

## **Executive Summary**

Fuels Industry UK is a trade association whose members refine and supply over 85% of the UK's transport fuel and are essential to delivering both today's energy security and tomorrow's transition to lower-carbon fuels. Our members own and operate the UK's four surviving refineries and fuel supply infrastructure, employing thousands directly and supporting hundreds of thousands more in the wider supply chain.

The downstream oil sector supports the UK's ambition to decarbonise heavy goods vehicles (HGVs). However, the consultation proposes a regulatory pathway that risks excluding proven and emerging low-carbon fuels (LCFs) and fails to adopt a technology-neutral approach. This is despite Government acknowledging ZE HGV uptake remains nascent, HGVs remain challenging to decarbonise, and LCFs already deliver significant carbon savings today.

Our central position:

The UK should acknowledge and maintain a credible role for low-carbon liquid fuels especially for long-haul, heavy-payload and specialist HGVs where ZE technologies will not be operationally viable at sufficient scale in the 2030s. This is a position supported by Logistics UK and is therefore representative of views beyond the downstream sector.

The reader is especially directed to responses to Questions 9 and 17.

## **Part A: Current market status**

- 1. Do you think the Certification Regulation (EU) 2017/2400 should be amended within the UK to align with the 2nd and 3rd amendments, as adopted in the EU?**

Fuels Industry UK has no strong position on administrative alignment with EU amendments and believes OEMs would have a stronger opinion. However, it acknowledges that the 2<sup>nd</sup> amendment introduced methods for assessing the emissions from a wider range of technologies, including fully electric. While these fall short of a true full life cycle assessment (Well-to-Wheel), which should be adopted, the alignment would ensure consistency.

## **Part B: New regulation options for HGVs**

- 2. What are your views on Option 1 regarding a strengthened and expanded CO<sub>2</sub> standard for HGVs?**

Strengthening CO<sub>2</sub> standards is acceptable *only* if they remain technology-neutral and recognise LCF-compatible ICE improvements. This is a position explicitly supported by Logistics UK, which recommends a multi-solution approach that includes LCFs<sup>1</sup>. Furthermore, a less efficient vehicle using LCFs will always be less polluting than a more efficient vehicle using fossil fuels. Incentivising LCFs will achieve greater reductions in GHG emissions than enforcing OEM fleet-average CO<sub>2</sub> targets that will rely mainly on incremental efficiency improvements.

### **3. What are your views on Option 2 regarding the introduction of a ZEV mandate limiting the sales of non-ZE HGVs**

Forcing OEMs to sell specific vehicles that preclude the use of GHG emissions saving LCFs is *not* a technology-neutral approach and therefore is not supported by Fuels Industry UK. It is also possible that limiting the sale of non-ZE HGVs results in aging vehicles being used for longer. Without also incentivising LCFs this would result in the opposite outcome in terms of sector decarbonisation.

### **4. If you agree with using Option 2 as a future framework, should the ZE HGV mandate be accompanied by a CO<sub>2</sub> standard for non-ZE HGV vehicles?**

Fuels Industry UK does not agree with Option 2. As discussed in response to Q2, emissions reductions through efficiency improvements or electrification will have a smaller impact than those provided by LCFs. Due to years of incremental gains, efficiency improvements tend to be only a few per cent at most. Hybrid HGVs offer a maximum GHG saving of approximately 50% when compared to a diesel-powered equivalent<sup>2</sup>, while fully electric HGVs are estimated to achieve a 63% reduction when also accounting for future grid decarbonisation. In comparison, LCFs already deliver at least 60% GHG emissions saving today, as required to be eligible for a Renewable Transport Fuel Certificate (RTFC)<sup>3</sup>.

### **5. What are your views on Option 3 considering requirements for fleets to purchase or lease an increasing share of ZE HGVs?**

The disadvantages mentioned in the consultation, particularly around the additional burden to operators is the more compelling argument. A technology neutral approach, which is likely to favour solutions that are immediately implementable,

---

<sup>1</sup> Logistics UK, Powering change: building a credible plan for decarbonising road logistics, 2025

<sup>2</sup> Zacharof, N., Bitsanis, E., Broekaert, S., & Fontaras, G. (2024). Reducing CO<sub>2</sub> Emissions of Hybrid Heavy-Duty Trucks and Buses: Paving the Transition to Low-Carbon Transport. *Energies*, 17(2), 286.

