

RHA



Payload Loss Survey Report

Contents

| | |
|-----------------------------------------------------------------------------------------|----|
| Foreword | 4 |
| Summary overview | 5 |
| Background | 6 |
| Headline findings | 7 |
| The survey results – methodology and findings | 10 |
| Annex 1 – Summary overview of current regulations governing vehicle weights and lengths | 17 |
| Annex 2 – Electric HGV payload loss survey questions | 18 |
| Annex 3 – Questions to vehicle dealers | 20 |
| About the RHA | 21 |



Foreword



The Road Haulage Association (RHA) is committed to making the road to Net Zero achievable to the industry we represent. To inform both our work and that of others, we seek to provide relevant and evidenced feedback.

As the largest dedicated trade association representing HGV, coach and van operators, we recognise that we can learn from the experiences of other forms of transport. We also recognise there will be challenges that are specific to the vehicles included in our sector.

The payload loss caused to electric HGVs operating at 44-tonnes is one such challenge and has been a long-standing issue since the regulations were amended in 2023 to allow for heavier electric batteries in HGV operations. This is because the welcome derogation to allow an additional 2-tonnes for heavier batteries does not apply to the heaviest lorries.

As part of our commitment to break down the barriers preventing the uptake of zero-emission commercial vehicles by fleets, we have identified resolving the payload loss issue as a priority. This follows the publication of our *Future of Fleets* report in June 2025 – the first-ever survey of operator readiness for Net Zero. Our core finding from that report was that, despite the unprecedented effort and focus to invest in commercial vehicle decarbonisation which we welcome, it must also be commercially viable.

We have three messages from this report. First, payload loss acts as an impediment to decarbonisation. Second, heavier batteries will increase wear on the roads, either through having more “lighter” electric lorries to fulfil the deliveries that could otherwise be made on an equivalent 44-tonne diesel lorry or through having the same number of heavier electric lorries if payloads equate to their diesel counterparts. Third, low electricity costs are essential to improve the viability of operating an electric HGV.

We believe that it is preferable to have the same number of heavier electric lorries rather than more “lighter” electric lorries. Our Payload Loss Survey Report therefore sets out additional evidence from a survey of operators and vehicle dealers to make the case to the Department for Transport for increasing regulated vehicle weights and lengths. We also ask that the Government brings down electricity prices as a priority. In doing so, the Government will open up the market for the heaviest electric HGVs.

In making these asks, we recognise the consequences. Important questions of public interest will rightly be raised on vehicle safety and the impact on the roads infrastructure. It is vital that these issues are fully considered with all our partners across government, regulators, industry and wider society. We therefore present this report to inform technical discussions on how solutions are found that allow the transition to zero-emission commercial vehicles to continue unhindered.

Richard Smith
Managing Director, RHA
March 2026

Summary overview

The Road Haulage Association (RHA) is pleased to present the results of its Electric HGV Payload Loss survey. This report provides additional evidence on the extent and impact caused to an HGV operator where the two tonne dispensation to allow for heavier batteries does not apply – principally on HGVs operating at 44-tonnes. The aim of this report is to inform further discussions with the Department for Transport and other UK regulatory bodies on increasing permitted weights for affected electric HGVs.

Three asks arise from this report:

- To increase the authorised gross vehicle weight for electric HGVs by 2-tonnes from 44-tonnes to 46-tonnes
- To increase the authorised axle weights on the drive axle for electric HGVs from 10.5-tonnes to 12.5-tonnes
- That the Department for Transport convenes a cross-representative technical working group to assess the merits of changing authorised vehicle weights and corresponding Construction and Use regulations.

Together with associated technical changes to vehicle length and turning circle requirements, this would remedy a barrier caused by regulation that limits the full operating potential of affected electric HGVs compared to their diesel equivalents. Left unchanged however, current vehicle weight regulations disincentivise an operator from investing in equivalent electric HGVs.

Based on an indicative comparison of electric vs diesel “fuel” running costs, running an electric 6x2 costs £28,282 per year more than its diesel equivalent. With current regulations allowing a two tonne derogation to apply on an electric 4x2 tractor unit, the payload loss penalty on the 4x2 falls from 11.8% to 4% with a consequential and more favourable fall in cost to £15,738 per year more than its diesel equivalent. However we also note that, where the payload penalty exists, up to 11.8% or 4% more journeys respectively are required to fulfil deliveries compared to their diesel equivalents.

Overall, with payload loss left unremedied, the increase in cost to run an electric 6x2 and 4x2 for equivalent payloads is 18.7% and 10.4% respectively. With the payload penalty removed and a hypothetically lower depot-based electricity unit price available to business of £0.25 per kWh, a saving is generated for an electric 6x2 compared to its diesel equivalent of £1,855 per year.

At the time of publication, we note that maximum weight issues for electric HGVs are flagged in the Government’s Consultation on a New Heavy Vehicle CO2 Emissions Regulatory Framework for the United Kingdom.¹ We therefore recommend that the Department for Transport convenes a technical working group comprising of representatives from operators (such as the RHA), vehicle manufacturers, highways authorities, enforcement agencies, devolved governments and local authorities. This is so that our findings can be used to inform the associated costs and benefits of making a change to authorised vehicle weights.

The scope of this report does not cover coaches nor hydrogen-powered HGVs, though we judge that vehicle weight and length issues also apply to these vehicle types. Similar payload concerns arise for coaches from heavier batteries, with space needs to place hydrogen fuel tanks on an HGV chassis being the primary concern for hydrogen-powered HGVs. In addition, whilst our research in this report is limited to HGVs operating at 40-tonnes or more, we received further feedback that the operating potential of electric 32-tonne 8x2 rigid HGVs, principally “tippers” carrying aggregate, is also impeded by current vehicle weight regulations. We therefore recommend that the needs of all these vehicles are considered as part of any changes to vehicle weight and length regulations.

Finally, we regard the figures presented in this report as a benchmark. The RHA fully expects the cost-effectiveness of electric HGVs to improve through innovation and technological advancements in battery capability and vehicle range. Falling electricity prices also improve viability. We therefore look to monitor progress against these figures into the future.

Contact RHA Policy at policy@rha.uk.net

¹ See: Department for Transport, Consultation on a New Heavy Goods Vehicle CO2 Emissions Regulatory Framework for the United Kingdom, January 2026, p20, para 44

Background

In June 2025, the RHA published its *Future of Fleets*² report which set out findings from the first survey of its type to benchmark commercial vehicle operator-readiness to decarbonise their fleets. Our report reflected the very real challenges of meeting the UK's Net Zero targets.

We were encouraged that 23% of HGV operators, 39% of van operators and 17% of coach operators either have electric vehicles in their fleets or plan to within the next 5 years. However, 70% of HGV operators, 75% of coach operators and 56% of van operators reported having no plans in place to introduce zero-emission vehicles into their fleets, with HGV operators ranking **lack of vehicle mileage, cost** and **payload loss** as barriers preventing them from doing so.

