

Zero Emission Bus and Coach Policy  
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Emailed to: [buses@dft.gov.uk](mailto:buses@dft.gov.uk)

20 May 2022

Dear Sir/Madam

### **Ending the sale of new non-zero emission buses, coaches and minibuses**

I am writing to you as Lead Officer for Transport for the South East (TfSE) to respond to DfT's consultation on setting a deadline for the sale of non-zero emission buses, coaches and minibuses.

As a sub-national transport body, TfSE represents sixteen local transport authorities: Brighton and Hove, East Sussex, Hampshire, Kent, Medway, Surrey, West Sussex, the Isle of Wight, Portsmouth and Southampton, and the six Berkshire unitary authorities. They are represented on the TfSE Partnership Board along with the region's five local enterprise partnerships, district and borough authority representatives, protected landscapes, National Highways, Network Rail and Transport for London.

TfSE published its transport strategy in July 2020. Its strategic vision includes achieving net zero carbon from transport in the region by 2050. With decarbonisation front and centre, this consultation is of particular interest to TfSE. This is a potential policy tool that can make a clear signal to the bus market and fits completely with what TfSE is aiming to achieve.

TfSE's answers to the specific questions in the consultation are set out in the attached paper.

This is an officer-level letter at this stage, subject to endorsement by TfSE's Shadow Partnership Board at its next meeting on 13 June; a further iteration of this response may therefore follow.

Yours faithfully



Rupert Clubb  
Lead Officer, Transport for the South East  
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## TfSE response to DfT's consultation: Ending the sale of new non-zero emission buses, coaches and minibuses, May 2022

### 1/2. Views on setting a specific date between 2025 and 2032 for ending the sale of new non-zero emission buses

Yes, a specific date should be set that gives a clear steer to bus manufacturers, bus operators and others in the industry – such as those providing funding and financing on the direction that UK plc wants to follow. This should be a consistent approach with that for light vehicles (cars and vans), for example.

The impact of the increased 'cost of entry' to zero-emission bus operations, both in terms of the cost of purchasing the vehicles and the refuelling and recharging kit, on bus operating costs will need to be kept under careful review. This will be vital given the ongoing challenges with the financial viability of bus operations with higher costs meaning fewer buses operating on fewer routes.

Another key signal could be to have a clear target date for a minimum standard for internal combustion engine (ICE) buses: such as phasing out all service buses that do not meet Euro IV standards by 2025 and Euro V standards by 2030. Those dates should fall close to the times that most Euro IV/V buses should be life-expired anyway, but they could still offer a stretching target to some operators. The government could even reserve its position to bring a 2030 deadline for Euro V even earlier, if appropriate.

In the meantime, TfSE supports a market mechanism based on having higher BSOG payments for the lowest emission vehicles.

At present, the bus manufacturing industry does not seem geared up to producing 100% zero-emission vehicles from as early as 2025. There are very good zero-emission bus types available and the range is growing. There is a challenge too for the power supply industry as to whether it is geared up to upgrade many bus operators' depots to battery electric, hydrogen or some other solution by installing the necessary supply, storage and charging/refuelling infrastructure by that date.

One of the factors made apparent at the recent ITT Hub event (11/12 May 2022) was that there are industry players who can work together to provide turn-key solutions to supply of infrastructure, fuelling and new zero-emissions buses that can create potentially affordable deals for bus operators, taken over a 15-year operating life. The key thing to achieve this is to make sure that all the relevant suppliers work together on the complete product (a zero-emissions bus dept/sub-fleet), to manage total costs downwards. Decisions made early in the process of planning and potential investment can make a huge difference in whether such solutions become affordable or not.

Many bus fleets are leased, rather than bought outright. This may help to spread the initial capital investment over a longer period. At a time of increasing interest rates though, outright purchase may become more attractive over time.