<https://doi.org/10.3390/en17020286>; Luján, J. M., García, A., Monsalve-Serrano, J., & Martínez-Boggio, S. (2019). Effectiveness of hybrid powertrains to reduce the fuel consumption and NOx emissions of a Euro 6d-temp diesel engine under real-life driving conditions. *Energy Conversion and Management*, 199, 111987.

<sup>3</sup> <https://theicct.org/battery-electric-trucks-emit-63-less-ghg-emissions-than-diesel/>

should be favoured. If this option is selected then, SMEs, which account for 99% of road freight operators<sup>4</sup>, must be given exclusions as they are already under significant strain from successive policy decisions. In addition to those mentioned, these include hikes to employer National Insurance rates and wage increases. Additionally, both Vehicle Excise Duties and the HGV Levy are due to rise further in April 2026<sup>5</sup>.

**6. If you agree with using Option 3 as a future framework, what eligibility criteria should be set to include freight operators in a fleet mandate?**

No response.

**7. If you agree with using Option 3 as a future framework, should a purchasing requirement, fleet requirement, or a combination be established?**

No response.

**8. Of the options presented, what is your preferred approach, or combination of approaches, for reducing emissions from HGVs and delivering a phase-out of new non-ZE HGVs?**

Fuels Industry UK strongly believes that any solution where the critical, immediate and sustained role of LCFs is overlooked is deeply flawed. All options outlined ignore the role of LCFs today and for the future and therefore ignore the developed and skilled UK downstream sector able and prepared to meet these demands.

**9. Are there any alternative approaches that the government should consider to reduce CO<sub>2</sub> emissions from HGVs?**

It is paramount that the Government goes further than just acknowledging the role of LCFs and referencing the RTFO. The consultation itself states that LCFs “are already delivering significant carbon savings in the current surface transport fleet, including HGVs”, yet the proposed framework does not embed these fuels into future regulatory design. This risks producing an implicitly flawed, single-technology pathway that overlooks practical decarbonisation routes available today.

A more robust, evidence-based approach must be adopted that includes full Well-to-Wheel (WTW) assessment methodologies, rather than solely considering Tank-to-Wheel, tailpipe emissions. This would allow the comparison of technologies based also on their upstream emissions, for example the production pathways of hydrogen show

---

<sup>4</sup> Logistics UK, Powering change: building a credible plan for decarbonising road logistics, 2025

<sup>5</sup> <https://www.gov.uk/guidance/how-to-use-the-hgv-levy-service>

a large variation in carbon emissions but its use falls within the Zero Emission category.

Further considerations regarding inclusion of LCFs within the framework include:

- European emissions standards have become increasingly stringent driving down the pollutant emissions from HGVs substantially. The consultation points out the small contribution of HGVs, which emit 5 per cent of domestic transport emissions of NOx. The average annual reduction rate in NOx from 1990 to 2024 is 5 per cent<sup>6</sup>. In 2024, domestic transport accounted for 30 per cent of NOx emissions<sup>7</sup>. That means that for over 30 years, each year we have reduced NOx emissions by over three times the quantity that HGVs currently emit. Penalising ICE vehicles and thus preventing them from using LCFs on the grounds of NOx emissions is unfounded.
- Both the OECD<sup>8</sup> and the UK Air Quality Expert Group<sup>9</sup> highlight the increasing proportion of non-exhaust emissions of PM2.5. Furthermore, they show that even with increased uptake of EVs these emissions are expected to keep increasing. Non-exhaust emissions of PM2.5 can be attributed to brake, road and tyre wear, all of which increase with increased vehicle weight. Therefore, HGVs are likely responsible for a disproportionately large share (relative to the number of vehicles) of these emissions and electrification, which tends to increase vehicle weight, will only amplify this. This is the case even when accounting for regenerative braking techniques. As with NOx, precluding the use of LCFs on the grounds of PM2.5 emissions is unfounded.
- Low Carbon Fuels, which includes e-, bio- and waste-derived fuels, decarbonise regardless of vehicle efficiency and are already acknowledged to be delivering significant carbon savings. They can be likened to solar or wind generation decarbonising the electricity required to charge batteries in EVs as renewable fuels provide reduced carbon energy directly to an ICE-powered vehicle.
- The consultation refers to “growing cross-modal and international competition for constrained feedstocks”. While this must be carefully managed, it is not a sufficient reason to exclude LCFs, just as grid connectivity issues are not a reason to exclude adding more renewable electricity generation.
- The road freight industry requires very high utilisation, both in terms of day-to-day and lifetime usage. Reports of HGVs having total lifetime mileages of up to a million miles<sup>10</sup>. Current technology has proven able to meet these demands and therefore should be considered in part of the long-term solution to provide certainty until new ZE HGV technology has proven able to achieve this. There