This is a stark reminder that Net Zero must be commercially viable. Whilst we welcome the investment in the research and development to produce zero-emission commercial vehicles plus the accompanying infrastructure to power them, the vehicles that transport our goods and passengers on UK roads must pay for themselves.

Our vision and approach to decarbonisation

The RHA is committed to breaking down the barriers that prevent the uptake of zero-emission commercial vehicles. Our end-goal is to see an adequate supply of affordable zero-emission commercial vehicles via a vibrant second-hand market. This is to ensure our vital small and medium-sized enterprise (SME) businesses, who make up 95% of the logistics and coach sectors, can acquire these vehicles affordably to thrive.

Achieving this requires a functioning vehicle market – in simple terms, where a supplier (in this instance, the vehicle manufacturer or, for the second-hand market, first user) provides a product (a vehicle) that a buyer (a commercial vehicle operator) is willing to buy for their needs (to fulfil their obligations to their end-customer). Our aim is to break down the “barriers” which prevent the establishment of that functioning vehicle market.

Given the high up-front vehicle costs associated with the current nascent nature of the zero-emission HGV vehicle market, it is essential that the market evolves to the point where economies-of-scale apply to drive down the cost of these vehicles naturally. This requires increased vehicle production levels driven by operator demand.

The RHA's work is focused on eliminating the barriers that impede natural operator demand. Following the publication of our *Future of Fleets* report, we identified addressing the payload loss “barrier” as a priority. Between August and November 2025, we undertook research to ascertain the extent and impact that payload loss acts as an impediment to HGV operators acquiring electric HGVs where the two tonne derogation to accommodate heavier batteries does not apply.

This is within a national policy context where, in June 2019, the Westminster Parliament committed the UK to be Net Zero by 2050. To focus delivery within the road transport sector, successive Governments have set a Zero-emission Vehicle Mandate where all new car and van sales are zero-emission from 2035.

For HGVs, the previous Conservative Government specified in 2021 that sales of new diesel HGVs under 26-tonnes will stop from 2035 with sales of all new diesel HGVs stopping from 2040. Equivalent end-of-sale dates for coaches are not currently in place. At the time of publication, the Labour Government has been consulting on how it “may design a regulation to enable these [HGV] phase-out dates”, encompassing coaches too.³ This report is also published at a time where there are over 1,000 registered electric HGVs⁴ on UK roads out of a total number of 534,100 HGVs.⁵

For a summary overview of current vehicle weight and length regulations, please see annex 1.

Headline findings

Our report is based on three sources of evidence. First, we issued a quantitative survey to HGV operators asking the extent to which they could fulfil their deliveries where the two tonne dispensation **does not apply** – see annex 2 for the questions.

Second, to inform these results, we sought feedback from vehicle dealers on the operating potential of affected electric HGVs. This was done by issuing an additional set of qualitative questions via the National Franchised Dealers Association (NFDA) – see annex 3.

Our final source is desk-based research conducted by the RHA to assess the financial implications of running an electric 6x2 tractor unit (where the two tonne derogation **does not** apply) and an electric 4x2 tractor unit (where the two tonne derogation **does** apply), compared to their diesel equivalents.

Full details of our methodology can be found in the section *The survey results – methodology and findings*.

Source 1 – Electric HGV Payload Loss survey

Based on 114 responses analysed from our quantitative survey, our headline findings are as follows:

- 88% of those who responded operate vehicles at over 42-tonnes, thereby preventing them from making use of the current 2-tonne allowance for certain zero-emissions HGVs. Of these only 37% believed they could meet their requirements within the 22T payload.
- 57% of operators could complete less than half of their deliveries with a 22T payload. This indicates more vehicles and/or additional journeys are required to fulfil the same delivery requirements.
- 74% of all deliveries that are currently made using a diesel vehicle could be made on an equivalent electric HGV with a range of 300 miles (or 483 km) and where electric charging is available at the end-destination. This indicates that a majority of deliveries can be made by an electric HGV as such vehicles become available on the market.
- However, the percentage of all deliveries that could be made using an equivalent electric HGV with a range of 300 miles (or 483 km) falls to 51% where there is no electric charging available at the end-destination and, instead, the operator must return to their depot to recharge their vehicle – known as “back-to-base”. This therefore indicates that more “opportunistic” charging is required at delivery points.
- Our survey results also indicate when deliveries are made during a 24-hour period. 64% of operators reported they run mixed shifts – ie. a combination of day, night and tramping⁶ shifts further broken down as follows: 26% operate days only, 1% nights only, 1% multishift and 7% tramping operators. This provides useful insights for both charge point operators and the electricity sector to determine **when** and **how much** electricity is needed during a 24 hour period to charge electric HGVs.

Source 2 – Vehicle Dealer feedback

We received two responses to our questionnaire (see annex 3) circulated to vehicle dealers. Whilst we acknowledge the very small sample, it nonetheless revealed key insights on the operating potential of electric HGVs. A core message was that unchanged axle weights restrict an electric HGV operator's ability to utilise the payload that would otherwise be available to them on an equivalent diesel. This is because current axle weight limits prevent operators from loading an affected electric HGV up to its total legal weight, because the weight applied to one or more axles would exceed their limit first.

In addition, we received feedback that a three-axle electric tractor unit operating at 44-tonnes needs a longer wheelbase to fit sufficient batteries to power the vehicle. However, this makes the vehicle either too long to meet permitted vehicle lengths or unable to meet current turning-circle requirements. Compounding the issue, operators cannot use two-axle electric units as an alternative because, under the current regulations, five axle combinations (e.g. a two-axle tractor unit plus three-axle trailer) cannot exceed a gross vehicle weight of 40-tonnes (42-tonnes for zero-emission combinations). This makes a 4x2 tractor unit unsuitable for heavy-duty long-haul operations.

2 Road Haulage Association, *The future of fleets – informing the net zero transition for commercial vehicles*, June 2025

3 See Department for Transport, *Consultation on a New Heavy Goods Vehicle CO₂ Emissions Regulatory Framework for the United Kingdom*, January 2026

4 Source: Society of Motor Manufacturers and Traders (SMMT) – see: <https://www.smmt.co.uk/hgv-demand-dips-in-2025-as-nascent-zev-uptake-grows/>

5 Source: DfT Statistics, Table VEH1111

6 Tramping is the practice of making long distance deliveries. As the typical journey will take several days, or longer if travelling across Europe for example, the driver will sleep in their cab overnight

Source 3 – Assessment of diesel fuel vs electric charging running costs

To assess the financial impacts arising from payload loss, we narrowed our analysis to the “fuel” costs arising from running an electric 6x2 tractor unit (where the two tonne derogation does not apply) and an electric 4x2 tractor unit (where the two tonne derogation does apply), compared to their diesel equivalents. We conducted this assessment against two sample HGV models manufactured by Volvo Trucks.

