



**YOUR**

**HVVO**

**HANDBOOK**

**EVERYTHING YOU NEED TO KNOW  
ABOUT POWERING YOUR VEHICLES  
WITH RENEWABLE ALTERNATIVE DIESEL**

# SAY HELLO TO HVO



Hydrotreated Vegetable Oil – otherwise known as HVO – is leading the way as a renewable, responsible alternative to diesel. Working to mitigate carbon emissions, enhance energy security and ensure compliance, it's set to help businesses everywhere achieve their corporate sustainability goals. But is it right for you and your fleet?

Whether you operate 10 vehicles or 100, and whatever stage you're at on your energy transition journey, we're here to provide you with the knowledge and insights you need to make the right decision for your business.

## YOUR COMPLETE GUIDE TO USING HVO TO POWER YOUR VEHICLES.

### WHAT YOU WILL LEARN

- Benefits: environmental and performance
- What to consider when seeking a supplier
- Common misconceptions
- Comparison with standard diesel and other alternatives
- HVO's positive impact on sustainability goals in your industry
- Answers to FAQs

### LET'S GET STARTED

Watch our video for  
your introduction  
to the valuable  
potential of HVO





**STEVE LITTLE –  
MANAGING DIRECTOR**

# TIME FOR THE ENERGY EVOLUTION

The countdown to Net Zero 2050 is well and truly on. When first set, the goal to bring all greenhouse gas emissions to net zero seemed a distant target. But the wheels of change are in motion – and the energy evolution shows no signs of slowing.

With the government pledging to end its contribution to climate change over the coming decades, legislation is increasingly focused on a move away from fossil fuels and towards alternative energies. The klaxon of corporate, social and environmental responsibility is also sounding louder, prompting companies to make clearly defined commitments to lower their environmental impact.

Simple, seamless and sustainable, HVO is a transformative alternative to traditional diesel which holds the power to propel companies towards net-zero without delay.

We hope this guide explains why renewable diesel is the smart choice to power your fleet – and how partnering with us will help make your energy transition journey easier and more efficient.

## FUTURE FUEL FACTS – ADOPTION OF ALTERNATIVE ENERGY IS BECOMING CRITICAL

CERTAS ENERGY IS  
COMMITTING TO PROVIDING  
**800 MILLION LITRES**  
OF **HVO**   
TO BUSINESSES EVERY YEAR BY 2030

\* [CLICK FOR SOURCE](#)

[READY TO LEARN MORE?](#)



# MAKING THE BUSINESS CASE

HVO is 100% biodegradable and responsibly sourced with a verified sustainable supply chain. Unlike conventional diesel production, hydrogen is used to remove oxygen from the oil molecules and split them into smaller chains, making combustion easier and cleaner. It can be used as a direct drop-in replacement for standard diesel and offers impressive and instantaneous carbon reduction.

It's no surprise, then, that HVO is fast becoming a popular choice in the haulage, logistics and transportation sector. Alongside its strong sustainability credentials, HVO can be seamlessly integrated into existing vehicles. This makes it ideal for fleet managers who want to realise significant life-cycle greenhouse gas (GHG) carbon reduction but find it difficult to decarbonise due to current technology and electrification shortcomings. The key is to find a solution that can balance business needs and carbon reduction goals, for now and the foreseeable future.

**WITH PREMIUM CERTAS ENERGY HVO,  
YOU CAN MAKE SIGNIFICANT PROGRESS TOWARDS THIS GOAL.**

## 1,2,3...HVG0! COUNTING THE BENEFITS

- ✓ **REDUCES NET LIFE CYCLE CO<sub>2</sub> GREENHOUSE EMISSIONS BY UP TO 90%\* COMPARED TO STANDARD DIESEL**
- ✓ **PRACTICALLY FOSSIL- AND FAME-FREE\*\***
- ✓ **RENEWABLE, SUSTAINABLE AND 100% BIODEGRADABLE**
- ✓ **DROP-IN REPLACEMENT FOR CONVENTIONAL DIESEL**
- ✓ **NO REQUIREMENTS FOR ENGINE MODIFICATIONS OR NEW VEHICLES**
- ✓ **MEETS EN15940 STANDARD FOR PARAFFINIC FUELS**
- ✓ **EXCELLENT COLD-WEATHER PERFORMANCE**
- ✓ **READILY AVAILABLE AT MORE THAN 13 REFUELLING SITES ACROSS THE UK**

