

Written Evidence by the Institution of Mechanical Engineers (IMechE) to the UK Department for Transport and Office for Zero Emission Vehicles consultation on a 'New HGV CO2 emissions regulatory framework for the UK'

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About the Institution of Mechanical Engineers and why we are responding to this consultation

The Institution of Mechanical Engineers (IMechE) represents over 110,000 engineering professionals and students in the UK and internationally.

This response has been prepared by the IMechE's Engineering Policy Unit with expert advice from the Institution's Automobile Division and Powertrain Systems and Fuels Group. These IMechE committees bring together expertise from across vehicle design, zero emissions travel, manufacturing, powertrain systems, infrastructure, safety, and lifecycle engineering. This submission draws on published IMechE policy positions, member expertise, and engagement with industry, government, and research organisations.

We are responding due to the Institution's specific knowledge in this area and because, more widely, a key part of our IMechE 2030 Strategy¹ is to "harness the expertise of our members and employees for the good of society and promote engineering as a means for solving the major challenges faced by our planet."

Response summary

Principles and key messages:

- Policy should be technology neutral and allow the most appropriate low carbon solutions to emerge through competition. Regulation should consider whole life cycle emissions, rather than just tailpipe.
- Need alignment with EU where possible to remove the possibility for unintended consequences and perverse incentives.
- This legislation should focus on HGVs only. Other transport modes, like buses, coaches, and heavy-duty vehicles used in farming and construction, should be regulated separately.
- Truck manufacturing is a high capital investment industry with long lead times therefore stability of legislation and regulation should be a priority.

¹ <https://www.imeche.org/about-us/our-strategy/>

- We need to learn the lessons from certain aspects of the ZEV mandate that did not work for light vehicles. A ZEV mandate for HGVs is not the right approach and could have serious negative economic consequences.
- Any solution that increases the cost of moving freight will feed through to the cost of everyday goods, thereby driving higher inflation.
- If the government is pushing industry to produce and sell more battery electric HGVs, they need to also make sure the charging infrastructure keeps pace with roll out.

We recommend a holistic systems approach that integrates consumer policy, infrastructure delivery, industrial strategy, and fiscal design, supported by robust, transparent metrics and long-term policy stability.

Q1 – 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?

Because both small and large haulage trucks and coaches travel internationally, the UK should seek to align with the EU as much as possible, but there may be small exceptions.

For example, the EU is aiming for 43% emissions reductions by 2030 and 64% by 2035.² The UK will not be able to meet these targets due to having very different vehicle combinations. EU regulations have been optimised around 40 tonne, 4-metre high five axle articulated vehicle combinations, which are predominant on the continental mainland as opposed to the 44 tonne, taller six axle combinations that prevail in the UK.

There is also the potential for loopholes in the regulation with purchase/registration of EU trucks in UK. If it becomes cheaper to buy and register a truck in the EU but run it in the UK then companies will take advantage of this.

In regulating heavy vehicles, there is also the possibility for negative unintended consequences, e.g. companies will choose to operate multiple small vans rather than one HGV, thereby increasing the environmental impact.

The UK should have its own conditional targets on the wider transport system, for example in refueling and charging infrastructure.

² https://climate.ec.europa.eu/eu-action/transport-decarbonisation/road-transport/lorries-buses-and-coaches_en

Q2 – What are your views on Option 1 regarding a strengthened and expanded CO₂ standard for HGVs?

There should be a UK-specific glide path for CO₂ emissions standards for new HGVs based on revised categorization of weights and dimensions.

This could work in conjunction with positive incentives for fleet operators in Option 3. A combination of requirements on manufacturers and incentives for fleet operators would be the best solution to enable decarbonisation while not disadvantaging the UK compared to European neighbours.

Regulations will not affect every company equally due to different technologies and usage.

Some market pull will also be required, with incentives for purchasing zero-emissions HGVs. For example, an accelerated roll-out of rapid chargepoints and removal of VAT charged on electricity for chargepoints.

It would be better for manufacturers if there is alignment with the EU. It is important that UK-specific legislation does not disadvantage UK vehicle manufacturers and operators relative to the EU. Costs will increase if they are having to meet two separate specifications.

Q3 – What are your views on Option 2 regarding the introduction of a ZEV mandate limiting the sales of non-ZE HGVs

We do not believe a ZEV mandate is the right solution for HGVs. Lessons should be learned from the light vehicle mandate, especially for vans, which the IMechE explored in our recent response to the House of Commons Transport Committee's inquiry on *Supercharging the EV Transition*.³

For example, that it incentivised the purchase of diesel vehicles before changes were implemented, and billions of pounds of fines burdened the industry by setting targets that were not realistic to meet.

A ZEV mandate is not appropriate for HGVs because it would:

- Not be technology neutral.
- Negatively affect the UK vehicle market.

³ Institution of Mechanical Engineers. (2026). Written evidence to the House of Commons Transport Committee's inquiry on Supercharging the EV Transition. <https://www.imeche.org/policy-and-press/consultation-responses/>

- Be easy to work around and/or get exemptions.

It could also adversely impact the UK manufacturing industry. The transition required should be driven by market incentivisation that recognises both the situation in the EU and the UK.

