LOGISTICS UK

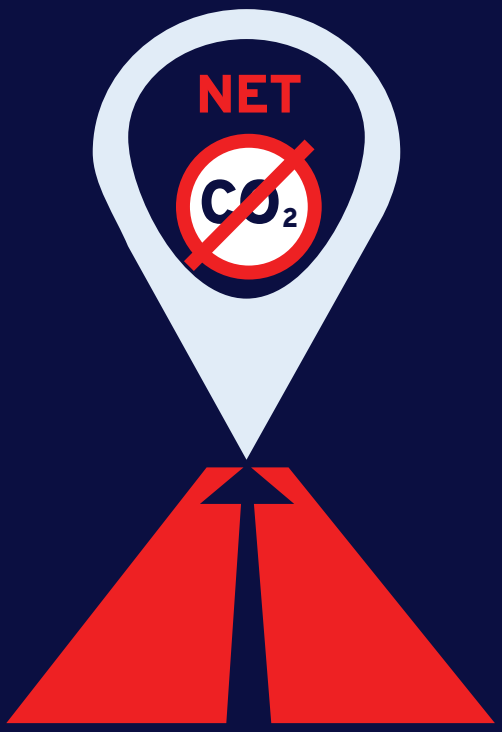
The route to Net Zero logistics

Produced by Logistics UK Policy

The logistics sector is essential to keep the goods we rely upon day in, day out moving across the UK. But the sector recognises the urgent need to tackle transport emissions, playing its role through investing in new technologies, lower carbon fuels and new business practices. In order to achieve 'Net Zero', we need the right supportive policy framework to help drive this transition.

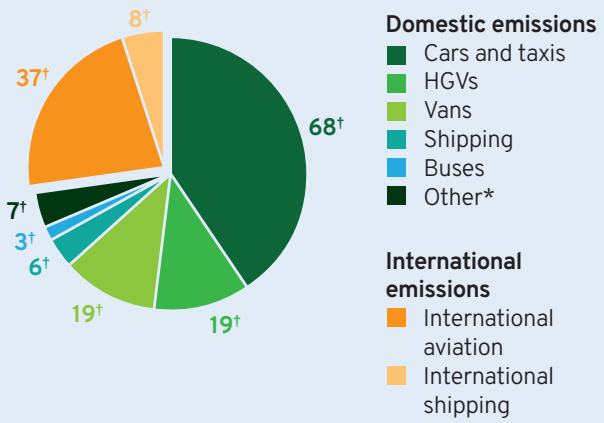
This document identifies the key priorities for achieving Net Zero greenhouse gas (GHG) emissions across logistics operations as quickly as possible:

- A routemap and plan from Government that provides confidence and clarity for the logistics industry.
- Certainty on commercially viable, zero tailpipe emission technologies for HGVs by the mid-2020s.
- Incentives to help overcome higher upfront purchase prices, until the market matures.
- Rapid development of recharging and refuelling infrastructure for all commercial vehicles.
- A fair and equitable approach to funding power upgrades for depots.
- A clear policy framework to support low carbon alternative fuels for HGVs that can reduce emissions today.
- Research and investment into a multimodal approach for logistics, helping support the movement of goods via rail, water and air.



The importance of decarbonising transport

Greenhouse gas emissions ($MtCO_2e$) by transport mode, 2019



†$MtCO_2e$

Comprises, in 2019: rail, 1.8 $MtCO_2e$; domestic aviation, 1.5 $MtCO_2e$; military vehicles, 2.3 $MtCO_2e$; motorcycles, mopeds and other road transport, 1.2 $MtCO_2e$

Source: Transport and Environment Statistics 2021 Annual Report, DfT, May 2021

Transport is now the UK's largest GHG emitting sector, following a decrease in energy emissions since 2016[1], and is responsible for 27% of GHG emissions[2]. Emissions from transport fell by 1.8% in 2019, the second consecutive fall following emissions rising since 2013[2]. However, whilst improvements in vehicle fuel efficiency have led to lower emissions, these have largely been offset by increased road traffic, with reductions that are only 4.6% lower than in 1990[2].