\*Source \*\* <1%, nominal trace levels only if not zero

## LET'S EXPLORE HOW HVO COULD BENEFIT YOUR BUSINESS



### REDUCES EMISSIONS – INSTANTLY

One of the biggest advantages of HVO is the significant reduction in life-cycle GHG emissions it delivers. HVO is a paraffinic fuel, with near-zero sulphur and very low aromatics content. Compared to standard diesel, it produces fewer regulated emissions of toxic hydrocarbons, nitrous oxides (NOx) and particulate matter (PM), all of which are harmful to human health and the environment.

By transitioning to HVO, fleets can cut fuel-related emissions (well to wheel) from operations by [up to 90%](#) compared to standard diesel, helping to lower their carbon footprint with immediate effect.



### PRACTICALLY FAME- AND FOSSIL-FREE\*

HVO is a highly stable “FAME-free fuel”, with limited risk of microbial attack. It is produced and accredited to meet the international fuel standard EN 15940, the specification for paraffinic diesel, and the Fuel Quality Directive 2009/30/EC Annex II.



### DROP-IN AND GO

A particularly attractive feature of HVO is its drop-in capabilities. It can be used in vehicles designed for standard diesel, without any changes to the engine. As capital expenditure is not required, HVO offers a viable and accessible route towards decarbonisation, without disruption or delay.



### POWERFUL PERFORMANCE

The benefits of HVO extend beyond sustainability. Due to its molecular structure, it offers low temperature performance, with a cold filter plugging point (CFPP) to -30 degrees. It also has lower filter blocking tendency and improved combustion over some alternatives.

\* <1%, nominal trace levels only if not zero



## THE HVO VS DIESEL DEBATE

### PAVE YOUR PATH TO NET ZERO

Both fossil fuels and alternative energies will play important roles in the energy transition. But understanding the distinction between them can be difficult. Here, we take a closer look at how HVO differs from standard diesel to help you determine which is the best option for your fleet operations.



#### COMPOSITION

Standard diesel – also known as white diesel or DERV – is a liquid fuel derived from crude oil through fractional distillation. It has a relatively high density and is formed of complex hydrocarbons, as well as compounds of sulphur, oxygen and nitrogen, which all affect combustion and give rise to unwanted emissions.

HVO falls under the umbrella of diesel but it is composed of uniform hydrocarbon molecules. It has a lower fuel density, is virtually free from aromatics, metals and sulphur content, and has a higher cetane value versus standard diesel. HVO can help to improve the cleanliness and efficiency of engines, as well as offer better performance during cold weather.



#### COMPATIBILITY

HVO and standard diesel are interchangeable. Both are energy-dense fuels that can be used to power lorries, trucks and HGVs.



#### FUTURE-PROOFING

As the UK moves towards the goal of net-zero emissions by 2050, the way we fuel fleets is changing. HVO can help businesses to lower their emissions, with immediate effect.



#### PRICE

The average price of both diesel and HVO fluctuates daily and is dependent on a number of factors, including market changes, volume, availability and location. HVO currently costs slightly more than regular diesel price per litre.



#### AVAILABILITY

Certas Energy offers a reliable and competitive supply of our premium HVO and DERV, available from the pump at a growing number of HGV refuelling sites. Click [here](#) to see the full list and map.

### KEEN TO KNOW MORE?

Call our HVO experts on 0345 608 8003  
or email your team at [hvofuelcards@certasenergy.co.uk](mailto:hvofuelcards@certasenergy.co.uk)

## BUSTING THE HVO MYTHS

Need help separating fuel fact from fiction?