We note the following from our comparison of “fuel” costs between an electric HGV and its diesel equivalent:

- The cost of running an electric 44-tonne 6x2 HGV is **£28,282 per year more** than its diesel equivalent.
- The cost of running an electric 40-tonne 4x2 HGV is **£15,738 per year more** than its diesel equivalent.
- With payload parity with its diesel equivalent, the additional cost of running an electric 6x2 and 4x2 could be reduced by £16,201 and £5,492 respectively.
- When taking into account broader costings (driver, depreciation plus time & distance-related costs), the increase in cost to run an electric 6x2 and 4x2 for equivalent payloads is 18.7% and 10.4% respectively.

We draw four broad conclusions from this analysis. First, at the time of publication in 2026, we acknowledge and fully expect that these figures will improve as battery capabilities increase leading to improved vehicle efficiency.

Secondly, our 4x2 tractor unit assessment shows that the two tonne derogation reduces the payload loss reduction from 11.8% to 4%, with a consequential and more favourable fall in the electric charging running cost incurred to run an electric 4x2 tractor unit. Therefore, the derogation helps viability. However, we also note that, where the payload penalty exists, up to 11.8% or 4% more journeys respectively are required to fulfil deliveries compared to their diesel equivalents. This has impacts on additional costs, the need for additional drivers and more vehicles on already congested roads.

Thirdly, low electricity costs dramatically improve the viability of running an electric HGV. For example, with the payload loss remedied together with a hypothetical unit electricity cost of £0.25 per kWh, running an electric 6x2 tractor unit has a “fuel” saving of **£1,855 per year** compared its diesel equivalent. We therefore ask the Government accelerates planned investments in the energy sector as set out in its The UK’s Modern Industrial Strategy to realise the promise of lower electricity prices paid by business.⁷

Finally, our analysis should be placed within the context of other barriers preventing the uptake of electric HGVs, such as high up-front vehicle capital costs and depot charging investment costs – the assessment of which are beyond the scope of this report. In a low margin industry (2%) such as haulage, we make the point that eliminating all unnecessary costs associated with electric HGVs, together with the prospect of savings, will incentivise the sector to make the switch to electric HGVs. Remedying the payload loss by increasing permitted vehicle weights and lengths removes one key structural barrier that helps incentivise increased electric HGV uptake.

RHA commentary

Left unresolved, the payload loss penalty created by not applying the two tonne derogation and associated changes on vehicles operating at 44-tonnes distorts the “total cost of ownership” (TCO) for an operator seeking to run an affected electric HGV. The physical constraints caused by the current regulations can be summarised as follows: compared to an equivalent diesel HGV, existing electric tractor 4x2 weights mean lower permitted payload, whilst a longer electric tractor 6x2 length means less trailer space and reduced payload.

Consequently, the real-world impact is additional journeys (with the probability of additional electric HGVs) to fulfil the delivery requirements that can otherwise be made on an equivalent 44-tonne diesel HGV. This adds cost and inefficiency into the operation which the low margin (2%) haulage sector cannot absorb with the costs passed on to the end-consumer.

This “structural barrier” caused by regulation acts as a disincentive for a haulier to switch to an electric 44-tonne HGV, both from the costs incurred and the competitive disadvantage this places the haulier compared to their diesel counterparts. At the time of writing, the situation is compounded by natural market “barriers” such as the high up-front cost of an electric HGV compared to their diesel equivalent and the ability to access competitive electricity rates.

7 See: HM Government, The UK’s Modern Industrial Strategy, November 2025

It also places pressure on operators to find additional drivers for the additional journeys. For context, following the publication of our report Lorry drivers: the vital link in 2025,⁸ we have issued a revised forecast showing a need for 60,000 new HGV drivers across the UK each year for the next five years.⁹ Finally, the need for additional vehicles adds to congestion on UK roads.

Conversely, remedying the payload loss penalty by increasing permitted gross vehicle weights to 46-tonnes and adjusting associated axle weight and turning circle requirements eliminates the costs and inefficiencies created, deriving a financial benefit to the end-customer. In turn, this incentivises an operator to switch to an electric HGV operating at over 40-tonnes.

Considerations

In asking for the vehicle weight regulations to be changed, the RHA recognises that there are critical issues of public interest to be considered – principally, safety, whether the prospect of “lighter” batteries retaining the same energy density negates the need for regulatory change, and the infrastructural impact on road wear and bridges. We therefore do not make our asks lightly, and it is important that the justification for change is clearly evidenced and considered.

On safety, we are assured via extensive testing by the vehicle manufacturers that the design and engineering standards of modern vehicles are capable of accommodating safely the proposed increase in gross vehicle weights. This is because the vehicle manufacturers have built in sufficient tolerance and compliance margins to operate the vehicles within these higher limits. This is demonstrated by the Design Weights shown on vehicle plating certificates which, in turn, is used to determine braking performance – often exceeding the government weight limits.

We also recognise the argument that, over time, batteries will become lighter due to technological advancements in their capabilities, thereby negating the need to increase permitted vehicle weights. However, we judge that the timeline driving the improvement in battery technologies does not align with the timelines expected within the UK to introduce electric HGVs.

For context, we are guided by research conducted by the University of L’Aquila in Italy forecasting how energy densities per kilogram of battery weight will improve over time to 2030.¹⁰ Our assessment of their research is that batteries will be approximately 20% lighter by 2040, meaning that “the structural barrier” caused by existing vehicle weight regulations will not be immediately mitigated by the prospect of future lighter batteries.

We comment however that there will be an impact to road wear and bridges – caused either by an increased number of electric HGVs if current weight regulations remain unchanged or the same amount of heavier electric HGVs if current weight regulations are amended. This is an issue that needs to be resolved and we look to contribute to the work underway to address this.

As part of the technical group we recommend is set up, we would welcome working through how electric HGV weights are considered as part of the existing structure assessment criteria as set out in the “Design Manual for Roads and Bridges” (DMRB) including “HA loading” requirements.¹¹ This will inform the costs and benefits associated with the case for changing authorised vehicle weight regulations.

Finally, we observe the need for alignment with proposed changes by the European Union to its Weights and Dimensions Directive to allow for heavier zero-emission HGVs across EU countries.¹² Under proposals supported by the European Economic and Social Committee, a “maximum additional weight of 4-tonnes for zero-emission (ZE) lorries only” could be adopted within the EU.¹³ It is vital that the UK Government considers the ramifications of this for UK operators, both in terms of UK operators being able to compete fairly within and across EU countries and how EU operators running such HGVs within the UK are treated.

Together with our findings that a “structural barrier” caused by regulation disincentivises operator uptake of electric HGVs at 44-tonnes, we present this report to the Department for Transport and other UK regulatory bodies for further discussion with the aim of finding a solution that works for all.