Government and sub-national transport bodies may have a role in encouraging and facilitating those joined-up deals that can make zero-emission bus purchase, or conversions from ICE, more attractive.

3. [While the range 2025-2032 is outlined above we also welcome views on your preferred specific end date with reasons why you feel it is appropriate](#)

Bus manufacturers do not appear to be in a position to provide a wholly zero-emission solution for all new buses in the next 2-3 years. For example, the Scania Group<sup>1</sup> expect only 10% of their vehicle sales (trucks and buses) will be zero-emission by 2025 and 50% by 2030.

With that in mind, 1<sup>st</sup> January 2030 would seem to be the earliest that a deliverable target can be set for all new bus sales to be zero-emission. Even then, there may be aspects of the new bus supply chain that may find that deadline hard to deliver. But still, a clear statement of intent from the UK government will provide considerable momentum to make that target achievable – especially if supported by other nations too.

National and regional government have an important role in the meantime to encourage roll out of as many examples of zero-emission bus operation as possible. This should go beyond supporting demonstration projects; it must involve government working with the bus sector to accelerate take up of zero-emission bus solutions with the aim of normalising them.

4. [We also welcome views on the proposal to use an approach based on type approval categories](#)

The proposal in the consultation is that the end date under consideration should apply to all buses with a capacity of over 22 passengers plus driver, based on vehicle type approval classifications. This appears appropriate *provided that* this results in a joined-up solution along with the ban already in place on sales of new petrol- or diesel-only cars and vans from 2030, leaving no loopholes somewhere between the two.

5. [We welcome further views on the challenges arising from charging and refuelling infrastructure in ending the sale of new non-zero-emission buses and what more might be needed to address these challenges?](#)

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<sup>1</sup> See <https://www.scania.com/group/en/home/sustainability/sustainable-transport/electrified-solutions.html>

There are many different ways of providing complete zero-emission bus solutions. Before long, there will need to be greater focus on open-access standards for charging and refuelling infrastructure. There is considerable concern that too much will end up being spent on different ways of achieving the same thing – not least because of the pace at which technological development provides new and improved solutions to problems.

Some of the zero-emission recharging/refuelling equipment required at depots (eg a new electricity sub-station or hydrogen storage/processing) may require planning consent prior to installation. This could represent an obstacle to an operator being able to adopt the technology, especially if consultees consider the proposal a ‘bad neighbour’ development). There needs to be a greater understanding among local planning authorities that, increasingly, bus operators will want to be able to upgrade their depots to have zero-emission fuelling capability – and to reflect that in their spatial policies. It may be that some of the required infrastructure may need to become Permitted Development (especially in the case of battery-electric).

6/7 Against this background we want to use this opportunity to obtain evidence and views to understand:

- the challenges to transitioning to a zero-emission coach/minibus fleet;
- what might be a realistic date to end the sale of new non-zero-emission coaches/ minibuses;
- what would need to be true/in place to make the phase out of non-zero-emission coaches/minibuses happen; and
- what might Government do to accelerate the transition.

Coaches/minicoaches used on private hire or express service work can have different operating cycles from buses in service. Coaches, for example, may not return to their home depot as often as service buses do. They need to be able to find refuelling locations wherever they operate.

This issue is linked to the STBs’ work on alternative fuels for HGVs. The project will identify locations on the SRN and other A-road network that might be best suited to provide electric and hydrogen (H<sub>2</sub>) charging/refuelling. These will be locations along routes that see the greatest numbers of HGVs. If those facilities were then installed, they could be an important refuelling backbone for coach and minibus/minicoach operation too.

8 Do you consider the estimated impacts presented in the IA to be reasonable? If not, please specify the changes you would make, noting which assumptions and uncertainties you believe to be incorrect.

TfSE does not intend to offer a response on this issue. The bus industry itself is better placed to respond in an informed way.