---

<sup>6</sup> <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-nitrogen-oxides-nox>

<sup>7</sup> ENV01 – Table 3b

<sup>8</sup> [https://www.oecd.org/en/publications/non-exhaust-particulate-emissions-from-road-transport\\_4a4dc6ca-en.html](https://www.oecd.org/en/publications/non-exhaust-particulate-emissions-from-road-transport_4a4dc6ca-en.html)

<sup>9</sup> <https://uk-air.defra.gov.uk/research/aqeg/zero-emission-vehicles>

<sup>10</sup> <https://www.rechtien.com/service/service-parts-tips/semi-truck-life/>

are a number of concerns regarding battery lifetime, especially when considering the additional strain and impact of high charging rates which would be crucial to keeping average daily ranges at the current level.

## **Part C: Defining the scope for zero-emission vehicles**

### **10. Do you have any comments on the exclusion of ZE HGVs with a GVW between 3.5 tonnes and 4.25 tonnes from a future HGV regulation?**

No response.

### **11. Do you think a regulatory framework for reducing CO<sub>2</sub> emissions from the HGV sector should be extended to include coaches?**

Inclusion of coaches should only be considered if LCF-powered vehicles are to be acceptable as the coach sector is dominated by many SMEs covering a wide variety of routes. Following the logic of options 3 for the new regulatory framework, SMEs would be given exclusions and this would need to be carefully considered for coach operators.

### **12. What are your views on a future regulation including CO<sub>2</sub> emission reduction targets for trailers?**

These are supported as improvements in trailer design will reduce energy requirements for both ICE and ZE HGVs.

### **13. Should a derogation or an exemption be given to smaller volume HGV manufacturers in a regulatory framework? If yes, what should that threshold be?**

The consultation notes that "seven manufactures [account for] over 95% of [sales of] HGVs". The UK could follow Europe's revised standards which exempt manufacturers who sell fewer than 100 vehicles a year.

### **14. Should an exemption be given to smaller volume coach manufacturers? If yes, please elaborate why and explain what should that threshold be?**

If coaches are to be included, as per question 11, then a similar approach to that described in response to question 13 should be applied. However, there are currently far fewer manufacturers of ZE coaches in the UK which is why the contribution of LCFs is critical.

### **15. Should a sunset clause be set for any derogation? If yes, by what year should this be set?**

If a sunset clause is to be set, it should account for normal manufacturer cycles (design, testing and production) and not occur before mandated timelines for ZE HGVs in 2040.

**16. Should any additional vehicles be exempt from the standards that we have not considered here?**

Heavy and specialist vehicles should be considered for exemptions or longer timelines to move to ZE, if the ZE definition is maintained as tailpipe dependent only.

**17. What criterion, or combination of criteria, should be used to set the eligibility of a ZE HGV?**

Fuels Industry UK does not support a purely no tailpipe emissions definition of ZE. A more robust, defensible and effective definition would consider full Well-to-Wheel emissions (including those embedded in the vehicle itself) to produce a  $\text{gCO}_2/\text{tonne-km}$  as this reflects the true impact of the vehicle and its operation. This should be assessed based on actual data and not rely exclusively on projections (e.g. electricity carbon intensity reducing, battery technology advancing). This reflects the criteria described in option two of item 128. The reporting of this carbon intensity cannot be solely the responsibility of the manufacturer since the fuel used (whether that is liquid fuel or electricity) is a crucial part of the equation.

