



Manufacture

- 1. Hydrogenation:** The feedstock, which can be vegetable oils, animal fats, or recycled cooking oils, undergoes a hydrogenation process. This involves reacting the feedstock with hydrogen in the presence of a catalyst.
- 2. Hydrotreatment:** The hydrogenation process removes impurities such as sulphur, nitrogen, and oxygen, as well as saturates double bonds in the hydrocarbon chains of the feedstock. This results in a cleaner and more stable fuel.

HVO Fuel - C_nH_{2n+2}

- **Not fossil fuel based**
- **Chemically identical to Diesel (EN 15940)**
- **More stable than Biofuel as Oxygen removed**
- **HVO 7% less density than Diesel**
- **Different Density – may need recalibration of pumps**
- **90% fewer emissions than fossil diesel?**
- **Costs significantly more (£1.75 vs £1.45)**
- **HVO manufacturing capacity is limited.**
- **Uses 20% more energy to produce than fuel itself**

New-Zero?

- Requires substantial agricultural land to grown feedstock
- Price of corn increased
- Demand diverts from world food
- Rainforest replaced



source: tradingeconomics.com

Recommendation

- Take the electric path for vans/cars
- Extend larger vehicle life where possible during transition
- RCV's can be refurbished for ¼ cost new
- Electric RCV's not currently effective outside urban core
- **Use HVO on remaining transition vehicles only**

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