Road vehicles produce the most GHG emissions across the transport sector, with cars and taxis emitting 61% of road transport emissions in 2019, compared with 18% from HGVs and 17% from vans[3].

Through the Climate Change Act, the UK has a legally binding target to reach Net Zero by 2050. On the pathway to Net Zero, the Climate Change Act sets out five-year Carbon Budgets that must be achieved. In April 2021, the UK Government accepted the Climate Change Committee's recommendation to set the Sixth Carbon Budget at a 78% reduction by 2035[4].

The role of logistics

The logistics industry fully recognises the part it must play in lowering GHG emissions both today and in the coming decades. Logistics UK members are already making changes, such as investing in lower carbon fuels and technologies, or through improving efficiency of fleet operations to lower fuel consumption. But to fully achieve Net Zero, we need the right technologies and vehicles that are commercially viable, with the right supporting infrastructure.

The Logistics UK Industry Survey 2020/21 asked respondents what they viewed as their top three priorities for Government from a range of policy actions, with "providing incentives for alternative fuels and carbon reduction" ranking as the second highest. This highlights what an important issue this is for the industry. However, the results of our May 2021 Logistics Performance Tracker survey show that just under 70% of respondents were dissatisfied or very dissatisfied with the availability of electric HGVs, and 37% for vans. Overall, 70% of respondents were either dissatisfied or very dissatisfied with the availability of supportive infrastructure for alternatively fuelled vehicles[5].

Logistics by transport mode

Road

Heavy Goods Vehicles (HGVs)

Percentage of Euro V/5 and Euro VI/6 vehicles

Euro V/5	25.1%	29.7%
Euro VI/6	49.2%	49.4%

Source: Logistics UK Industry Survey 2020/21, Logistics UK, 2021

The majority of goods in the UK are moved by HGVs. The most recent data show the amount of goods lifted by HGVs increased

1 Decarbonising Transport: Setting the Challenge, Department for Transport, 2020. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932122/decarbonising-transport-setting-the-challenge.pdf

2 2019 UK Greenhouse Gas Emissions, Department for Business, Energy and Industrial Strategy, 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957887/2019_Final_greenhouse_gas_emissions_statistical_release.pdf

3 2019 is the most recent published data. Emissions data from March 2020 will be less reliable as a benchmark due to the impact of the COVID-19 pandemic

4 UK enshrines new target in law to slash emissions by 78% by 2035, GOV.UK, 2021. https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035

5 Logistics Performance Tracker 11, Logistics UK, May 2021

Are you currently satisfied with the availability of alternatively fuelled vehicles?

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
Electric HGVs	36.0%	33.3%	29.3%	1.3%	0.0%
Electric vans	13.7%	23.3%	52.1%	9.6%	1.4%
Natural gas HGVs	20.3%	28.4%	45.9%	5.4%	0.0%
Biofuel HGVs	18.7%	24.0%	48.0%	6.7%	2.7%
Hydrogen fuel cell HGVs	25.7%	25.7%	47.3%	1.4%	0.0%

Source: Logistics Performance Tracker Q2 2021, Logistics UK, June 2021

by 2.4% to 1.4 billion tonnes, when compared to 2018 (year to July). HGVs travelled 1% more vehicle kilometres increasing to 19.1 billion vehicle kilometres[6]. With most HGVs still running on diesel, fleet renewal can help ensure the most efficient vehicles are on the roads. It is therefore positive that 49.2% of the UK's HGV fleet is now Euro VI[7].

Currently no commercially viable solution for zero tailpipe emission HGVs exists and there is significant uncertainty over which fuels will be the most appropriate, with differing views around hydrogen, electrification and electric road systems. This is creating significant confusion amongst our members about what technologies they should invest in and when.

Government intervention is therefore required to bring forward the market introduction of cleaner, low-carbon HGVs. Government data shows only 16 ultra-low emission HGVs were registered in 2020, bringing into sharp focus the scale of the challenge[8].