**18. For vehicles not covered under the scope of the Certification Regulation, what criterion, or combination of criteria, should be used to set the eligibility of a ZE HGV?**

For such vehicles the same criteria as described in the response to question 17 should be applied but with sensible scaling factors. These scaling factors could be implemented according to vehicle weight. VECTO categories could be used to aid this scaling.

**19. For your preferred criterion, or combination of criteria, what eligibility threshold do you propose? Why?**

A threshold should be applied based on carbon intensity to ensure continual operations and improvements in the fleet. For example, the RTFO requires a renewable fuel to achieve a minimum of 60% GHG saving to receive certificates. This can be increased with time to reflect ambitions and market maturation. In so doing, the carbon intensity of the sector will be measurably reduced.

## **Part D: Vehicle categories, weightings, flexibilities, and penalties**

**20. Do you agree with maintaining the VECTO vehicle category segmentation? If not, what alternative segmentation would you suggest?**

Fuels Industry UK supports maintaining the VECTO categorisation to minimise burden on OEMs and ensure a defensible approach is continued.

**21. What metric should be applied as a weighting system for a particular vehicle grouping?**

Maintaining the current methodology of the mileage payload weighting factor would provide sensible results. However, as the proportion of battery-powered HGVs increases in the sector considering the total lifetime mileage will provide a fairer reflection of full lifetime emissions. The “representative conventional vehicle” could be a modern HGV running purely on fossil-derived diesel.

**22. Which flexibilities do you think should be established under a future HGV regulation?**

As highlighted in response to question 9, the emissions from a vehicle are defined by the energy used to power that vehicle. A more efficient vehicle not using LCFs will emit more lifecycle CO<sub>2</sub> than a less efficient vehicle using LCFs. This is also true for battery-powered vehicle if the carbon intensity of electricity exceeds that of an LCF. Driving fleet decarbonisation by focusing solely on OEMs is a deeply flawed approach.

**23. What is your preferred option for credit transfer? If there is an alternative option you would like to have considered, please elaborate here.**

No response.

**Part E: ZE HGV uptake/CO<sub>2</sub> emission reduction trajectories**

**24. Do you have any comments on the level and provision of penalties and enforcement in a future HGV regulation?**

The reader is directed to the response to question 22. It highlights how this approach is not technology neutral as it ignores that an LCF can achieve greater decarbonisation of the fleet than electrification. For context, the UK carbon intensity at the time of writing (4.15pm, 17<sup>th</sup> February 2026) was 213 gCO<sub>2</sub>/kWh<sup>11</sup>. The reference carbon intensity of the combustion of a fossil fuel was 83.8 gCO<sub>2</sub>e/MJ<sup>12</sup>, which is about 301.7 gCO<sub>2</sub>/kWh. The minimum threshold of 60% reduction would produce a fuel with a lower carbon intensity than the grid. This further emphasises the reason to use LCFs and to consider decarbonisation beyond the fleet manufacturers.

---

<sup>11</sup> <https://carbonintensity.org.uk/>

<sup>12</sup> <https://www.gov.uk/government/statistics/renewable-fuel-statistics-2023-final-report/renewable-fuel-statistics-2023-final-report>

Therefore, penalties should:

- Be proportional to lifecycle emissions
- Consider the impact of LCFs, which demonstrably reduce emissions
- Provide a technology-neutral approach

**25. Which VECTO groups should be included in the 2035 phase out dates, and which should be included in the 2040 phase out dates?**

No response

**26. For your chosen regulatory option, what target trajectory do you think should be set?**

No response.

**27. If a ZEV mandate is your preferred option, should a CO<sub>2</sub> improvement target also be set for the non-ZE HGV fleet? If so, please elaborate.**

Fuels Industry UK supports an expanded use of LCFs to achieve real and immediate decarbonisation of the sector.