

THE ROAD AHEAD: DELIVERING A MORE RAPID ZERO-EMISSION HGV TRANSITION





WHO WE ARE

The Society of Motor Manufacturers and Traders (SMMT) is one of the largest and most influential trade associations in the UK. It supports the interests of the UK automotive industry at home and abroad, promoting the industry to government, stakeholders and the media.

The automotive industry is a vital part of the UK economy and integral to supporting the delivery of the agendas for levelling up, net zero, advancing global Britain, and the plan for growth. Automotive-related manufacturing contributes £78 billion turnover and £16 billion value added to the UK economy, and typically invest around £3 billion each year in Research and Development (R®D). With more than 208,000 people employed in automotive manufacturing and some 800,000 in total across the wider automotive industry, we account for 10% of total UK goods exports, generating £94billion of trade.

More than 25 manufacturers build over 70 models of vehicles in the UK, plus an array of specialist small volume manufacturers, supported by some 2,500 supply chain businesses and some of the world's most skilled engineers. Many of these jobs are outside London and the Southeast, with wages that are around 14% higher than the UK average. The automotive sector also supports jobs in other key sectors – including steel, chemicals, plastics and rubber, as well as more broadly in advertising, finance and logistics.



SUMMARY & RECOMMENDATIONS

This paper provides an overview of the current market for zero emission HGVs and is a call to action to realise the opportunities for operators to decarbonise their fleet using vehicles available to purchase in the UK today.

European manufacturers have agreed that all new HGVs must be fossil fuel free by 2040.¹ Likewise, the UK automotive sector is committed to decarbonisation of its products. In 2023, 16.5% and 6% of new car and van registrations, respectively, were zero emission. For buses, 45% of all new registrations were zero emission. However, zero emission HGVs are lagging behind with just 0.5% of HGV registrations in 2023.

Today, 27 battery electric HGVs are already available to purchase in the UK, with a wider range of battery electric and fuel cell electric options in development and expected to be available within the next few years. In this context, urgent action is needed to ensure operators have the confidence to plan their future fleet purchases and empower the identification and uptake of zero emission HGVs that are suitable for their specific needs. Incentives, infrastructure investment, planning, and access to energy will all be critical enablers for an emerging zero emission HGV market.

In the UK, zero emission capability is possible where the use case allows, provided there is sufficient support for operators and a robust infrastructure network. The cost of purchasing a zero emission HGV is considerably more than diesel. The further cost of installing infrastructure is an additional up-front hurdle faced by many operators seeking to subsequently take advantage of lower operating costs.

Beyond cost factors, the main obstacles reported by operators relate to grid connection challenges and the absence of public charging infrastructure, whether this is for battery electric charging or hydrogen refuelling. They also express a preference for charging at destinations rather than at public locations, unless these are dedicated for use by hauliers.

As with other zero emission vehicles, drivers have reported an enhanced driving experience, which improves overall driver welfare. Lower noise and vibration have positive effects, helping operators to maintain safe working practices. The transition to zero emission HGVs is, therefore, not only critical for improving the natural environment, it also improves driver experience.

¹<u>https://www.acea.auto/press-release/all-new-trucks-sold-must-be-fossil-free-by-2040-agree-truck-makers-and-climate-researchers/</u>



SMMT has identified a number of required interventions to further support the acceleration of the zero emission HGV market:

- 1. **Government should increase investment in Project Rapid**. This fund should be expanded to provide dedicated HGV, bus and coach charging infrastructure along the strategic road network and at motorway service areas.
- 2. Government should, as a matter of urgency, bring forward its promised national charging and hydrogen refuelling infrastructure strategy for HGVs, covering both depots and public locations. The strategy should include details on how operators will be supported with energy connections and a plan for shared charging and refuelling infrastructure, including detail about how low carbon fuels will be included in the transition. Government should set binding targets for charging and refuelling infrastructure dedicated to HGVs and commit to these in the forthcoming infrastructure strategy.
- 3. Government should carry out a review of funding and financing for HGVs and infrastructure to support operators with decarbonisation of their fleets. The mechanism for allocating funding should be efficient for both manufacturers (to register vehicles) and operators (to purchase vehicles).
- 4. Government should provide a supportive regulatory framework, in consultation with industry, which can rapidly develop the nascent zero emission HGV market in the UK. Such a framework should provide support and confidence to manufacturers, and empower operators to develop and bring forward plans to decarbonise their fleets.
- 5. Government should support the development of local and regional freight strategies that take a holistic approach to the decarbonisation of the freight sector, ensuring efficient logistics. These strategies should be linked to Government funding and maximise opportunities for first and last mile zero emission logistics and support for new vehicle technologies.
- Government should act to support consistent implementation of local planning policy to ensure smooth and efficient processes for installing infrastructure. This could be considered as part of guidance provided within the National Planning Policy Framework.