8 See: Road Haulage Association, Lorry drivers: the vital link, February 2025

9 RHA analysis based on a Freedom of Information request to the Driver Vehicle and Licensing Agency (DVLA), October 2025

10 See: Vittorio Ricci, Pietro Romano and Nicola Stampone, Estimate of Economic Impact of EVs Li-ion Batteries Recovery, University of L’Aquila, September 2023, p3, Figure 3

11 For context on how highway bridges and structures are assessed by the UK’s highways authorities, see: <https://www.standardsforhighways.co.uk/search/html/96569268-6c26-4263-a1f7-bc09a9e3977f?standard=DMRB>

12 <https://www.consilium.europa.eu/en/press/press-releases/2025/12/04/council-sets-position-on-maximum-weights-and-dimensions-for-road-vehicles/>

13 <https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/revision-weights-and-dimensions-directive-9653ec>

The survey results – methodology and findings

To gauge the extent and impact payload loss on affected electric HGVs would cause operators, we sought evidence from three different sources.

Source 1 – Electric HGV Payload Loss survey

Between 4 August to 30 November 2025, we ran our Electric HGV Payload Loss survey and the questions asked can be found at annex 2. Via this survey, we sought to quantify how operations would be affected by those operators using electric HGVs where the two tonne derogation does not apply. We sought evidence on four principal issues:

- Miles currently undertaken by a diesel HGV when making deliveries.
- Average weight of payload currently carried.
- Percentage of deliveries that could be fulfilled within a 300 mile range – both delivery only, and delivery-and-return.
- Percentage of deliveries that could be fulfilled with a 22-tonne payload.

The “300 mile range” criterion was chosen to test the extent to which deliveries could be fulfilled using electric HGVs now available on the market with this advertised range.¹⁴

The “22-tonne payload” criterion was chosen to reflect a typical payload option available for an electric 44-tonne articulated HGV with an unladen electric tractor and trailer unit combined weight of 22-tonnes. This compares with their diesel equivalent where the typical payload available is 28-tonnes.

The final sample size was 114 responses from different operators, with the profile broken down as follows:

- 74% of the operators were located in a single Traffic Area – see Q1 of the survey for the list of Traffic Areas.
- 42% operated in single industry sectors.
- The average number of vehicles per operator as reported in this survey was 43 with 145 trailers. In this sample, 45% of respondents had over 20 vehicles, with 55% having 20 vehicles or fewer.
- 88% operated HGVs weighing 42+ tonnes.
- 16% operated HGVs weighing 36-42-tonnes.
- 40% operated HGVs under 36-tonnes.
- 63% of operators only operate one of the vehicle classifications (either 42-tonne +, between 36-tonne to 42-tonne, or under 36-tonne).
- 26% of operators work solely on day shifts.
- 1% of operators work solely on night shifts.
- 1% of operators work on multi-shift operations (where one HGV may be operated for over 12 hours using different drivers).
- 7% of operators work on tramping operations.
- 64% of operators worked mixed shifts, with a high proportion (45%) running mainly daytime operations.

Findings from the Electric HGV Payload Loss survey

We report the following findings from our Electric HGV Payload Loss survey:

- 88% of those who responded operate vehicles at over 42-tonnes, thereby preventing them from making use of the current 2-tonne allowance for certain zero-emissions HGVs. Of these only 37% believed they could meet their requirements within the 22T payload.
- 74% of all deliveries (as reported in this survey) could be completed by an electric HGV with a maximum range of 300 miles if charging is available at the delivery point. However, of these, 90% are operating vehicles over 42-tonnes where the two tonne payload allowance currently does not apply. This means that additional journeys and vehicles are needed to move the goods that could otherwise be carried on a lorries with no payload loss penalty, increasing costs and the need for additional drivers.

14

See for example: <https://www.daf.co.uk/en-gb/trucks/daf-xf-xg-xgplus-electric>

- 51% of all deliveries (as reported in this survey) could be completed by an electric HGV with a maximum range of 300 miles on a back-to-base basis. In this scenario, charging would only be needed at the operator’s depot and not at the end-destination.
- 57% of operators could complete less than half of their deliveries with a 22-tonne payload, meaning more vehicles would be required to fulfil the same delivery requirements.
- Of the 62% operating predominantly day shifts, less than half (45%) believe they could operate within the 22-tonne load capacity of an electric HGV combination.

Underlying facts as reported in the survey

- The average annual mileage reported was 88,000 miles.
- The average number of miles to the delivery point reported was 94 miles. The average load weight reported was 20-tonnes (NB. This is based on deliveries leaving the depot, and does not take into account factors such as empty running which would reduce the reported average load weight).
- 40% of operators said less than 25% of their deliveries could be fulfilled with 22T payload.
- 57% of operators said less than 50% of their deliveries could be fulfilled with a 22T payload.
- 45% of operators said that their customers had requested or enquired about electric HGV use in their contracts.

Source 2 – Vehicle Dealer feedback

At the same time of running the Electric HGV Payload Loss survey, we sought qualitative feedback from vehicle dealers on the operating potential of electric vehicles – see annex 3 for the questions asked. We received two responses back.

Findings from Vehicle Dealer feedback

Whilst we acknowledge the very small sample, it revealed key insights on the restrictions to payload arising from current vehicle weight regulations. In summary, the following themes were raised:

- **Payload Displacement:** While a two-tonne allowance is granted for zero-emission heavy goods vehicles (HGVs), the entire allowance is taken by battery weight considerations. Consequently, these vehicles often possess a lower net payload capacity than their diesel counterparts.
- **Operational Weight Constraints:** Battery-electric tractor units typically weigh between two and four tonnes more than internal combustion equivalents. Even with the additional allowance, the overarching 44-tonne limit remains fixed, resulting in a net loss of payload capacity for operators.
- **Axle Weight Limitations:** Existing axle weight restrictions—specifically the 10.5-tonne limit on the drive axle—have not been adjusted. This often prevents vehicles from reaching their maximum legal gross weight, as individual axles reach their statutory limits first.
- **Dimensional and Maneuverability Conflicts:** For 44-tonne UK operations, three-axle electric tractors require an extended wheelbase to accommodate battery packs. However, these dimensions often breach overall length regulations or are unable to meet mandatory turning-circle requirements. This necessitates a shift toward two-axle configurations, which lack the axle capacity to provide commercially viable payloads.
- **Market Disincentives:** Due to restrictive 10.5-tonne drive-axle limit, length and payload concerns, 44-tonne three-axle electric tractors are often unviable. This encourages a continued reliance on diesel tri-axle tractors, which offer better payload options and known residual values.
- **Competitive Disadvantages:** Current weight and axle regulations create inherent barriers for zero-emission vehicles. When higher capital costs and range limitations are coupled with reduced payload capacity, the business case for adoption becomes difficult to justify.
- **Vehicle Combination Incompatibility:** Beyond weight constraints, longer electric tractor units are often incompatible with standard trailer fleets. Adapting to these requirements would necessitate investment in shorter trailers, further diminishing total load volume relative to traditional diesel-powered logistics.