Here, we challenge the common misconceptions around HVO to help you decide if it's the right fit for your business.

### #1

**HVO IS NOT A COST-EFFECTIVE SOLUTION**

**Reality check:** HVO, is a high-quality premium fuel, so it understandably costs more than traditional diesel. However, this price is expected to decrease as availability grows. And as HVO can be used as a direct replacement for diesel in a standard engine, there's no upfront costs associated with changing vehicles.

### #2

**ADOPTING HVO WOULD DISRUPT MY BUSINESS.**

**Reality check:** As HVO is a drop-in alternative diesel, it can be used without any modifications to vehicles or engines. This limits disruption to business operations, allowing you to sustain high levels of productivity and avoid a time-consuming fuel transition.

### #3

**HVO IS NOT SUSTAINABLE – ELECTRICITY IS THE ONLY VIABLE ROUTE TO NET ZERO.**

**Reality check:** Unlike electricity, HVO is a readily-available renewable fuel choice for fleet managers looking to significantly reduce their environmental impact.

Zemo recently published its Renewable Fuels Guide, which was designed to help HGV fleet operators make informed decisions about alternative fuel options and take important steps towards net zero. The [guide](#) champions Certas Energy's successful energy transition to HVO, serving as an inspiration for transport businesses looking to lower their own carbon footprint.

### #4

**I AM NOT YET LEGALLY OBLIGED TO SWITCH TO AN ALTERNATIVE FUEL – WHY SHOULD I MAKE THE TRANSITION TODAY?**

**Reality check:** It is an inescapable fact that the UK is moving towards a net zero emissions future. Regulatory changes are already being passed to encourage the adoption of alternative fuels and combat the UK's air quality crisis, such as the phasing out of new diesel HGVs by 2040 and the creation of Ultra Low Emissions Zones (ULEZ).

With further restrictions on the horizon, more businesses will be encouraged to take proactive steps on their carbon reduction journey. HVO is a suitable, sensible solution, helping to plug the gap to net zero and offering significant sustainability and performance benefits along the way.

## #5

### HVO IS UNRELIABLE AS A PRIMARY FUEL SOURCE.

**Reality check:** Demand drives supply and growing awareness of HVO is feeding further investment, bringing greater availability to the market.

HVO is now gaining traction in the transport and logistic industry in particular, with many companies – including the [Royal Mail](#) – transitioning their HGV fleet to HVO.

## #6

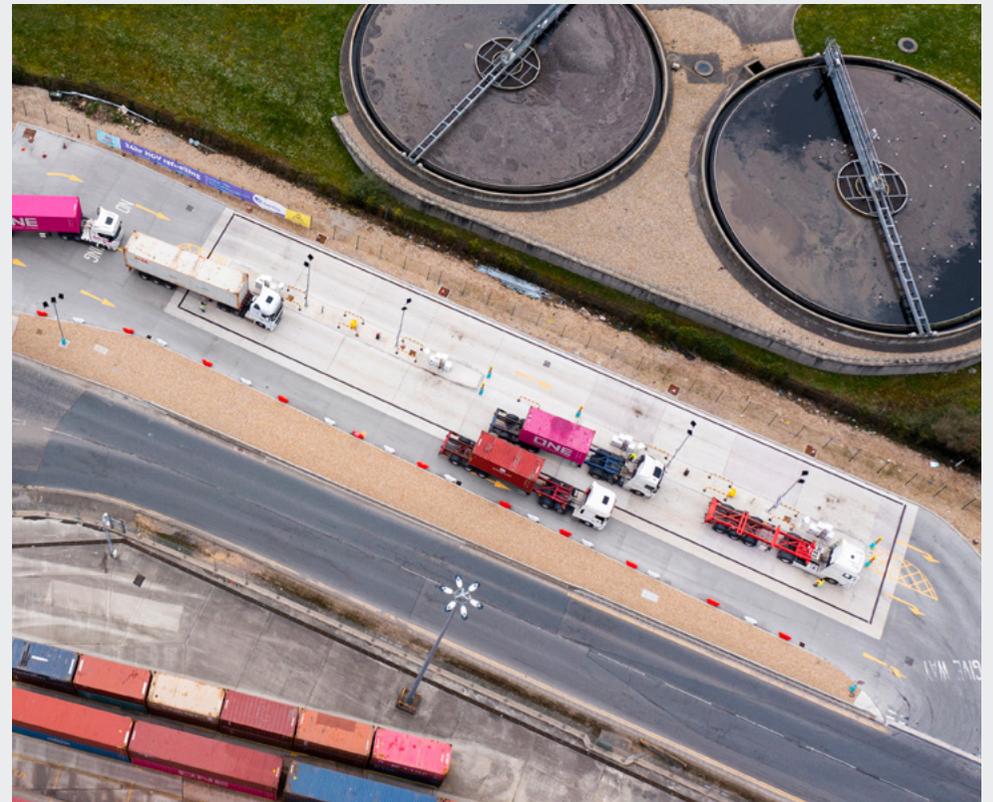
### ALL HVO IS THE SAME – IT DOESN'T MATTER WHERE I BUY IT