THE CURRENT HGV MARKET

Road transport contributed 26% of the UK's greenhouse gas (GHG) emissions in 2021, representing a 15% decrease since 1990.² HGVs, while only making up 6% of annual vehicle miles in 2021, created 21% of the total transport emissions. This is mainly because HGVs typically travel longer distances with greater loads. Accelerating decarbonisation of HGVs is therefore essential if the UK is to meet its ambitions for carbon reduction.



Figure 1: Territorial UK greenhouse gas emissions by NC sector, 1990-2021 (MtCO2e)

Source: Table 1.2, Final UK greenhouse gas emissions national statistics 1990-2021 Excel data tables

The HGV parc in 2023 consisted of 625,873 vehicles, ranging in size from 3.5 tonnes to 44 tonnes and up to 150 tonnes for vehicles authorised for use under Special Types General Orders (STGO).²³ STGO vehicles are those that do not meet the Road Vehicle (Construction and Use) Regulations but are authorised under the Road Vehicles (Authorisation of Special Types) (General) Order 2003. 99% of these are diesel fuelled. The remaining 1% are using alternative fuels, with only 0.19% being full battery electric vehicles.





NURTURING THE NASCENT ZERO EMISSION MARKET

The range of operations and functions provided by HGVs do not allow for a simple approach to decarbonisation. HGVs used in construction, agriculture and other industries often require significant power to carry out their designated function, in addition to their driving range. Gaining access to power in remote locations and potentially inhospitable conditions poses additional challenges.

However, within the diverse HGV sector, there are a variety of use cases where greater progress can be made more quickly. Today, there is ample opportunity to use zero emission vehicles in urban and regional freight activities, and also within a variety of low range services such as refuse collection and other municipal uses. With adequate supporting infrastructure and access to energy there also exists great potential for zero emission operations within rural and farming communities.

In its Transport Decarbonisation Plan (TDP), UK Government committed to the phase out of all new non-zero emission vehicles by 2040.³ It later announced the end of sale date for all new non-zero emission HGVs up to 26 tonnes in 2035 and over 26 tonnes in in 2040^{.4}

³<u>https://www.gov.uk/government/publications/transport-decarbonisation-plan</u>

⁴ <u>https://www.gov.uk/government/consultations/heavy-goods-vehicles-ending-the-sale-of-new-non-zero-</u> emission-models/outcome/outcome-and-response-to-the-consultation-on-when-to-phase-out-the-sale-ofnew-non-zero-emission-hgvs



While the 2035 end-of-sale date for cars and vans has been well-established, UK Government's ambition to end the sale of a large proportion of new, non-zero emission HGVs within the same timescale remains a huge challenge. The diversity of HGV use-cases and technologies means that existing regulations intended to increase the numbers of zero emission cars and vans cannot simply be extended to these heavier vehicles. HGVs present their own unique regulatory, infrastructure and technology challenges, which must be carefully examined and understood in conjunction with the design of appropriate and targeted incentivisation and support mechanisms.

Government should provide a supportive regulatory framework, in consultation with industry, which can rapidly develop the nascent zero emission HGV market in the UK. Such a framework should provide support and confidence to manufacturers, and empower operators to develop and bring forward plans to decarbonise their fleets.

The current market for zero emission HGVs stands at just 0.5%, which equates to only 234 vehicles registered in 2023⁻⁵ This takes the total number of zero emission HGVs (4.25t and over) in the UK fleet to 327, compared with a 16.5% market share for cars which equates to over 1 million zero emission cars on the road already.⁶ With 73% of new HGV registrations being under 26 tonnes, actions to accelerate the uptake of zero emission HGVs must be taken to provide operators with the assurance and confidence they need to commit to decarbonising their fleet.⁷



Figure 3: HGV registrations 2023

⁶ https://www.smmt.co.uk/2024/02/uk-reaches-million-ev-milestone-as-new-car-market-grows/

⁵<u>https://www.smmt.co.uk/2024/02/demand-for-new-trucks-grows-for-second-year-running-as-more-businesses-go-green/</u>

⁷ https://www.smmt.co.uk/vehicle-data/heavy-goods-vehicle-registrations/



The TDP makes reference to a shift to zero carbon modes of transporting goods and services, including greater use of rail and domestic maritime to make our freight system net zero by 2050. In delivering the TDP, Government should consider the cost of modal shift as well as any unintended consequences from increased rail and maritime activity, such as noise and other pollutants. Government should also acknowledge the ongoing requirement for first and last mile deliveries to take place by road, ensuring an end-to-end service.

