



The Changing Landscape of Fuel Distribution



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In June 2019, the UK became the first major economy in the world to pass laws guaranteeing an end to its contribution to global warming by 2050. The target will require the UK to bring all greenhouse gas emissions to net zero by 2050, compared with the previous target of at least an 80% reduction from 1990 levels.

However, at a time when the World needs more energy, we cannot sustain the increase in carbon dioxide emissions and harmful particulate matter that thus far are inevitably emitted from traditional fossil fuels. Fossil fuels must play a part in transitioning to this lower carbon future. Our challenge is how we meet demand for energy and move towards cleaner air and a net zero emission target in the UK.

As an industry, we have a track record of successes in this area. With the introduction of unleaded petrol and bio-fuels, we have been moving forward in this area. A progression that must now accelerate.

A move in **the changing landscape of fuel distribution.**



The future of liquid fuels

The net zero future is still a long way off in fuel terms and as such, various transitional fuels are currently emerging and being tested in terms of their ability to transport us to the ultimate net zero goal.

So as we transition to a cleaner, greener fuelling future, we recognise the importance of alternative liquid fuels to provide the medium-term transition. The infrastructure exists and there are fuel options - some available, some coming over the horizon. So, what are the alternatives?

Fuel	+	-
Electricity	No harmful emissions during use. The Government's choice of energy solution.	If you calculate emissions from generation as well as use, this is not as green an alternative as first appears. Infrastructure changes are needed to cope with increased demand.
HVO (Hydrotreated Vegetable Oil)	Lower CO ₂ and Nitrogen Oxide emissions. No need to change the existing infrastructure, storage, delivery or tanks.	Supply chain is fragile but would improve with investment. More expensive than diesel but again, this may change when supply is increased and the fuel more widespread.
CNG (Compressed Natural Gas)	Cleaner and cheaper than diesel. Efficient to run.	Storage tanks and infrastructure expensive to adapt.
Biofuel	Less emissions than diesel and can be blended with other fuels.	Less clean than other 'alternative' options. Infrastructure issues. Different storage tanks needed.
LNG (Liquefied Natural Gas)	Clean, odourless and easier to store than CNG.	Expensive option with less efficiency than other alternatives.
GTL (Gas to Liquid)	Reduced CO, Nitrogen Oxide. Smokeless and odourless. No infrastructure changes needed.	Expensive. No reduction in CO ₂ .

HVO: a drop-in, readily available alternative to diesel

Having looked at the alternatives and their various pluses and minuses, we believe HVO to be integral to our transition.

HVO OFFERS:

Net GHG CO₂ reduction of up to 90% vs fossil diesel fuel.

HVO IS:

Manufactured from 100% renewable & sustainable waste derived from raw materials, accepted by the Road Transport Fuel Obligation and certified by the ISCC.

HVO IS:

A drop in fuel that can replace mineral diesel with no changes required to the engine or operational infrastructure. HVO is legal for road and non-road use.

HVO GIVES:

Significant reductions in noxious tail pipe emissions.

Clean our air by switching to HVO and start reducing your CO₂ emissions

HVO fuel is a fossil-free, FAME free paraffinic renewable diesel fuel made from sustainable raw materials. HVO is available across our depots and is compatible with diesel engines and machinery.

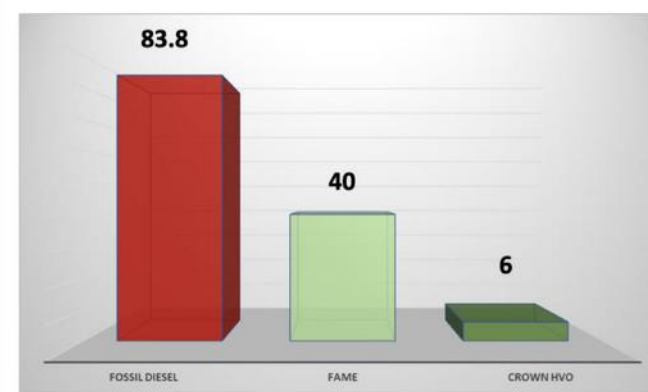
Lower your emission with HVO Fuel

HVO fuel, also known as hydrotreated vegetable oil or HVO, is an advanced renewable diesel fuel derived from 100% renewable waste streams through hydrotreatment and isomerisation. It meets bio content requirements with no FAME included and, to that point, avoids the instability and operability issues seen by many low blend diesels and high blend biofuels.

