely available. Fuel providers also commonly offer E85 and E15 blends. There are over 200 E85 refueling stations in Michigan.

See next page for biodiesel info!



BIOFUELS AND THE CARBON CYCLE:

Biofuels are made from natural feedstocks like corn and soybeans, that absorb carbon from the atmosphere as they grow. When biofuels are burned, they release carbon they recently captured back into the air. This does not mean that all biofuels are carbon neutral, however, it does mean that burning biofuels does not significantly increase carbon in the atmosphere.

For more information, visit cleanfuelsmi.org or reach out to us at info@cleanfuelsmi.org.

BIODIESEL:

A renewable and biodegradable liquid fuel made from vegetable oils, animal fats, and recycled grease. In its pure form, it is called B100. B20 and lower blends can be used in any diesel vehicle without modifying the engine.

BENEFITS OF BIODIESEL:

Energy Security: Reduces dependence on foreign oil. It is produced in the U.S.

Emissions: A 20% blend of biodiesel releases on average almost 45% fewer regulated exhaust emissions. The use of B100 compared to petroleum diesel reduces carbon dioxide emissions by 74%.

Safety: It is safer than petroleum diesel because it is less combustible and less harmful to the environment in case of a spill.

Availability: There are over 300 B20 and above biodiesel fueling stations in the U.S. and at least 6 in Michigan.

Sources:

[U.S. Energy Information Administration](#)

[U.S. Department of Energy: Alternative Fuel Data Center](#)

