ViGo Decarbonisation – A special series in partnership with **ViGo Bioenergy**

THE ROAD AHEAD

DECARBONISATION: **THE CURRENT STATUS**

With the focus on fleet decarbonisation sharpening, we kick off a series of articles aimed at helping operators through the steps they need to take to ensure that their vehicles are fully prepared

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Commercial Motor If you run a fleet of diesel trucks, the clock is ticking: the UK government is ramping up pressure on transport companies to cut emissions and prepare for a future in which new diesel HGVs will be phased out by 2040. With new rules and reporting requirements coming into force, staying compliant is crucial for maintaining a strong position in the industry. That's why, in partnership with ViGo Bioenergy (ViGo), *Commercial Motor* is launching a special series to help you navigate the changing regulatory landscape, understand your fuel options, and keep your business ahead of the curve.

Why all the fuss about trucks and road freight?

As a response to the drastic increase in global temperatures, the UK has set targets to reduce carbon dioxide (CO_2) emissions by 78% by 2035 and get to net zero emissions by 2050. CO_2 is the primary driver of climate change.

Today, one third of the UK's carbon emissions comes from transport.

For decades, diesel trucks have been the workhorse of the UK's supply chain, but the focus on truck decarbonisation is not arbitrary. Diesel-powered internal combustion engines (ICE) are significant contributors to CO_2 emissions.

According to government data, domestic transport accounted for 29% of the UK's CO_2 emissions in 2023, with trucks and vans responsible for over 30% of these transport emissions. Cars are the biggest carbon emitters and the regulator has set in motion plans to reduce those emissions through the zero emission vehicle (ZEV) mandate. This being in place, commercial vehicles are now getting the regulator's attention. HGVs, in particular, present a large opportunity for impact: they account for 16% of transport emissions, yet represent only 1% of vehicles on the road. Therefore, decarbonising heavy trucks provides an effective lever with which to significantly lower overall transport emissions.

NEED TO KNOW

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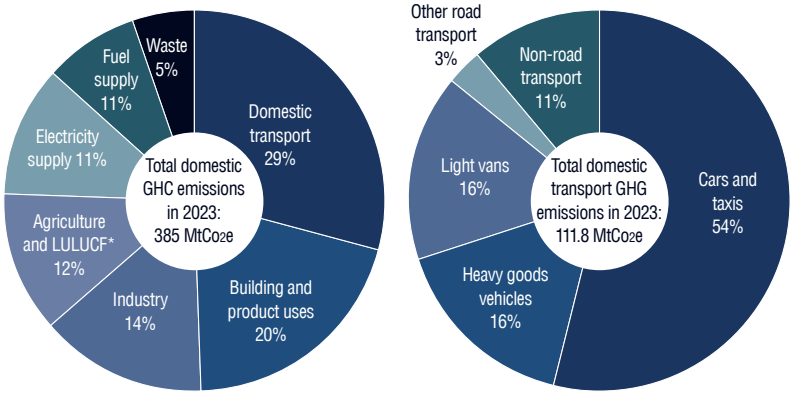
UK CARBON EMISSIONS



*Land use, land use change and forestry

Photo: ViGo Bioenergy

A clean break: Low-carbon fuel network provider ViGo is helping operators on the road to decarbonisation

What's happening with regulations?

Regulators in the UK and the European Union are enacting a number of regulations to curb carbon emissions. The UK government has already introduced new rules to reduce emissions from commercial vehicles and force all companies to formally report their carbon emissions.

For vehicles, the phase-out dates for new diesel and petrol HGVs are the main framework in play – no new vehicles below 26 tonnes can be sold after 2035, and this extends to all new HGVs by 2040.

When it comes to measuring and reporting emissions, the Greenhouse Gas (GHG) Protocol is the internationally recognised standard. It provides a framework for companies to categorise their carbon emissions into three groups: Scope 1 – direct emissions from sources you own or control, such as fuel burned in your trucks; Scope 2 – indirect emissions from purchased electricity, like charging electric vehicles; and Scope 3 – all other indirect emissions in your value chain, such as outsourced transport or emissions embedded in goods and services you buy.

LOW- AND ZERO-CARBON TRUCK TYPES

Pretty soon all companies, regardless of their activities, will need a working knowledge of their carbon emissions under these scopes, and will need to demonstrate how they are deploying plans to reduce those carbon emissions.

In the transport sector, logistics fleet operators will need to consider how and when to update their fleets, what alternative fuels or technologies to invest in, and how to keep up with reporting requirements. Tracking emissions and demonstrating efforts to reduce them is quickly becoming a standard part of doing business in the transport sector as shippers themselves are legally mandated to track the performance of their supply chains. Most importantly, these regulations mean it's time to start planning for a future without diesel trucks.

Four main diesel alternatives that are low/zero emission fuels are emerging as practical solutions for decarbonising HGVs:

- **Biomethane:** Produced from organic waste, biomethane is used in trucks with modified ICEs and offers substantial carbon savings, and long ranges. It typically sells at a discount to diesel.
- **Hydrotreated vegetable oil (HVO):** A renewable diesel alternative that can be used in existing diesel engines with no modification, making it an operationally easy switch for many fleets. HVO prices at a premium to diesel.
- **Battery electric vehicles (BEVs):** These trucks are powered by electric motors and batteries, delivering zero tailpipe emissions, best suited for short-range HGV routes or lighter vehicles.
- **Hydrogen:** Hydrogen fuel cell trucks generate electricity on board to power electric motors, enabling fast refuelling and medium-distance haulage, but this newer technology comes at a much higher price.

Each of these options comes with its own operational considerations, infrastructure needs, and benefits. In the next article in the series, we'll take a closer look at each of these alternatives – with a particular focus on biomethane (LNG and CNG) – and what they mean for the day-to-day realities of running a modern fleet. □

VIGO BIOENERGY AND THE CASE FOR BIOMETHANE

Low-carbon fuel network provider ViGo is ideally placed to help fleet owners and logistics companies with their decarbonisation transition.

Heavy road transport accounts for 4% of global emissions. Powered almost exclusively by fossil energy, these emissions continue to increase.

Biomethane offers fleet owners and logistics companies a compelling fleet decarbonisation option. It is cost-competitive, energy-dense and highly abating. It's the cheapest low-carbon fuel to put into a truck, based on total cost of ownership. Operational feedback indicates it outperforms all other alternative fuels with the energy density to provide range for long-distance haulage, or energy-intensive applications, while carbon saving certificates provide for the GHG protocol. Quick refuelling time and a secure and reliable supply of fuel are supported by a growing network of operational stations across the UK and elsewhere in Europe. This is complemented by the back-to-base model, where ViGo offers customers their own, depot-based infrastructure for their fleet.