To help provide the clarity operators desperately need on technology choice, Logistics UK supports the Government's Zero Emission Freight Trials that have commenced. We urge Government to use the findings of these trials to provide certainty on what technologies will be most viable for use in the UK by the mid-2020s, at the latest. The phase-out date for new diesel HGVs should be realistic and achievable, while being environmentally ambitious.

Even when zero tailpipe emission HGVs are widely available, cost and supporting infrastructure will be significant barriers to overcome. For those electric trucks that will be coming to market in the short term, initial acquisition costs are expected to be significantly higher than the cost of their diesel equivalent, and we urge Government to continue to provide substantial purchase grants to offset these costs. However, without widespread charging infrastructure in place, moving to electric is still not a viable solution.

Light Commercial Vehicles (vans)

The frequency with which commercial vans are replaced depends largely on the type of business and operation, with five-year replacement cycles on average for delivery and collection vehicles. For utilities and servicing, this can be up to seven or more years, especially if carrying heavy or specialist plant and equipment. Small businesses are more likely to opt for second-hand vehicles, many of them keeping these vehicles for significantly longer. The second-hand market for electric vehicles is not yet mature and so limited supply of second-hand vehicles will disproportionately impact smaller operators.

At the end of 2020, the Government published its 'Ten Point Plan for a Green Industrial Revolution', which confirmed 2030 as the phase-out date for new petrol and diesel cars and vans and 2035 for hybrids. This will mean that, from 2035, all new cars and vans, will be fully zero emission at the tailpipe. Second-hand vehicles can continue to be driven and sold, and conventional and hybrid vehicles and components can continue to be produced for export. A delivery plan is expected to be published later this year and a review of progress towards the phase-out dates is expected by 2025.

With manufacturers and operators requiring clarity as to what technologies are likely to make this transition feasible in the given timeframe, many are turning to electric. Almost all major commercial vehicle manufacturers have at least one electric van model on the market, though there are still very few options for larger vans, with current trials still proving insufficient for industry's needs.

Logistics UK's 2019 'Electric Vehicle Report'[9] identified recharging infrastructure, grid capacity, vehicle availability, cost, mileage range and heavier vehicle model range as the biggest barriers to greater uptake. We support Government policies to encourage uptake of electric vans, which include upfront purchase grants, zero VED ratings and congestion charge exemptions, but more must be done to address the commercial and technical barriers to recharging infrastructure.

Infrastructure

The Government must commit to ensuring public refuelling and chargepoint infrastructure can be rapidly developed, installed and is accessible for use by commercial vehicles, with the strategic road network a priority. There must be a clear plan set out by Government to ensure this is in place to allow a seamless transition to zero tailpipe emission technologies.

Depot charging will be essential, especially for van operators, so a fair and equitable approach to funding power upgrades is needed if this technology is to be adopted. On-street public chargepoints must be of adequate size and usage permitted by drivers of commercial vehicles including in residential areas.

Alternative fuels

During the transition to zero tailpipe emission vehicles, there should be a policy framework for alternative fuels that deliver environmental benefits but that are fit for purpose in the road freight sector today. These include options such as biomethane and Hydrotreated Vegetable Oils (HVO), which can be used in current diesel or gas vehicles and can drastically reduce emissions immediately. Information to support investment decisions, vehicle technology choices, skills development and training for new fuel technologies must be available to the

6 Domestic Road Freight Statistics, United Kingdom 2019, DfT, July 2020

7 Logistics UK analysis based on Vehicle Licensing Statistics, Table VEH0511, DfT, April 2020

8 VEH0170: Ultra low emission vehicles registered for the first time: United Kingdom. https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035

9 Electric Vehicle Report, Logistics UK, 2019. https://www.logistics.org.uk/evreport

New ULEV registrations		2019	2020	Annual percentage increase (2020)	Proportion of all new registrations (2020)
	**Cars**	72,853	171,068	135	10.3
	**Light good vehicles (LGVs)**	3,625	6,208	71	2.1
	**Heavy goods vehicles (HGVs)**	19	16	-16	–
	**Buses and coaches**	121	317	162	6.1

Source: Vehicle Licensing Statistics: Annual 2020, DfT, May 2021

logistics industry. Fleet advice and commercial vehicle finder tools, like the one developed by LoCITY and Cenex[10], should be supported and promoted.