There is only one dedicated public charging location for HGVs in the UK.⁸ Therefore, all zero emission HGVs in operation today are solely reliant on back to base charging. Many of these vehicles have been purchased by local authorities for refuse collection due to the relatively short range and consistency of duty cycle associated with these services. Urban and some regional freight distribution operations can also operate with zero emissions. Again reliant on back to base charging and low power requirements. These operations are likely to fall into the under 26 tonnes category.

Emerging policies and actions for decarbonisation of HGVs are solely focused on freight. Many vehicles, under 26 tonnes are used for servicing, often requiring a significant amount of energy to carry out the function for which they were designed. Whilst there are some vehicles coming to market in the service sector, this sector still requires development.⁹ Further research is required to understand the power requirements for HGVs used for servicing and carrying out specific functions.

SUPPORTING EARLY ADOPTERS OF NET ZERO HGVS

The current UK market for zero emission HGVs offers vehicles up to 44 tonnes that are able to travel over 400km (249 miles) and smaller HGVs that can travel up to 500km (311 miles). This is ample range for most urban and regional freight services. Last mile deliveries are ideal for zero emission operation and have the added benefit of ensuring reduced nitrogen dioxide emissions in areas where there is significant public exposure.

A study by Element Energy conducted on behalf of Transport and Environment states that between 65% and 75% of the rigid HGV fleet can be electrified using depot charging only with models already available to purchase today.¹⁰ There are 327 zero emission HGVs in operation in the UK proving the point that zero emission in the heavy vehicle sector is indeed possible. For more operators to have the confidence to purchase these vehicles they must have the enablers in place to maintain their business without disruption.

⁸<u>https://www.zap-map.com/charge-</u>

points/bolton/MSUF08R#:~:text=M61%20Rivington%20%2D%20Southbound%20HGV%20charging,available%20 at%20this%20charging%20location.

^a<u>https://www.renault-trucks.co.uk/press-release/uks-first-all-electric-mixer-demonstrates-pathway-to-low-carbon-logistics</u>

¹⁰ https://www.transportenvironment.org/discover/e-trucks-its-time-for-the-uk-to-make-the-switch/



There have been a number of trials using zero emission HGVs which have proven the technology to be reliable. Scottish Forestry are working in partnership with a number of timber hauliers and Volvo Trucks to explore range, charging times, performance and total cost of ownership.¹¹

CASE STUDY: CREEL MARITIME - RURAL HAULAGE

Timber haulage in the UK is responsible for 111 tonnes of CO2 per annum. The timber haulage sector is actively seeking to reduce emissions from its operations and recognises that transport plays a significant role in the ability to decarbonise the sector. With the project managed by Creel Maritime Ltd, Scottish Forestry have commenced a three year trial of using zero emission HGVs for timber haulage.



Operated by Scotlog in Inverness, a 44t HGV is being used to transport roundwood timber from the port and in Lockerbie, sawmiller James Jones is using a 40t HGV to transport sawn timber from mill to finishing facilities. Since the start of the project six months ago ,the vehicles have travelled 20,788 miles transporting around 44,000 tonnes of timber. This has saved eight tonnes of CO2 in just 6 months.

Drivers have reported a love for the vehicles. The low noise and vibration have a positive effect on their working environment, additionally the maneuverability is much smoother.

Using a zero emission HGV in rural Scotland is proving the point that decarbonisation of the HGV sector is possible, even in challenging conditions.





Cost remains the biggest barrier to HGV fleet decarbonisation, not only the cost of purchasing the vehicles themselves but also the additional costs of installing charging infrastructure at depots. Infrastructure costs can be millions of pounds, depending on the complexity of the installation and requirement to upgrade to the local grid.

The Plug-in Truck Grant (PiTG) is available to support the purchase of zero emission HGVs with up to £25,000 available for vehicles over 12 tonnes.¹² This grant has been available for 8 years. However, the administration of the grant is cumbersome and burdensome for both vehicle manufacturers to register eligible vehicles and for operators to access the grant.