**Reality check:** Not all HVO is created equal – or sourced ethically. It's imperative to choose a fuel partner with an assured supply and full transparency about their sustainable sourcing and environmental credentials.

## #7

### THE UK DOESN'T HAVE A RELIABLE SUPPLY OF HVO

**Reality check:** Certas Energy has an extensive national network of high-speed bunker sites, and drop-in renewable fuel is also available at an increasing number of our refuelling sites. We're also the first provider in the UK to offer HVO fuel to [HGV fuel card users at the pump](#). All this means you're never far away from a convenient, competitively priced supply of Certas Energy HVO.



## CLEARING UP CONFUSION ABOUT ALTERNATIVE FUELS

How does HVO measure up against other future fuel types?

Now we've explored the advantages of HVO over standard diesel, let's see how it compares to other alternative fuels.



### HVO VS GTL FUEL

Gas-to-Liquid (GTL) Fuel is practically FAME-free and part of the paraffinic family of fuels. It is a drop-in replacement and can instantly reduce harmful emissions and improve local air quality. However, GTL Fuel doesn't lower life cycle carbon emissions in the same way HVO can – so HVO is a better option for transport businesses working to cut their carbon footprint.

GTL Fuel currently has a lower price per litre than HVO, making it an attractive option for businesses looking for a more gradual transition away from standard diesel, while protecting productivity and profitability.



### HVO VS CNG

Compressed natural gas (CNG) is methane stored at high pressure. It offers up to 25% reduction in carbon dioxide (CO<sub>2</sub>) and 80% reduction in nitrogen oxide (NO<sub>x</sub>) and is 30-50% cheaper than standard diesel. However, making the switch can be costly and challenging. New tanks are required, the fuel must be kept at a specific temperature and availability is limited in the UK.



### HVO VS LNG

Liquefied natural gas (LNG) is gas that has been cooled to liquid form to enable non-pressurised storage or transport. It is safer and more convenient to use than pressurised gases and is popular in the marine sector. It can reduce CO<sub>2</sub> emissions by up to 25% and nitrogen oxide up to 90% compared to traditional heavy fuel oils. LNG, however, is a lower energy density fuel and doesn't deliver the same efficiency benefits as other alternatives, such as HVO.



## HVO VS BIODIESEL

Biodiesel – also referred to as FAME (fatty acid methyl esters) – is a fuel made from renewable materials, such as vegetable oils, animal fats or recycled greases. It is biodegradable and can help to reduce emissions, including CO<sub>2</sub>. It can also be blended with standard diesel.

However, there are maintenance issues related to biodiesel. It is subject to poor cold weather storage and handling, with a greater propensity for water pick-up. It is therefore at an increased risk of microbial activity and filter blocking tendency. This can lead to significant vehicle downtime, including clogged filters. As HVO is practically FAME-free\*, it does not experience the same operational issues.



