HVO IS GO!

With increased demand for more environmentally friendly transport fleets, HVO has never been more popular. John Challen finds out how this extra interest will affect the supply chain

Much has been written over the years about the benefits of hydrotreated vegetable oil (HVO) fuel – its popularity more recently accelerated by the drive to decarbonise across fleets. In fact, you don't have to look very far to find examples of big-name operators who have pledged to switch from traditional diesel to biofuels. At the end of last year, DPD committed to the fuel, along with PepsiCo and Wren Kitchens – all benefiting from a reduction of CO_2 tailpipe emissions of up to 90%, compared with diesel-fed trucks.

The increased demand – and consumption – of the fuel does, however, create an issue at the supply level. With established major refineries still supporting the volume choice of diesel, HVO remains in relatively short supply.

It's an approach that William Tebbit, CEO of Green Biofuels, believes needs to change. "There is a growing realism that transition fuels are a good way to help us decarbonise while we wait for new technologies – whatever they may be – to become available at scale and economically viable," he reasons. "When we look at the cost of some of the alternative technologies at the moment, they are still hugely expensive. But it isn't just about electric vehicles and whether they're good or not (financially or otherwise); it's actually about delivering low-carbon electricity."

Tebbit knows the landscape is changing, but adds that the leap to battery power is a bit further away than many might think – or hope. As a result, increasing the amount and availability of HVO should be seriously under consideration. "There needs to be a bit more pragmatism and realism about the solutions we're talking about," he maintains. "Personally, I think electric vehicles are fantastic for certain applications. But, as a source of power, products such as HVO are better for big vehicles and plant equipment." Tebbit says people need to concentrate less on what's coming next and think more about what can be done in the short term. "The disadvantage of HVO, without a doubt, is that there is no refinery in the UK currently producing it. However, there is a more appealing argument for one if it is using, for example, UK waste and feedstocks in a UK-based refinery that produces products for the UK."

There are issues around future HVO production plant plans, reasons Tebbit – not least the vast sums of money required to build a brand new refinery as well as planning laws. "Public consultations around developments are fine, but they do slow things down," he recognises.

One company that could take the plunge – but it is unknown to what

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extent – is Essar, owner of the Stanlow refinery in Ellesmere Port in the north west of England. The company recently pledged £360m to build a 'carbon capture facility' at the site, to help meet its 2030 target of becoming a low carbon refinery. The plans include a 'significant' investment in biofuels as well as incremental improvements and transformational projects. The work at Stanlow is expected to begin at the beginning of 2024, with completion slated for 2027.

PLEDGED

At the same time, Essar has pledged its support – along with Tebbit's Green Biofuels – to DPD, helping its switch to HVO. The operator has stated its goal of moving the entire fleet to the biofuel by the end of 2023. "Essar is committed to playing a leading role in the decarbonisation of the UK economy and manufacturing the fuels of the future in a lower carbon way," says Carlos Rojas, head of marketing and logistics at Essar.

"As a key partner of choice, we have worked seamlessly to provide integrated energy, infrastructure and logistical solutions to DPD nationally for over ten years and are proud to be its strategic supply partner as it decarbonises its fleet."

With brand new sites seemingly ruled out, Tebbit suggests retrofitting refineries might be the way to go. He is realistic enough to admit that it wouldn't be easy, and that the only real options would be at the sites in Grangemouth (Petroineos), Stanlow and Fawley (Esso) and possibly some smaller refineries. "I also think there's still scope for modular HVO refineries, because it's quite a modular system," he adds. "That means we could see smaller regional refineries using UK waste for fuel."

The problem, as previously mentioned, is volume. "The waste from the UK on its own is probably only enough to produce around 500 million litres a year," calculates Tebbit. "That makes a difference, but the industry uses more than 30 billion litres a year – so it's only a drop in the ocean."

Whatever happens, Tebbit urges refineries and the wider industry to act as soon as possible. "It's not a good idea, in my opinion, to keep talking about what we're going to do in the future, but then do nothing about decarbonising now," he says. "The fact of the matter is that HVOs and non-renewable fuels are better than regular diesel, so anyone who replaces even a litre of it with something better should be applauded.

"I'm not a refinery expert, but I understand that somewhere like Stanlow could still keep capacity for refining fossil fuels and use some of the facilities at the existing refinery to produce HVO. It's probably about a billion dollars of capital expenditure to get a decent-sized bespoke refinery, but it's achievable and I think someone will make that move sooner or later."

Meanwhile, another consideration in the wider context of the transport sector and fuel use is energy security, believes Tebbit. "When you bear in mind that there's a lot of biodiesel produced in this country – and those feedstocks are very similar to those which you use in an HVO – we ought to be looking to produce the best quality products," he reasons. "I think that there ought to be an incentive – not necessarily financial – to encourage people to go down the route of advanced fuels. Traditional biodiesels might help on the carbon reduction, but not so much when it comes to improving air quality. If you've got a product such as HVO, which improves local air quality and reduces carbon, why wouldn't you adopt that?" TE