Most zero emission HGVs available for purchase qualify for the PiTG. However, the process for verifying eligibility and registering new vehicles on to the system can take almost two years. For this reason, many manufacturers have placed vehicles on the market ahead of gaining grant approval. Creating a more efficient process for accessing the funding would support operators with their purchase plans and accelerate zero emission HGV adoption.

The bus sector has shown great success with the implementation of zero emission technology and has been supported through funding schemes that consider the bus services provided by local authorities before approving funding plans. A similar approach could be taken to support the uptake of zero emission HGVs.

Government should support the development of local and regional freight strategies that take a holistic approach to the decarbonisation of the freight sector, ensuring efficient logistics. These strategies should be linked to government funding and maximise opportunities for first and last mile zero emission logistics and support for new vehicle technologies.

The government has recently launched the Zero Emission Heavy Duty Vehicle and Infrastructure Demonstrator (ZEHID).¹³ This is a £200m funding scheme which supports a number of consortia to demonstrate how battery electric and hydrogen fuel cell HGVs can replace the current diesel fleet. The projects will see 310 battery electric and 60 fuel cell electric trucks rolled out alongside 50 public chargepoints and one hydrogen refuelling station by 2025.

The ZEHID programme will fund some public charging infrastructure, however, in contrast with all other vehicle types, there has never before been any specific funding scheme available for charging infrastructure for HGVs either for public or private use.

https://www.find-government-grants.service.gov.uk/grants/plug-in-van-and-truck-grant-1
https://www.gov.uk/government/publications/zero-emission-heavy-goods-vehicles-and-infrastructure-competition-winners/zero-emission-heavy-goods-vehicles-and-infrastructure-competition-winners



Cars and Vans	Home charging scheme On street residential charging scheme. Workplace charging scheme LEVI
Taxis	Dedicated taxi charging (local)
Buses	ULEB, Green Bus fund, ZEB fund, ZEBRA
HGV	No infrastructure funding

Government should carry out a review of funding for HGVs and infrastructure to support operators with decarbonisation of their fleets. The mechanism for allocating funding should be efficient for both manufacturers (to register vehicles) and operators (to purchase vehicles).

INFRASTRUCTURE CHALLENGES AND OPPORTUNITIES

HGV operators face far more challenging obstacles to decarbonise their fleets when compared with car and small van operators. In 2023 SMMT published its position paper on charging and refuelling requirements for HGVs, which outlined the barriers to decarbonisation due to the lack of infrastructure available, and made recommendations for how these could be overcome.¹⁴ Since publication there is now only one location dedicated to HGV charging infrastructure in the UK.¹⁵

Figure 4:SMMT HGV charging and refuelling recommendations for HGVs



¹⁴ <u>https://www.smmt.co.uk/2023/04/zero-emission-hgv-market-shackled-by-absence-of-infrastructure-and-lack-of-plan/</u>

¹⁵ <u>https://www.zap-map.com/charge-points/bolton/MSUF08R</u>



Operating an HGV requires a license that carries specific obligations beyond those associated with private drivers or those operating car and small van fleets.¹⁶ This license imposes restrictions on where the vehicle must be parked when not in use, limiting charging and refuelling options. For operators, this exacerbates the more general challenge of accessing the necessary energy required for charging at depots.

CASE STUDY: HACKNEY COUNCIL – DEPOT CHARGING

Hackney Council has been operating electric cars and vans for over 20 years, installing depot based charging infrastructure across 13 sites and a few at drivers' homes approximately seven years ago, but



experienced many challenges in that time. Being early adopters, there are many lessons they had to learn for themselves without the advantage of others' experiences.

During that time frame they have commissioned four different chargepoint operators to provide the required infrastructure. Initially the service was very good but when the first operator was bought out by another company, repair and maintenance of the legacy company's equipment was not supported and due to technology development the equipment became obsolete very quickly. Furthermore, the data derived from the software did not provide sufficient fleet management information to understand the whole cost of charging or driver and vehicle operating dynamics.

Future plans include adding zero emission HGVs and buses to the fleet but the council is aware it does not have sufficient energy at the depots. Furthermore, to accommodate charging infrastructure at the depots they will have to displace some of their vehicles to other locations.

The work Hackney Council have done so far to decarbonise its fleet has led to an understanding of the limitations of early infrastructure solutions. In future it would consider leasing rather than buying the equipment so the necessary upgrades and ongoing safety obligations transfer at a lesser cost.