## HVO VS HYDROGEN

Hydrogen is promising as a clean, safe and versatile energy source and it is set to play a significant role in the transition to a net zero future. But it is not yet readily available on the market and comes with other challenges, including a lack of infrastructure and safe storage.



## HVO VS ELECTRICITY

Electrification is crucial in the energy mix of the future. However, there are current limitations for wide-scale use in the transport and logistics sector, such as insufficient battery range and lack of infrastructure. The electrification of heavy-duty vehicles is also in its infancy. Therefore, it is not a fully formed solution for a zero-emissions future at present.

TO DELVE DEEPER INTO HOW HVO MEASURES UP AGAINST STANDARD DIESEL AND OTHER ALTERNATIVES, [READ OUR GUIDE](#)

\* <1%, nominal trace levels only if not zero

## ASK THE EXPERT: YOUR HVO FAQs ANSWERED

Still have gaps in your HVO knowledge? Certas Energy's leading HVO technical expert Neil Ryding is here to fill them in.

**Q**

**CAN HVO BE MIXED WITH STANDARD DIESEL?**

HVO fuel is fully interchangeable with traditional diesel and can be mixed at any percentage. This makes it a frictionless transition fuel. Given that it can be safely blended with conventional diesel, HVO also offers significant flexibility, allowing a gradual transition if you so choose.

**Q**

**IS HVO SUITED TO THE TRANSPORT AND LOGISTICS SECTOR?**

Businesses in this sector can benefit from making the switch – it'll support your sustainability goals and transition is simple. There's no need to adapt vehicles or engines, HVO is easily accessible at Certas Energy refuelling stations across the UK, and it mixes with standard diesel – so there's no need to even empty the tank. All this makes it ideal for HGV and other on-road vehicles.

**Q**

**I WANT TO MAKE THE TRANSITION TO HVO. WHAT SHOULD I LOOK FOR IN A FUEL PARTNER?**

Seek out a HVO fuel supplier that is International Sustainability & Carbon Certification (ISCC) certified and is approved as an Renewable Fuel Supplier under Zemo's RFAS scheme.

Any reputable supplier should be able to demonstrate a fully validated and auditable supply chain for its fuel. At Certas Energy, we understand the value of transparency. All of our raw materials are checked and verified and our fuel's credentials audited by the Department for Transport (DfT) to ensure sustainability and product integrity are certified.



**NEIL RYDING,**  
**SENIOR TECHNICAL CONSULTANT**

**Q****CAN I CLAIM THAT EMISSIONS WILL BE CUT BY MORE THAN 90% IF I SWITCH TO HVO?**

It depends on the HVO supplier. Greenhouse gas savings differ between products and batches, as it does not come entirely from tailpipe emissions. It is a life-cycle, well-to-wheel calculation, taking into account feedstock, production processes and transportation. That is why it is imperative to do your research when it comes to your supplier; to ensure the HVO you choose meets your sustainability objectives, and that you can be confident in your carbon reduction claims.

Check our [top tips](#) for choosing a transparent and trusted energy partner.

**Q****IS HVO OEM-APPROVED?**

HVO is approved by the vast majority of [manufacturers](#) of off- and on- road machinery and vehicles. This includes DAF, Mercedes-Benz and Scania. If you are unsure about the compatibility of your vehicle's engine, contact your manufacturer or one of our [experts](#).

**Q****IS HVO AVAILABLE IN THE UK?**

Yes, HVO is now widely available in the UK – you just need a supplier with an accessible network. Certas Energy's nationwide network of high speed bunkers and refuelling stations is well stocked with HVO so you're never far away when the tank's running low. Our continuous investment in our infrastructure underlines our commitment to being a reliable and trusted HVO partner and enhances our ability to further enhance our customers' operations.