We conclude from this feedback that, despite best efforts to reconfigure combinations and payloads within existing permitted parameters, current vehicle weight regulations are a “structural barrier” that disincentivises an HGV operator from switching to an electric HGV where the two-tonne derogation does not apply. We therefore recommend a review of Construction and Use Regulations relating to turning circle requirements, lengths, gross weights and axle weights to assess vehicles not covered by the derogation.

Source 3 – RHA desk-based assessment of diesel fuel vs electric charging running costs

For completeness, we used the information received from the Payload Loss Survey and vehicle dealer feedback to conduct a desk-based assessment of the financial implications of running an electric HGV where the two tonne derogation does not apply compared to its diesel equivalent. To do this, we narrowed our analysis to a comparison of the diesel fuel vs electricity charging running costs incurred to power equivalent vehicles. We then conducted this assessment against a sample of two HGVs manufactured by Volvo Trucks. Our workings can be found under Scenarios 1 and 2 on pages 13 and 15 of this report.

In doing this, we acknowledge that we have focused on just one element – “fuel” – of the total cost of ownership (TCO) of running an HGV. We discounted doing a broader TCO analysis due, principally, to on-going uncertainties over the residual value of electric HGVs. We therefore recognise that our cost comparison is limited in nature. This said, according to the annual RHA Cost Movement reports, fuel can represent between 20%-25% of an HGV's running costs¹⁵ and is a major operational consideration for hauliers.

Methodology

To conduct our analysis, we used the following method and rationale:

- We focussed our analysis on comparing the “fuel” running costs on both a 6x2 and a 4x2 tractor unit. Our reason for analysing a 6x2 was to understand the full “fuel” cost impact where the two tonne derogation does not apply. Our reason for analysing a 4x2 was to understand the extent to which “fuel” costs impacts are reduced where the two tonne derogation does apply.
- With each vehicle model we assessed, we first established the annual diesel fuel cost to run that model.
- We then established the annual cost of charging the equivalent electric HGV model. The £/kWh cost used is based on charging at depot only. It does not factor in prices that may be charged at en-route public charging and/or end-destination sites.
- To account for the additional journeys needed to fulfil deliveries that could otherwise be made on the equivalent diesel model, we adjusted by adding on the following time-related costs (driver wages and depreciation*) plus distance-related costs (tyres* and maintenance*).
- We used the following factors in our calculations:
 - We used 88,000 miles as the reference annual mileage of a diesel 44-tonne HGV as reported to us via our Electric HGV Payload Loss survey.
 - The £/litr diesel cost used was £1.06 (excluding VAT) as reported in the RHA's fuel report of week ending 23rd January 2026 for our members.
 - The £/kWh used to calculate electric charging costs at depot was £0.332 (excluding VAT) – calculated as an average of the suppliers' rates for businesses quoted by www.electricityprices.co.uk on 25th January 2026.¹⁶
 - The following time- and distance- related costs* were taken from the RHA's *Cost Tables 2026*:¹⁷
 - driver cost (wage plus pension, NI etc.): £65,264
 - depreciation: £23,518.
 - tyres: 3.13p per mile.
 - maintenance: 14.61p per mile.
 - We have assumed that an efficiently-run diesel 6x2 and 4x2 tractor unit can yield 9 miles per gallon (mpg).
 - For the Volvo electric FH models, we used the advertised battery capacity of 360 kWh and vehicle range of 300 km to calculate an efficiency of 1.2 kWh/km for both an electric 6x2 and 4x2 tractor unit.¹⁸

*The depreciation and distance-related costs used are based on running a diesel tractor unit capable of operating at 44 tonnes. We acknowledge that the equivalent distance-related costs for an electric HGV will differ – with maintenance costs likely to be lower due to an electric tractor unit having fewer moving parts to replace; and tyre costs likely to be higher to account for the greater wear caused by the heavier electric battery and the engineering required in the manufacture of such tyres. At the time of publication, insufficient market data exists on electric HGV depreciation and distance-based costs to provide accurate costings. Regarding depreciation, we have assumed a

¹⁵ In 2025, diesel fuel represented 22.81% of the total cost of ownership of running a 44-tonne diesel HGV – see: Road Haulage Association, Haulage Cost Movement 2025, p22. The equivalent figure for 2024 is 24.01% – see: Road Haulage Association, Haulage Cost Movement 2024, p20

¹⁶ See: <https://www.electricityprices.org.uk/business-electricity-rates/>

¹⁷ See: Road Haulage Association, Cost Tables 2026, p13

¹⁸ See: <https://www.volvotrucks.co.uk/en-gb/trucks/electric/volvo-fh-electric.html>

longer lifecycle for electric HGVs compared to diesel. To take a consistent approach, we have increased depreciation by the percentage of payload loss, to allow for increased cost and wear. Where cost savings are calculated, we have used the increased depreciation values. The costs used are therefore indicative of what the electric HGV depreciation and distance-based costs may look like.

Findings

From our analysis of the two Volvo models, we noted the following from our comparison of “fuel” costs between an electric HGV and its diesel equivalent.

- The cost of running an electric 44-tonne 6x2 HGV is **£28,282 per year more** than its diesel equivalent.
- The cost of running an electric 40-tonne 4x2 HGV is **£15,738 per year more** than its diesel equivalent.
- With payload parity with its diesel equivalent, the additional cost of running an electric 6x2 and 4x2 could be reduced by £16,201 and £5,492 respectively.
- When taking into account broader costings (driver, depreciation plus time & distance-related costs), the increase in cost to run an electric 6x2 and 4x2 for equivalent payloads is 18.7% and 10.4% respectively.

From this analysis, we make four observations. First, we acknowledge and fully expect that these costs will go down as battery capabilities increase leading to improved vehicle efficiency.

Secondly, our 4x2 tractor unit assessment shows that the two tonne derogation results in a payload loss reduction from 11.8% to 4%, with a consequential and more favourable fall in the electric charging running cost incurred to run an electric 4x2 tractor unit. This shows the derogation improves viability.

Thirdly, low electricity costs dramatically improve the viability of running an electric HGV. For example, with the payload loss remedied together with a hypothetical unit electricity cost of £0.25 per kWh, running an electric 6x2 tractor unit has a “fuel” saving of **£1,855 per year** compared its diesel equivalent. Low electricity costs as envisaged in The UK's Modern Industrial Strategy are therefore essential.