- 9 How do you expect the upfront cost of:
- Battery electric buses
  - Hydrogen fuel-cell buses
  - Battery replacements
  - Fuel-cell replacements
  - Electric powertrains
- to change over the period 2025 to 2032. Please provide, or cite, any evidence you may have, or which informed your understanding
- TfSE has no specific evidence on this at present.
- 10 In the absence of any policy/regulation, what would you expect the uptake of zero emission buses to be over the period 2025 to 2032
- TfSE would expect uptake to be slower than putting a target date in place. We have no specific information on the extent to which this would be the case, but there is a lot more work to be done in the areas of electric bus design, battery technology, H<sub>2</sub> production/ transport and refuelling/charging infrastructure to decrease costs and develop emerging standardised technology approaches.
- 11 Do you believe that changes proposed through Ofgem’s Access and Forward-looking Charges Significant Code Review: Consultation will contribute to reducing the cost of obtaining sufficiently large electrical connections at bus depots?
- TfSE has no specific views or evidence on this point.
- 12 Do you have any evidence to indicate that additional zero emission buses might be needed on routes, given current and expected technological developments, and if so to what extent?
- Busier bus routes may require more vehicles if, say, battery-electric buses are unable to provide the same passenger capacity as the buses they replace(d). This could also be the case if converting operation to zero-emission attracted increases in passenger demand.
- There is then the wider issue that, to meet longer term (2050) decarbonisation targets, a higher proportion of trips will need to be made by modes including bus. That also points to a need to grow the fleet beyond a like-for-like replacement.
- 13 Do you have views/evidence on any potential impact that investment in zero emission buses over the period 2025-2032 might have on patronage and fares?
- This depends on whether fare levels are to be set purely on the basis of a commercial return sufficient to meet profit expectations, along with operating and capital costs; or are set to achieve other transport policy goals. Those goals could include modal shift away from private cars to more efficient forms of shared transport or to address the historic imbalance in the real terms rise in the cost of

using public transport compared to the cost of motoring over the last 30 years, for example.

In the medium term, in the absence of market intervention in fares setting, commercial fares could well rise faster for zero-emission bus fleets if all relevant capital costs are factored in. In the longer term, that trend should decrease as much of the fixed infrastructure could already be in place.

14-24 (various)

TfSE has no specific views or evidence on questions 14-24. Many of these are best addressed by operators and other providers in the bus sector.

- 14 Providing any evidence, how would you expect zero emission and conventional powertrain purchases to vary in the years prior to the implementation of the end of sales date?
- 15 How might you expect the end of sales to effect bus sector and related exports?
- 16 Providing evidence, if possible, what do you understand the operating lifespan of the following types of vehicles to be?
  - a. Diesel buses
  - b. Battery electric buses
  - c. Hydrogen fuel cell buses
- 17 Please explain your understanding, providing evidence where appropriate, of the costs and barriers relating to the provision of infrastructure for zero emission buses (both hydrogen and battery electric).
- 18 What impact might the proposed policy have on different population demographics and social groups, particularly those with defined protected characteristics under the Equality Act 2010?
- 19 Please outline your understanding, providing evidence, if possible, of the future apportioning of the bus fleet between hydrogen fuel cell and battery electric buses.
- 20 Do you believe that ending the sale of new, non-zero emission buses might cause operators to stretch the operational life of existing non-zero emission buses? If yes, please outline the extent to which you believe this might occur.
- 21 In relation to powertrains, how do you expect purchasing decisions to vary in the period preceding any end of sales?
- 22 Please outline your understanding of the need, and costs relating to mid-life component replacements for battery electric and hydrogen fuel cell buses.
- 23 Based on the Impact Assessment, what payback time, in years, would be economical for battery electric technology to be utilised in a given bus fleet?
- 24 Based on the Impact Assessment, what payback time, in years, would be economical for hydrogen fuel cell electric technology to be utilised in a given bus fleet?
- 25 Any other comments?

None specifically.

**Transport for the South East  
May 2022**

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