There should also be consideration of wider energy and environmental issues. For example, grid infrastructure as the requirement for high power rapid chargers may proceed at a pace that the electricity system cannot accommodate. There are already queues for planning infrastructure and grid connection to serve HGV rapid charging parks, which will put extra stress on grid capacity. Rapid roll-out of fully electric HGVs will also increase the requirement for critical materials. There is currently no robust supply chain for many key materials.⁴

Q4 – If you agree with using Option 2 as a future framework, should the ZE HGV mandate be accompanied by a CO₂ standard for non-ZE HGV vehicles?

N/A

Q5 – What are your views on Option 3 considering requirements for fleets to purchase or lease an increasing share of ZE HGVs?

Incentives should be put in place for fleet operators to reduce emissions, but we are against mandates. This is to avoid unintended consequences, and also to not punish small owner-operators.

Q6 – 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?

N/A

Q7 – If you agree with using Option 3 as a future framework, should a purchasing requirement, fleet requirement, or a combination be established?

⁴ National Engineering Policy Centre. (2024). *Critical materials - reducing demand and ensuring sustainability*. <https://nepc.raeng.org.uk/policy-work/critical-materials-reducing-demand-and-ensuring-sustainability/>

N/A

Q8 – 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?

Our preferred option is a UK-specific CO₂ emissions reduction glide path. There should be ambitious but achievable emissions targets implemented on manufacturers in combination with incentives for fleet operators to reduce emissions.

Q9 – Are there any alternative approaches that the government should consider to reduce CO₂ emissions from HGVs?

There should be an increasing appreciation of the whole life cycle emissions of vehicles. This is important due to the energy involved with producing batteries and because ‘carbon leakage’ may occur whereby manufacturing moves to countries with less stringent environmental regulations. The UK should look to mirror and align with the EU’s carbon border adjustment mechanism.

Regulations should also seek to reduce emissions from existing fleet by incentivising the use of sustainable low-carbon fuels that can directly replace diesel and natural gas.

The government should encourage research, and generally support the case, for liquid E-fuels. Tailpipe legislation of CO₂ which precludes their use would have negative environmental consequences.⁵

Q10 – 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?

N/A

Q11 – Do you think a regulatory framework for reducing CO₂ emissions from the HGV sector should be extended to include coaches?

⁵ Institution of Mechanical Engineers. (2020). *Accelerating Road Transport Decarbonisation*.
<https://www.imeche.org/policy-and-press/reports/detail/accelerating-road-transport-decarbonisation>

Other large vehicles that are not used for moving goods by road should be regulated separately. For example, buses are more likely to return to a depot at night so electric charging will be easier and less costly. Some bus yards are opening up for HGV charging as they are empty during the day. Vehicles that travel large distances and need to use public charging or refueling will have different issues to deal with.

Q12 – What are your views on a future regulation including CO₂ emission reduction targets for trailers?

Trailers should not be included at this time due to the complex and country specific nature of the trailer industry. It is a small niche industry that would not have the resources to deal with onerous regulations that would have a limited impact on emissions.

Q13 – Should a derogation or an exemption be given to smaller volume HGV manufacturers in a regulatory framework? If yes, what should that threshold be?

There should be exemptions for certain use cases, e.g., Special Types General Order (STGO) vehicles. We would propose that exemptions are based on vehicle type / application as opposed to sales volume.

Q14 – Should an exemption be given to smaller volume coach manufacturers? If yes, please elaborate why and explain what should that threshold be?

N/A

Q15 – Should a sunset clause be set for any derogation? If yes, by what year should this be set?

Lessons need to be learned from the ZEV mandate for light fleet. Truck manufacturing is a high capital investment industry with long lead times therefore stability of legislation and regulation should be a priority.

The UK should align with the EU as much as politics allows and have intermediate checkpoints in the run-up to any net-zero target for the industry.

Q16 – Should any additional vehicles be exempt from the standards that we have not considered here?

The defence sector should be excluded due to the unique use cases.

Q17 – What criterion, or combination of criteria, should be used to set the eligibility of a ZE HGV?

N/A

Q18 – 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?

N/A

Q19 – For your preferred criterion, or combination of criteria, what eligibility threshold do you propose? Why?

N/A

Q20 – Do you agree with maintaining the VECTO vehicle category segmentation? If not, what alternative segmentation would you suggest?

N/A

Q21 – What metric should be applied as a weighting system for a particular vehicle grouping?

N/A

Q22 – Which flexibilities do you think should be established under a future HGV regulation?

N/A

Q23 – What is your preferred option for credit transfer? If there is an alternative option you would like to have considered, please elaborate here.

N/A

Q24 – Do you have any comments on the level and provision of penalties and enforcement in a future HGV regulation?

We do not believe penalties should be imposed except in extreme cases. Lessons should be learned from the ZEV mandate for cars and vans, where £5bn of penalties were imposed in 2025.⁶

Penalties would be appropriate if vehicle manufacturers were wholly in control of industry buying electric trucks but this is not the case. Market drivers, for example charging infrastructure, have a large impact and manufacturers should not be penalised for things outside of their control.

Trucks are also usually built to order for specific operator specs, which regulation should take into account to not negatively impact manufacturers.

Q25 – Which VECTO groups should be included in the 2035 phase out dates, and which should be included in the 2040 phase out dates?

N/A

Q26 – For your chosen regulatory option, what target trajectory do you think should be set?

Q27 – If a ZEV mandate is your preferred option, should a CO₂ improvement target also be set for the non-ZE HGV fleet? If so, please elaborate.

N/A

⁶ <https://www.smmmt.co.uk/new-car-market-up-but-zev-trajectory-unviable/>