Finally, our analysis of “fuel” costs should be placed within the context of other barriers preventing the uptake of electric HGVs, such as high up-front vehicle capital costs and depot charging investment costs. In a low margin industry (2%) such as haulage, elimination of all costs and the prospect of savings will incentivise the sector to make the switch to electric HGVs. Remedying payload loss by increasing permitted gross vehicle weights to 46-tonnes and axle weights to 12.5-tonnes will remove a key barrier to uptake and help incentivise the switch to electric HGVs accordingly.

At the time of publication in 2026, we regard the figures presented in this report as a benchmark. The RHA fully expects the cost-effectiveness of electric HGVs to improve as a result of innovation and technological advancements. Reduced energy prices are also essential to incentivise operators to switch to electric HGVs. We therefore look to monitor progress against these figures into the future.

Scenario 1 – 6x2 Tractor Unit (44T) 2-tonne derogation not available

| Vehicle type: 6x2 tractor unit Manufacturer: Volvo Trucks | Electric HGV | Diesel HGV |
|--------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------|
| Model | FH Battery Electric 6x2 Tag Tractor - Full Air Suspension (FH 62T TE) | FH 13 6x2 Tag Tractor - Rear Air Suspension (FH 62T T3A) |
| Wheelbase | 3900 | 3900 |
| Powertrain | Battery electric | Diesel |
| Technical specification | fh62tte_gbr_eng.pdf | fh62tt3a_gbr_eng.pdf |
| Gross combination weight (gcw)(plated)(a) | 44,000 kg | 44,000 kg |
| Kerb weight (b) | 11,490 kg | 8,145 kg |
| Deduct kerb weight (b) from gcw (a) | 32,510 kg | 35,855 kg |
| Assumed unladen trailer weight (c) | 7,500 kg | 7,500 kg |
| Available payload: =(a)-(b)-(c) | 25,010 kg | 28,355 kg |
| Vehicle efficiency kWh/km : mpg | 1.2 | 9 |
| Payload difference | | 3,345kg |
| Payload loss | | 11.8% |

Analysis of running costs

| Diesel HGV | |
|-----------------------------------------------|----------------|
| Diesel price - £/ltr | £1.06 |
| Convert £/ltr to £/gallon (multiply by 4.546) | £4.82 |
| Diesel efficiency (mpg) | 9 |
| Number of gallons used per year (88,000 / 9) | 9,778 |
| Annual diesel fuel cost | £47,117 |

| Electric HGV | |
|--------------------------------------------------------------------------|----------------|
| Efficiency of electric HGV (kWh/km) | 1.2 |
| Convert 88,000 miles to km (multiply by 1.60934) | 141,622 |
| Factor in additional miles required to accommodate payload loss (+11.8%) | 158,333 |
| kWh required (1.2 x 158,333) | 190,000 |
| Price per kWh | £0.332 |
| Annual electric charging cost | £63,080 |

In isolation, running an electric 6x2 HGV has an additional “fuel” cost per year of **£15,963**, compared to the diesel equivalent. However, the costs incurred from the additional journeys needed to fulfil the deliveries compared to an equivalent diesel HGV must also be considered. This is analysed below.

Analysis of additional costs incurred

| | Figures as reported in RHA Cost Tables 2026 | Increased uplift to account for payload loss (11.8%) |
|---------------------------------------|---------------------------------------------|------------------------------------------------------|
| Driver employment costs | £65,264 | £7,701 |
| Depreciation (indicative) | £23,518 | £2,775 |
| Additional time-based costs | | £10,476 |
| Indicative mileage-based costs | | |
| Annual mileage | 88,000 | 10,384 |
| Tyres (£ per mile) | £0.0313 | £325 |
| Maintenance (£ per mile) | £0.1461 | £1,517 |
| Additional distance-based costs | | £1,842 |
| Total additional running costs | | £12,318 |

Taken together, the charging plus additional costs of running an electric HGV is **£28,282*** per year more than the equivalent diesel HGV. With payload parity with its diesel equivalent, removing the additional driver, tyre and maintenance costs plus additional electric charging cost (£6,658**) per year could reduce the cost of running an electric 6x2 by **£16,201** per year. With payload parity plus a hypothetically lower electricity cost at depot of £0.25 per kWh, a saving is generated compared to its diesel equivalent of **£1,855** per year.

*The total may not sum exactly due to rounding. **Worked out as: £63,080 – (141,622 x 1.2 x £0.332)

Analysis of % difference in cost (with payload loss unrectified)

| Vehicle type - 6x2 tractor unit Manufacturer: Volvo Trucks | Electric HGV | Diesel HGV |
|---------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------|
| Model | FH Battery Electric 6x2 Tag Tractor - Full Air Suspension (FH 62T TE) | FH 13 6x2 Tag Tractor - Rear Air Suspension (FH 62T T3A) |
| “Fuel” cost per year (a) | £63,080 | £47,117 |
| Driver employment cost per year (b) | £65,264 | £65,264 |
| Depreciation cost (indicative) per year (c) | £23,518 | £23,518 |
| Tyre costs per year (d) | £2,754 | £2,754 |
| Maintenance costs per year (e) | £12,857 | £12,857 |
| Additional running costs (f) | £12,318 | - |
| Total per year = (a)+(b)+(c)+(d)+(e)+(f) | £179,791 | £151,510 |
| % increase in cost | | 18.7% |

Scenario 2 – 4x2 Tractor Unit (40T) 2-tonne derogation available

| Vehicle type - 4x2 tractor unit Manufacturer: Volvo Trucks | Electric HGV | Diesel HGV |
|---------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------|
| Model | NEW FH Battery Electric 4x2 Tractor - Full Air Suspension (FH 42T E) | FH 13 4x2 Tractor - Rear Air Suspension (FH 42T 3A) |
| Wheelbase | 3800 | 3800 |
| Powertrain | Battery electric | Diesel |
| Technical specification | fh42te_gbr_eng.pdf | fh42t3a_gbr_eng.pdf |
| Gross combination weight (gcw)(plated)(a) | 40,000 kg | 40,000 kg |
| Kerb weight (b) | 9,890 kg | 6,855 kg |
| Deduct kerb weight (b) from gcw (a) | 30,110 kg | 33,145 kg |
| Assumed unladen trailer weight (c) | 7,500 kg | 7,500 kg |
| Add back two tonne derogation (d) | 2,000 kg | - |
| Available payload: = (a)-(b)-(c)+(d) | 24,610 kg | 25,645 kg |
| Vehicle efficiency kWh/km : mpg | 1.2 | 9 |
| Payload difference | | 1,035kg |
| Payload loss | | 4% |

Analysis of running costs

| Diesel HGV | |
|-----------------------------------------------|----------------|
| Diesel price - £/ltr | £1.06 |
| Convert £/ltr to £/gallon (multiply by 4.546) | £4.82 |
| Diesel efficiency (mpg) | 9 |
| Number of gallons used per year (88,000 / 9) | 9,778 |
| Annual diesel fuel cost | £47,117 |

| Electric HGV | |
|-----------------------------------------------------------------------|----------------|
| Efficiency of electric HGV (kWh/km) | 1.2 |
| Convert 88,000 miles to km (multiply by 1.60934) | 141,622 |
| Factor in additional miles required to accommodate payload loss (+4%) | 147,287 |
| kWh required (1.2 x 147,287) | 176,744 |
| Price per kWh | £0.332 |
| Annual electric charging cost | £58,679 |

In isolation, running an electric 4x2 HGV has an additional “fuel” cost per year of **£11,562**, compared to the diesel equivalent. However, the costs incurred from the additional journeys needed to fulfil the deliveries compared to an equivalent diesel HGV must also be considered. This is analysed below.