¹⁶ <u>https://www.gov.uk/being-a-goods-vehicle-operator</u>



To ensure an efficient use of the energy system, a mechanism for shared charging facilities will be necessary. This is already taking place in some locations, mainly at bus depots where charging facilities are available to use by others with agreement.¹⁷ For shared charging to be effective in the long term, some level of behavioural change will be necessary. To date, operators have had access to an abundance of diesel fuel and do not need to consider refuelling anywhere other than their own depots and fuel bunkers, or at public locations. However, using power at a host site will require security and assurance measures to be in place.

Government should, as a matter of urgency, bring forward its promised national charging infrastructure strategy for HGVs, covering both depots and public locations. The strategy should include details on how operators will be supported with energy connections, a plan for shared charging and refuelling infrastructure and detail how low carbon fuels will be included in the transition. Government should set binding targets for charging and refuelling infrastructure strategy.

Currently, there are considerable barriers to installing charging infrastructure at depots. In many cases the depot may not be owned by the operator and installations require landlord permission. The cost of upgrading the local grid to provide sufficient power for vehicle charging is often a prohibitive factor. The current challenges should not be underestimated and government should act quickly to resolve these if net zero targets are to be met. To overcome these barriers, further regulatory support is required.

¹⁷ https://www.sustainable-bus.com/infrastructure/first-bus-openreach-deal-charging-infrastructure-uk/



CASE STUDY: EVATA – SHARED CHARGING

Evata provides digital infrastructure that allows operators to share their charging facilities. The initial concept started life as a data automation product to build the business case for fleets seeking to transition their fleet from diesel to electric. After assessing more than 3,000 vehicles and discussing with fleet managers, it became clear that there was no simple charging solution for heavier and harder to decarbonise commercial vehicles.

An over-reliance on the public charging network led to loss of operational time, and the high cost of public charging hindered adoption.



Dubbed the "Airbnb of charging", Evata's sharing platform allows fleet operators to create partnerships with each other, enabling access to charging infrastructure at scale, whilst ensuring the user adheres to the host site's access policies.

The platform allows pre-booking of sessions, facilitating charging at opportunity locations along the route all whilst costing 30% less than the public network. This eliminates downtime and provides the security of having a working charger available when it's needed at a price that's affordable.





Charging for HGVs needs to consider the space requirements for manoeuvrability of longer and heavier vehicles. Most depots have a reverse-in policy, so the location of the chargepoint needs to be in place to ensure safety within the site. The design of charging for HGVs cannot be the same as for cars and vans.

Government should act to support consistent implementation of local planning policy to ensure smooth and efficient processes for installing infrastructure. This could be considered as part of guidance provided within the National Planning Policy Framework.

While the 27 zero emission HGV models currently on the market are all battery electric, there are fuel cell electric HGVs in development and expected to be available in the next few years. Therefore, there is an essential need to build refuelling infrastructure ahead of time.

Government should commit more funding towards, and speed up, the commencement of multiple hydrogen transport hubs across the UK. It should map out a foundation network of national hydrogen refuelling infrastructure and develop a rollout strategy, taking into account transmission requirements and options. Alongside this, the national planning process for the hydrogen refuelling station network must be improved and streamlined.

A RURAL PERSPECTIVE

Data from the Traffic Commissioner shows almost half of the operators in the UK have only one or two vehicles.¹⁸ Many of these are operated in rural areas that face significant challenges related to charging, refuelling and access to energy. There is already a lack of public chargers available for cars in these areas and the additional space and power demands of HGVs is unlikely to be resolved easily or quickly.¹⁹

There are opportunities for the creation of renewable energy in farming communities but greater support is needed. The National Farmers Union (NFU) have outlined its requirements for supporting renewable energy generation which will aid decarbonisation of their operations as well as provide energy for vehicles that are ideally placed for zero emission operation.²⁰

Farming communities are vital to the UK economy and for ensuring food security. However, their operations come with intense energy requirements. As with other freight operations, services such as those collecting and delivering milk often run with very little dwell time, covering routes of approximately 240km (150 miles) according to the NFU. These operations will require high power charging at their destinations to successfully decarbonise

¹⁸ <u>https://www.data.gov.uk/dataset/2a67d1ee-8f1b-43a3-8bc6-e8772d162a3c/traffic-commissioners-goods-and-public-service-vehicle-operator-licence-records</u>

¹⁹ New data reveals that there is just one electric vehicle charger for every ten miles in England's county and rural areas - County Councils Network

²⁰ https://www.nfuonline.com/media/ig2plmac/renewable-energy.pdf



their fleets. This is possible but requires secure grid connections to provide sufficient power. Supporting the generation of renewable energy will ensure clean energy is available locally for use in transport as well as farming operations.

