Synthetic fuels
Synthetic diesel

Advantage = immediately applicable
Synthetic diesel (GTL or HVO) has one major advantage over other fuel alternatives: it requires neither special vehicles nor special fuel dispensers. They can simply be filled into a conventional diesel vehicle - no conversions are necessary.

For example Shell Gas-to-liquids (GTL) Fuel is an innovative synthetic diesel fuel derived from natural gas. It burns more cleanly and can be used in existing diesel vehicles without modification and offers the potential to improve air quality by reducing local emissions.

Sources: https://www.edi-hohenlohe.de/zukunftskraftstoffe
https://www.shell.de/geschaefts-und-privatkunden/shell-card/mobilitaet-von-morgen/innovative-kraftstoffe/shell-gtl.html

HVO (Hydrotreated Vegetable Oils) = Biodiesel

One of the biofuels that can play an important role in achieving climate targets is HVO. HVO, the abbreviation for Hydrotreated Vegetable Oils, is a synthetic diesel. It is produced from hydrocarbons from vegetable and animal fats. Due to the way HVO is produced, no bound oxygen remains in the end product. This is in contrast to fuels produced by esterification, such as FAME. Since the raw materials of HVO can be easily recovered, HVO is a renewable diesel.

An important advantage of HVO compared to other biofuels is that it is very similar to fossil diesel in its properties. HVO can therefore be used as a direct substitute. It is of course possible to mix HVO with fossil diesel, but that is not necessary. The flexibility of HVO allows suppliers to offer different blends to find the best solution to an energy problem. (–>)

Continuation
HVO = Biodiesel

HVO is a synthetic diesel. A number of pollutants, such as aromatics and sulphur-containing compounds, are missing - in contrast to fossil diesel. HVO therefore emits fewer pollutants than fossil diesel. During the production of HVO, not only oxygen disappears from the raw materials. Aromatic substances, sulphur and impurities are also completely removed. The result is a fuel that not only benefits the environment, but also residents living near motorways and city centres. The exhaust gases of vehicles that run on HVO smell less and the processes in the engine run more quietly.

HVO is converted into hydrocarbons through a catalytic reaction with hydrogen (hydrogenation). This process adapts the properties of the vegetable oils to those of fossil fuels. HVO can be added to diesel fuel.

Sources: *https://www.bredenoord.com/de/wissen/stiller-schoner-en-hernieuwbaar-de-mogelijkheden-van-hvo-diesel/*
https://toolfuel.eu/