Analysis of additional costs incurred

| | Figures as reported in RHA Cost Tables 2026 | Increased uplift to account for payload loss (4%) |
|----------------------------------------|---------------------------------------------|---------------------------------------------------|
| Driver employment costs | £65,264 | £2,611 |
| Depreciation (indicative) | £23,518 | £941 |
| Additional time-based costs | | £3,551 |
| Indicative mileage-based costs | | |
| Annual mileage | 88,000 | 3,520 |
| Tyres (£ per mile) | £0.0313 | £110 |
| Maintenance (£ per mile) | £0.1461 | £514 |
| Additional distance-based costs | | £624 |
| Total additional running costs | | £4,176 |

Taken together, the charging plus additional costs of running an electric HGV is **£15,738** per year more than the equivalent diesel HGV. With payload parity with its diesel equivalent, removing the additional driver, tyre and maintenance costs plus additional electric charging cost (£2,257*) per year could reduce the cost of running an electric 4x2 by **£5,492** per year.

*Worked out as: £58,679 – (141,622 x 1.2 x £0.332)

Analysis of % difference in cost (with payload loss unrectified)

| Vehicle type – 4x2 tractor unit Manufacturer: Volvo Trucks | Electric HGV | Diesel HGV |
|---------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------|
| Model | NEW FH Battery Electric 4x2 Tractor – Full Air Suspension (FH 42T E) | FH 13 4x2 Tractor – Rear Air Suspension (FH 42T 3A) |
| “Fuel” cost per year (a) | £58,679 | £47,117 |
| Driver employment cost per year (b) | £65,264 | £65,264 |
| Depreciation cost (indicative) per year (c) | £23,518 | £23,518 |
| Tyre costs per year (d) | £2,754 | £2,754 |
| Maintenance costs per year (e) | £12,857 | £12,857 |
| Additional running costs (f) | £4,176 | - |
| Total per year = (a)+(b)+(c)+(d)+(e)+(f) | £167,248 | £151,510 |
| % increase in cost | 10.4% | |

Annex 1 – Summary overview of current regulations governing vehicle weights and lengths

This section is written as an interpretation to introduce the reader to the current regulations that govern vehicle weights and lengths. Always consult the relevant legislation on how the regulations apply to individual vehicles.

The physical dimensions – weight and length – of heavy goods vehicles (HGVs) are strictly regulated, with the regulations designed to address three issues:

- **Road safety** – to ensure loads are stable and the vehicle can stop safely in an emergency.
- **Road wear** – to ensure acceptable wear and tear on public roads and bridges.
- **Competition** – to prevent overloading that gives an unfair advantage over those who operate within the legal limits.

The regulations are set out in The Road Vehicle (Construction and Use) Regulations 1986 (as amended) and The Road Vehicles (Authorised Weight) Regulations 1998 (as amended) and govern the following vehicle types – “rigid motor vehicles”, “articulated vehicles” and “drawbar combinations”.¹⁹ “Special types vehicles” not conforming to the 1996 and 1998 regulations due to an operational need for them to be heavier, longer and/or wider are governed by the Road Vehicles (Authorisation of Special Types)(General) Order 2003 (STGO).²⁰ Enforcement is carried out by the police, Driver and Vehicle Standards Agency (DVSA) and the Traffic Commissioners.²¹

The regulations set limits on the maximum permitted gross vehicle weights, axle weights, vehicle lengths and turning circle requirements. Within these limits, vehicles may be designed in different combinations to perform particular operations that allow the haulier to fulfil their obligations to their customers. To visualise what these combinations look like within the permitted limits, the Department for Transport has published a simplified pictorial guide.²²

The powertrain on battery-electric vehicles (BEV) is heavier than their internal combustion engine (ICE) equivalents on a like-for-like basis. To compensate for the impingement this creates within the permitted weights, The Road Vehicles (Authorised Weight)(Amendment) Regulations 2023 introduced a derogation that amended the authorised weight rules to allow an additional 2-tonnes of gross vehicle weight (GVW) for certain specified zero-emission HGVs.²³

However, this derogation does not apply for the heaviest vehicles such as 44-tonne articulated lorries. Regulated axle weights also remained unchanged.

Mathematically, this immediately creates a payload loss penalty for affected vehicles, with additional journeys required to move the goods that could otherwise have been carried on lorries with no payload loss penalty. In a low margin (2%) industry such as the haulage sector, this matters as the loss in revenue and the extra costs arising from the additional journeys undertaken unfavourably distorts the viability of running such vehicles. Our Electric HGV Payload Loss survey therefore sought to understand the extent and type of operator who would be affected by the payload loss penalty.

19 See: <https://www.gov.uk/government/publications/hgv-maximum-weights/hgv-maximum-weights>

20 See: <https://www.gov.uk/government/publications/special-types-enforcement-guide/special-types-enforcement-guide>

21 Traffic Commissioners are an independent regulator appointed by the Secretary of State for Transport to license and oversee operators of heavy goods vehicles (HGVs), buses, coaches, and local bus services, ensuring compliance with all relevant regulations.

22 See: <https://assets.publishing.service.gov.uk/media/5a74dbd340f0b65f61322ceb/simplified-guide-to-lorry-types-and-weights.pdf>

23 See: <https://www.legislation.gov.uk/ukdsi/2023/9780348247459>

Annex 2 – Electric HGV Payload Loss survey questions

Thank you for completing this survey on electric HGV payload loss for the RHA. Following the RHA's recent Net Zero Survey, HGV operators flagged that payload loss (for electric HGVs weighing 44-tonnes gvw where the 2-tonne derogation to accommodate heavier batteries does not apply) was a major concern preventing investment in these vehicles.

Following your feedback, the RHA is determined to address this problem. To build a case for changing the relevant regulations governing vehicle weights and lengths, we need to evidence the extent and impact of the problem for HGV operators.

By completing this survey, you will help us build that case and provide the required evidence for change that we can then put to the Department for Transport.