**Q****ARE THERE ANY OTHER ALTERNATIVE FUELS THAT I COULD CONSIDER?**

Yes. Like HVO, GTL Fuel is a drop-in alternative fuel. While less expensive compared to HVO, it doesn't reduce carbon emissions to the same extent. However, it does offer other operational benefits such as improved cold start performance, reduced noise pollution and no odour.

**HAVE YOU GOT MORE QUESTIONS ABOUT HVO?**

Call our HVO experts on 0345 608 8003 and speak to one of your team.

# FUELLING

# FUTURES



# TOGETHER

## WHY CHOOSE CERTAS ENERGY?

As the UK's leading independent fuel and lubricants distributor, we take pride in being the energy transition partner of choice for the transport and logistics sector, providing solutions that you can rely on and trust. That's why we go to great lengths to guarantee that Certas Energy HVO is ethically sourced. We only partner with other RFAS suppliers and International Sustainability & Carbon Certified (ISCC)-accredited suppliers, delivering ultimate peace of mind for environmentally-conscious customers.

Through our extensive national network of high speed bunkers and refuelling sites, we can ensure a reliable supply of premium Certas Energy HVO to your business. Furthermore, we have the expertise and industry insight to support you in making a smooth, seamless transition. So, you can unlock the full potential of HVO, right away.

## DRIVING CERTAS ENERGY TOWARDS A LOW CARBON FUTURE

### DID YOU KNOW? WE'RE SWITCHING TO HVO

We are in the process of replacing ~4m litres per annum of standard diesel with our premium HVO for our large fleet.



### WE'RE ON TRACK FOR A LOW EMISSIONS FUTURE – ARE YOU? COME JOIN US!

Call our HVO experts on 0345 608 8003 or  
email your local team at [hvofuelcards@certasenergy.co.uk](mailto:hvofuelcards@certasenergy.co.uk)

### DID YOU KNOW? WE'RE OFFICIALLY A RENEWABLE FUEL SUPPLIER

**Certas Energy is a Renewable Fuel Supplier under the terms of the Zemo Renewable Fuels Assurance Scheme (RFAS).**

The Zemo Partnership, which Certas Energy has been a member of since 2022, is a non-profit organisation working with the government and members to help accelerate the journey to zero emissions. As part of this commitment, Zemo launched RFAS, which is an independently audited approval scheme for fuel suppliers. By gaining Renewable Fuel Supplier status, Certas Energy can demonstrate the efficacy of its HVO's renewable and sustainability claims and credentials. Customers are provided with a Renewable Fuel Declaration (RFD), showing the feedstock supply chain and the aggregated GHG intensity and savings compared to regular diesel.

## HVO: THERE WHEN YOU NEED TO REFUEL

We stock HVO across our network of refuelling sites located all over the UK, so it's always accessible when the tank's running low.

Click [here](#) to see the full list and map.



# EMPOWERING DECISIONS, **ENERGISING** BUSINESSES

## WITH SUSTAINABLE, RENEWABLE HVO

A lower-emissions future is a global goal and through our collective efforts, we can reach this ambitious objective. Technologies continue to advance at an exponential rate and opportunities to decarbonise are always in the pipeline.

Although the full potential and direction of future fuel innovations remains to be seen, one thing is for certain. HVO is a practical yet powerful solution for transport businesses keen to kickstart their journey towards a low emissions future, today.

# WHY WAIT?

If you're ready to start your journey towards a sustainable future, get in touch today.

Call our HVO experts

**0345 608 8003**

Email your energy experts

**hvofuelcards@certasenergy.co.uk**

Or find out more

**certasenergy.co.uk/my-business/products/  
hvo-on-the-road**

## HOW CAN WE HELP YOUR BUSINESS GO FURTHER?

Stay up to date with all our latest news and product development here or join our social media community here:



Certas Energy UK Limited (Head Office),  
1st Floor, Allday House Warrington Road, Birchwood, Cheshire, WA3 6GR.  
[www.certasenergy.co.uk](http://www.certasenergy.co.uk)