STRATEGIC PLANNING

For all operators, including those in rural communities, planning and development policies are crucial to the smooth and cost effective implementation of charging infrastructure. The National Planning Policy Framework (NPPF) makes light reference to provision for zero emission vehicles.²¹ Local policies for electric vehicle charging vary across the country with only 14% of local authorities having a charging strategy.²² To date, charging strategies have focused predominantly on cars and small vans.

In 2020, the government announced a £950m fund for charging infrastructure at motorway service areas and the strategic road network for cars and vans.²³ In December 2023, the Rapid Charging Fund (RCF) scheme design consultation was announced and a pilot scheme launched, which includes HGVs. The consultation asked if heavy duty vehicles should be included within the scheme. Failure to include HGVs within the rapid charging scheme would result in further delays to zero emission HGV uptake and considerably greater cost if infrastructure has to be installed retrospectively.

Government should increase investment in Project Rapid. This fund should be expanded to provide dedicated HGV, bus and coach charging infrastructure along the strategic road network and at motorway service areas.

SMMT recognises government's commitment to decarbonise the freight sector and are pleased to be a member of the Freight Energy Forum.²⁴ This partnership between industry and government can create the necessary framework to ensure the whole freight sector, including rail, maritime and aviation, can decarbonise in a collaborative way.

We expect the government's Freight Energy Forum to deliver a long term infrastructure strategy to meet the commitment by the UK government to phase out the sale of new non-zero emission HGVs by 2035/40, in partnership with the automotive and logistics industries and other policy stakeholders. This should ensure UK-wide consistent policies at both local and national level.

In October 2023, the government launched a call for evidence on infrastructure for zero emission heavy goods vehicle and coaches and committed to publishing this strategy in Spring 2024. This is a welcome and vital step

²¹ https://assets.publishing.service.gov.uk/media/65a11af7e8f5ec000f1f8c46/NPPF_December_2023.pdf

²² <u>https://www.fleetnews.co.uk/news/latest-fleet-news/electric-fleet-news/2023/06/23/local-authorities-have-no-time-to-develop-ev-infrastructure-strategy</u>

²³ <u>https://www.gov.uk/government/publications/government-vision-for-the-rapid-chargepoint-network-in-england/government-vision-for-the-rapid-chargepoint-network-in-england</u>

²⁴ https://www.gov.uk/government/groups/freight-energy-forum



and with the first end of sale date less than 11 years away, this is now urgent and must not be delayed any further.

Government should, as a matter of urgency, bring forward its promised national charging infrastructure strategy for HGVs and coaches, covering both depots and public locations. The strategy should include details on how operators will be supported with energy connections and a plan for shared charging and refuelling infrastructure. The strategy should:

- Consider the full diversity of heavy commercial vehicles from large vans up to 44 tonne articulated combinations, and heavier vehicles used for specialist freight movements
- Set clear targets for the deployment of charging and refuelling infrastructure alongside a national strategic plan that considers the interoperability of refuelling equipment, ease of access for larger (and longer) commercial vehicles and the power demands of new HGV powertrain technologies;
- Recognise a technology neutral transition that will reduce emissions of both carbon and air pollutants in the short term from the existing fleet, as well as in the longer term.
- Commit to research and development to support achieving net zero carbon and zero tailpipe emissions from HGVs;
- Outline how energy provision will be secured for fleet operators across the UK for depot-based charging;
- Set out a plan for infrastructure funding support for public and depot-based charging;
- Seek to simplify and create a consistent planning process for acquiring additional power for depot-based charging.

CONCLUSION

The zero emission HGV market is growing steadily with new products being introduced by a range of manufacturers. Most products qualify for the PiTG, however, the process for registering vehicles on to the scheme can take two years. This creates difficulties for the manufacturer and also limits the saving opportunity for operators.

Vehicle manufacturers will continue to introduce new product to the market but remain restricted to those suitable for back to base operations due to the absence of appropriate public charging infrastructure. The installation of charging infrastructure at depots is further hampered by the challenge of connecting to the grid to obtain sufficient energy.

Securing operator confidence is vital for the transition to zero emission commercial vehicle operations. This can be achieved through the implementation of stable regulatory policy for vehicle emissions and commitments to infrastructure and energy.

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