Incentives

The higher cost of lower and zero tailpipe emission technologies is a significant barrier, so Government incentives to help drive the early market is needed. The plug-in grant is therefore an important incentive to maintain, especially for HGVs, and there must be clear timelines about grant availability and eligibility to assist with business planning. There are currently only three large vans and trucks that qualify for Department for Transport grant funding, compared to 18 vans[11]. Government must work with industry to decide how to increase the number of trucks that qualify for a grant, as well as additional incentives such as congestion charge discounts and the ability to use bus priority lanes.

Payload

A measure that can be taken now is allowing HGVs to have bigger payloads, as they require fewer journeys, meaning fewer road miles, less fuel and less emissions. More load-efficient weights and dimensions should be trialled, and Longer Semi-Trailers that have already been extensively trialled by Government should become legal to operate in the UK.

Fuel efficiency

Many Logistics UK members are market leaders, using measures which include: driver training and incentives to boost eco-driving; the use of aerodynamic devices to reduce fuel burn; and maximising load utilisation to increase fuel efficiency. Government should support industry by simplifying the provision of advice and introduce incentives for companies to adopt best-practice innovations in this space.

The importance of a multimodal approach

Modal shift is vital for decarbonising logistics. While road movements will always be required, modal shift can play an important role when considering net zero targets.

Air

Air freight currently accounts for 40% of UK imports and exports by value and is vital for the UK economy. Air freight will always be needed for time-sensitive express deliveries for higher-value products such as car parts and pharmaceuticals.

Airlines are continuously upgrading their fleets. New planes are much more fuel-efficient and have quieter engines. The use of biofuels or jet fuel created from energy from waste is on the increase and ground operations are moving quickly towards becoming carbon neutral. The industry is constantly addressing environmental concerns and using innovative solutions to decrease waiting times for planes through digital platforms, making operations more efficient. That said, more support for research and development in air cargo is vital. Air emissions at a global level are governed through the UN agency for aviation, the International Civil Aviation Organization (ICAO), which has developed the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) to achieve its aim of carbon neutral growth.

Rail

Rail freight contributes to the UK economy in a safe, efficient and environmentally friendly way. Alleviating congestion on our roads, rail takes 2.9 million lorry journeys off the road each year, an average of 8,000 per day[12]. One freight train can take up to 76 HGVs worth of goods off the road, reducing emissions and congestion and improving air quality across the UK. One freight train can transport enough materials to build 30 houses, making more efficient development possible. Electrification of the rail network is ongoing and additional research is going into alternative technologies for heavy freight trains, such as hydrogen. Access to the rail network is important for the rail freight industry as it will enable more deliveries to take place by rail and improve efficiency overall.

Water

Ninety per cent of goods coming into the UK arrive by sea and 15% of domestic freight is moved by water. A commercial water vessel can carry up to 1,500 tonnes of goods – 75 HGVs worth. Port connectivity is key when considering decarbonisation. The International Maritime Organization (IMO) (the UN agency for maritime) has adopted mandatory measures to reduce emissions of greenhouse gases from international shipping, under IMO's pollution prevention treaty (MARPOL); these are the Energy Efficiency Design Index (EEDI) which is mandatory for new ships, and the Ship Energy Efficiency Management Plan (SEEMP). With excellent maritime facilities nationwide, ensuring ports and wharves have good road and rail connections can support environmental goals and regional development. With more effective Government support to promote modal shift, and policy frameworks that protect and expand our inland waterway freight infrastructure, these water-based modes could grow even further and reduce pressure on our congested roads, working towards decarbonising the logistics sector.

10 https://fleetadvicetool.cenex.co.uk

11 https://www.gov.uk/plug-in-car-van-grants

12 The role and value of rail freight in the UK, Rail Delivery Group, April 2021

T: 01892 526171* F: 01892 534989 www.logistics.org.uk

Logistics UK is a trading name of Freight Transport Association Limited
Registered office: Hermes House, St John's Road, Tunbridge Wells, Kent TN4 9UZ
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