Switch to HVO and start reducing your CO₂ Emissions

HVO fuel offers a fast and simple step towards “net zero” with no CAPEX requirement and reduces greenhouse gas CO₂ emissions by around 90%. The feedstocks used to manufacture HVO are 100% waste, drawn from primary sources which have bypassed damage to the environment, natural ecosystem and the drive for global deforestation.

For every 1,000 litres of diesel burned, you will produce 3.6 tonnes of greenhouse gas CO₂, compared to just 195kg GHG CO₂ for every 1,000 litres of HVO burned.



Ref: Crown Oils

gCO₂e/MJ



Diesel – 3.6 tonnes GHG CO₂ / 1000L burned



HVO – 195 Kg GHG CO₂ / 1000L burned

HVO isn't as new as people think...

- ✓ It meets international fuel standards EN15940 & ASTM D975
- ✓ It has a large number of direct OEM approvals others can use as an ASTM D975 fuel
- ✓ It's been available in continental Europe for 10+ years
- ✓ It's available on pump in Scandinavia and Benelux to the general public



Tax implications

For the government to reach its objectives, it also needs to ensure that the tax system incentivises users of higher polluting fuels like diesel to **improve the energy efficiency** of their vehicles and machinery, invest in cleaner alternatives, or just use less fuel.

This includes the tax treatment of red diesel, which is diesel used for off-road purposes, such as to power bulldozers and cranes in the construction industry or the refrigeration section of lorries. It is so-called because of the dye used to distinguish it from normal road fuel diesel. Red diesel accounts for around 15% of all the diesel used in the UK and is responsible for the production of nearly 14 million tonnes of CO₂ a year.

Despite diesel being one of the most polluting fuels that vehicles and machinery can use, those entitled to use red diesel pay a duty rate of only 11.14 pence per litre (ppl), which is significantly less (46.81ppl) than those using standard road fuel diesel (duty rate of 57.95ppl). Businesses using red diesel are therefore paying far less for the emissions they produce than individual car owners, even though the emissions produced from using one litre of diesel is broadly the same in both cases.



Tax implications

To address this, you may be aware that in the recent budget (March 2021), the Chancellor of the Exchequer confirmed impending changes to tax relief for 'off-road' or 'red' diesel. These changes will result in the removal of tax relief for some sectors and applications. Current duties will remain until 31st March 2022 and this new taxation legislation will be introduced from 1st April 2022.

This change does not apply to all sectors and there are some exemptions, including agriculture, non-commercial heating, rail and commercial boat operators.

Non-rebated

	Generally when used in road vehicles
Gas oil (diesel)	57.95
Fuel oil	57.95
Heavy oil other than gas oil and fuel oil (kerosene)	57.95
Heavy oil other than gas oil and fuel oil (excluding kerosene)	57.95
Biodiesel	57.95
Biodiesel blended with gas oil (bioblend)	57.95

Rebated

	Used in an excepted vehicle or other off-road engine	Used in heating
Gas oil (diesel)	11.14	11.14
Fuel oil	10.70	10.70
Heavy oil other than gas oil and fuel oil (kerosene)	11.14 (requires HMRC approval and repayment of the rebate prior to use)	0.00
Heavy oil other than gas oil and fuel oil (excluding kerosene)	11.14	11.14
Biodiesel	11.14	Not chargeable use
Biodiesel blended with gas oil (bioblend)	11.14	11.14

So, who qualifies for the reduced rate of tax on red diesel?

This measure introduces legislative changes through Finance Bill 2021 and subsequent secondary legislation to restrict the entitlement to use red diesel and rebated biofuels from April 2022 to the following qualifying purposes:

- For vehicles and machinery used in agriculture, horticulture, fish farming and forestry. This includes allowing vehicles used for agriculture to be used for cutting verges and hedges, snow clearance and gritting roads.
- To propel passenger, freight or maintenance vehicles designed to run on rail tracks.
- For heating and electricity generation in non-commercial premises - this includes the heating of homes and buildings such as places of worship, hospitals and town halls; off-grid power generation; and non-propulsion uses on permanently-moored houseboats.
- For maintaining community amateur sports clubs as well as golf courses (including activities such as ground maintenance, and the heating and lighting of clubhouses, changing rooms etc.)
- As fuel for all marine craft refuelling and operating in the UK (including fishing and water freight industries), except for propelling private pleasure craft in Northern Ireland.
- For powering the machinery (including caravans) of travelling fairs and circuses.