Please complete this survey by 5pm on 30 November. Any data shared externally will be anonymised and aggregated.

| | |
|---------------|--|
| Contact Name | |
| Company Name | |
| Email Address | |

Survey questions

1. In which traffic areas of the UK do you hold an operator's licence? (Please select all traffic areas that are covered by your operator's licence)

| | | |
|----------------------------------------|---------------------------------------|---------------------------------------------------------|
| <input type="checkbox"/> North Eastern | <input type="checkbox"/> Welsh | <input type="checkbox"/> South Eastern and Metropolitan |
| <input type="checkbox"/> North Western | <input type="checkbox"/> West Midland | <input type="checkbox"/> Scottish |
| <input type="checkbox"/> Eastern | <input type="checkbox"/> Western | |

2. Which industry sectors do you work in?

| | | |
|-----------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Agriculture / Tipping | <input type="checkbox"/> Food Manufacturing - Bagged | <input type="checkbox"/> Parcels |
| <input type="checkbox"/> Aerospace & Defence | <input type="checkbox"/> Food Manufacturing - Bulk Tanker | <input type="checkbox"/> Public Authorities |
| <input type="checkbox"/> Car Transporting | <input type="checkbox"/> Food / Chill | <input type="checkbox"/> Quarries |
| <input type="checkbox"/> Chemical - Bagged | <input type="checkbox"/> Food / Frozen | <input type="checkbox"/> Removals |
| <input type="checkbox"/> Chemical - Bulk Tanker | <input type="checkbox"/> Food Service | <input type="checkbox"/> Retail - Food |
| <input type="checkbox"/> Construction - Brick & Block | <input type="checkbox"/> Food Ambient | <input type="checkbox"/> Retail - Non-Essential |
| <input type="checkbox"/> Construction - Civil Engineering | <input type="checkbox"/> Fuel Tankers | <input type="checkbox"/> Textiles |
| <input type="checkbox"/> Construction - Drywall | <input type="checkbox"/> General Haulage | <input type="checkbox"/> Temperature Controlled Plants |
| <input type="checkbox"/> Construction - Tippers | <input type="checkbox"/> Gas / Oxygen | <input type="checkbox"/> Waste & Recycling |
| <input type="checkbox"/> Container Logistics / Rail | <input type="checkbox"/> International Road Haulage | <input type="checkbox"/> Wholesale |
| <input type="checkbox"/> Drinks On trade/Off trade | <input type="checkbox"/> Manufacturing | |
| <input type="checkbox"/> Drinks - Soft | <input type="checkbox"/> Pharma | |
| <input type="checkbox"/> Events | <input type="checkbox"/> Pallet Network | |

3. How many tractor units do you have in each category?

- 42T+
- 36T up to 42T
- Below 36T

Vehicles above 42T do not benefit from the whole 2T allowance. Please input the total tractor units you are operating across all operating centres. This will allow us to review how many operators may not benefit from the full allowance.

4. In total how many trailers does your company operate?

Please input the total number of trailers you are operating across all operating centres. This will allow us to produce a ratio of tractor units to trailers across the industry.

5. What percentage of your total fleet operates in each shift pattern?

- Day shift only
- Night shift only
- Double / Multi Shift (over 12 hours with multiple drivers or loads)
- Tramping
- Other

Please estimate the percentage for each type of shift. Some operators will sit wholly within one category. This will indicate the charging profiles needed to fulfil the needs of operational patterns.

6. How many miles does each shift cover on average?

- Day shift only
- Night shift only
- Double / Multi Shift (over 12 hours with multiple drivers or loads)
- Tramping
- Other

Please convert to miles if in km by multiplying by 0.62

7. Thinking about each delivery, what is your average miles to the delivery point?

If a multi drop operation - average miles between each drop

8. What is your average weight (in tonnes) of payload for each delivery? (Excluding the unladen vehicle weight)

This is the maximum load weight as you would leave the depot.

9. What is your average mileage per vehicle per annum.

Please convert to miles if in km by multiplying by 0.62

10. What percentage of your deliveries could be fulfilled with a 300 mile / 500 km range (Delivery only - not return)?

11. Thinking about each delivery, what percentage of delivery points could be reached with a 300 mile range?

12. What percentage of your deliveries could be fulfilled with a 300 mile / 500 Km range (Delivery & Return Trip)?

13. Thinking about each delivery, what percentage of delivery round trips could be reached with a 300 Mile range?

14. What percentage of your deliveries could be fulfilled with a 22T payload?

The 22T payload is taken from a 44T Gross Train Weight with an expected weight of 14.5T for a 6x2 Tractor Unit (capable of 300Mile Range at 44T) and 7.5T for the trailer.

15. What is the average mileage your vehicles operating below 22T payload cover in a shift?

16. How often are your loads operating within 2T of the Gross Train Weight?

17. How many of your customers have requested or enquired about Electric HGV use for their contracts?

Breakdown of responses by industry sector (n=114)

Annex 3 – Questions to Vehicle Dealers

1. How does the current 2-tonne weight allowance for ZEVs impact on your ability to offer competitive payloads compared to ICE vehicles?
2. Are you finding that the heavier powertrains (e.g. batteries or hydrogen tanks) are still causing a payload penalty despite the allowance?
3. Do the unchanged axle weight limits restrict your ability to fully utilise the additional gross vehicle weight allowance for BEVs?
4. Would an increase in driven axle weight (e.g. to 12.5-tonnes) help accommodate heavier ZEV components more effectively?
5. Are current maximum vehicle lengths sufficient to accommodate ZEV powertrains without compromising cab space or safety features?
6. Do the current cab length restrictions limit your ability to integrate zero-emission technologies while considering payload and dimensions.
7. Have you had to redesign cabs or sacrifice features to comply with length limits?
8. How do the 'deemed to comply' turning circle regulations (e.g. 8,135mm kingpin-to-bogie distance) affect your ability to meet the requirements with a BEV?
9. Are Longer Semi-Trailers (LSTs) a barrier to ZEV adoption?
10. Do current Weights and Dimensions regulations create a commercial disadvantage for ZEVs compared to ICE vehicles in terms of payload, range, or operational flexibility?
11. Are you finding the regulatory framework supportive or restrictive in your transition to zero-emission fleets?
12. What specific changes would you recommend to better align regulations with BEV design realities?

About the RHA

- The RHA is the largest dedicated trade association representing over 8,500 HGV, coach, and van operators across the UK.

Our members are operators of vehicles who, between them, operate around 250,000 HGVs (half of the UK fleet) out of 10,000 operating centres and range from a single truck company to those with thousands of vehicles.

The UK road haulage sector is responsible for 81% of all freight movements and is directly involved in the transportation of 98% of all agricultural products.

www.rha.uk.net

- To find out more, please contact:
policy@rha.uk.net

■ Please connect with us:

-  @RHANews
-  /RoadHaulageAssociation
-  /road-haulage-association
-  TheRoadHaulageAssociation
-  @roadhaulageassoc

RHA