Carbon offsetting

Consistent with what's happening in our Industry, we are evolving as a company. Not only are we driving efficiencies, we are also investing in Carbon Offsetting projects. Carbon offsetting allows us to invest in environmental projects around the world in order to balance out carbon emissions.

Reducing our Carbon Footprint

Climate change is reaching crisis levels, with transport and fuel sectors being targeted as large contributors of CO₂ emissions. As a fuel supplier it is challenging to find environmentally friendly solutions that meet the needs of our business, however Johnston Oils have taken their first steps in the right direction to start neutralising the CO₂ that is emitted by a proportion of our customers.

Johnston Oils have invested in a Carbon Compensation Scheme which funds carbon offsetting projects, designed to reduce and prevent CO₂ emissions through various sustainable solutions.

Projects

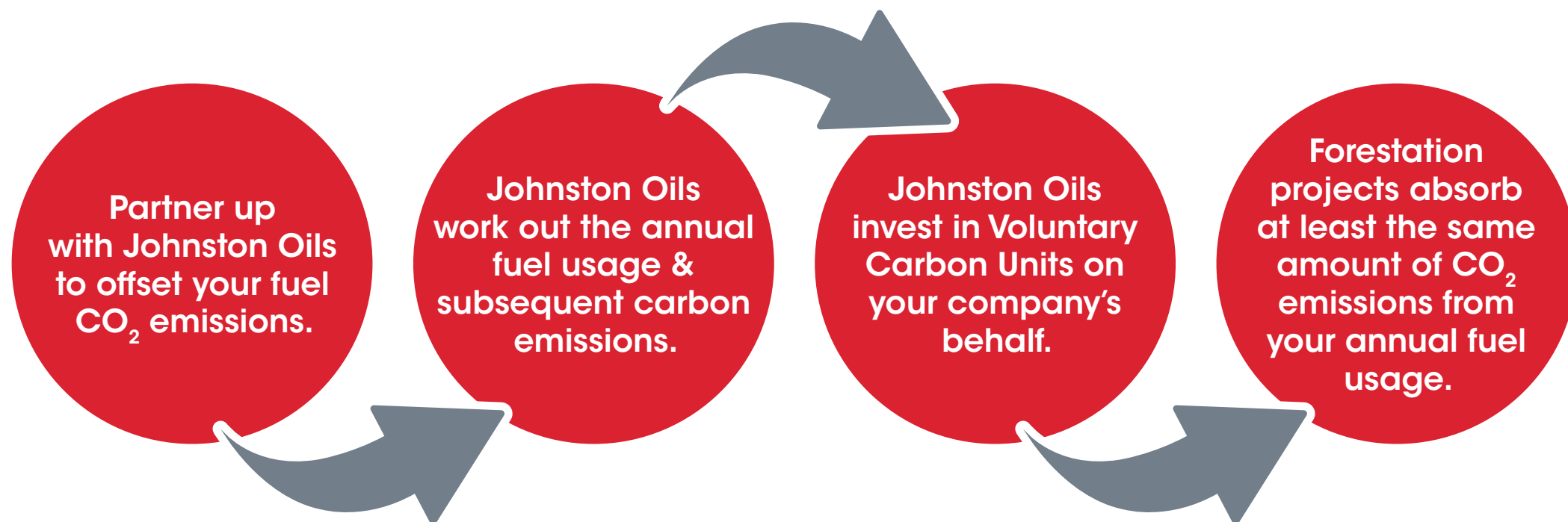
Current projects are based on a mix of reforestation and renewable energy projects. All projects are Verified Carbon Standard approved.

As well as providing a carbon saving, voluntary carbon projects also have a positive impact in the communities in which they operate, for example job creation.



Carbon offsetting...

How does it work?



Our commitment to you

The net zero future is still a long way off in fuel terms and as such, alternative fuels such as HVO, need to be part of the transition to the ultimate net zero goal. Tax incentives and penalties ensure these changes will happen. We are embracing this evolution and will ensure our customers are updated through each step. We assure you of our continued support and commitment on the road to a cleaner, greener future.



If you're looking for bulk supply of clean burning, environmentally-friendly alternative to mineral diesel or have any questions, then call our team on **01506 652 255** or email us - sales@johnston-oils.co.uk.