



LAPFF Response to Department of Transport consultation on ending the sale of new, non-zero emission buses, coaches and minibuses

Background

- The Local Authority Pension Fund Forum (LAPFF) is a voluntary association of 85 local authority pension funds and six LGPS pools, with combined assets of over £350 billion. It exists to promote the investment interests of member funds, and to maximise their influence as shareholders to promote high standards of corporate governance and corporate responsibility amongst the companies in which they invest.

Response

- LAPFF welcomes the opportunity to respond to this timely consultation. This section outlines our overall position, specific consultation questions are addressed in the following section.
- LAPFF has long recognised the imperative to address climate change as a systemic investment concern for our members. It poses material financial risks across all asset classes with the potential for significant loss of shareholder value.
- In 2020, LAPFF set out its view that a clear strategy and policies should be required for all road vehicles in terms of ending the sale of petrol, diesel and hybrid vehicles¹.
- Since then, the World Meteorological Association² has noted the world has already reached 1.2°C of warming. The Intergovernmental Panel on Climate Change (IPCC) set out that, for an 83% chance of remaining within

¹[LAPFF-response-to-DfT-consultation.pdf \(lapfforum.org\)](#)

² <https://public.wmo.int/en/media/press-release/2020-was-one-of-three-warmest-years-record#:~:text=Today%2C%20we%20are%20at%201.2,task%20of%20the%2021st%20century>.

1.5°C of warming, the global carbon budget will be used up by 2027 at the current emissions rate.³

- LAPFF's formally adopted policy outlines its main engagement objective for companies is to align their business models with a 1.5°C scenario and to push for an orderly net-zero carbon transition. LAPFF also considers companies should report on their approach to carbon risk in the context of how they are factoring the management of climate change into their business strategy in line with a just transition⁴.
- LAPFF considers that the necessary rapid decarbonisation of the economy requires all partners to work together. This includes government setting the clear policy direction and regulatory standards. The Forum therefore supports clearly identified legislative framework on carbon reductions, so that companies will be able to make the necessary decisions and financial commitments to provide the short and long-term solutions to decarbonising the economy that are needed.
- Our experience engaging with companies is that, without strong and timely regulation, achieving the UK's ambitions for reducing vehicle emissions will be slower and less effective as some companies tend only to meet minimum regulatory requirements.
- In this context, the Forum strongly supports ending the sale of new, non-zero emission buses, coaches and minibuses by 2025.

³[Sixth Assessment Report \(ipcc.ch\)](https://www.ipcc.ch)

⁴[2020 LAPFF Policies Full Version.pdf \(lapfforum.org\)](https://www.lapfforum.org)

Response on the Government's proposals to end the sale of new, non-zero emission buses

The Government is, therefore, now seeking views on setting a specific date between 2025-2032 for ending the sale of new non-zero emission (at the tailpipe) buses.

- 1. We are interested in views on such an approach being applied to buses.**

In 2020, LAPFF [responded](#) to the Department for Transport consultation on ending the sale of new petrol, diesel and hybrid cars and vans proposing 2025 as the cut-off date for the sale of new petrol and diesel cars and vans. That response also set out LAPFF's view that a clear strategy and policies should be required for all road vehicles.

In this context, LAPFF concurs with respondents to the informal consultation that setting an end of sale date would provide certainty to accelerate the transition of the UK's bus network to zero emission buses (ZEBs) acting as a catalyst for the decarbonisation of fleets.

- 2. We welcome views on the Government's proposal, outlined above, to end the sale of new non-zero emission buses on a specific date between 2025-2032.**

LAPFF concurs with respondents to the informal consultation that certainty on an end of sales date would encourage local authorities and bus operators to plan together to achieve the required outcome. This outcome includes the positive effect of air quality, particularly in urban areas.

- 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.**

LAPFF firmly supports 2025 as the preferred specific end date.

Our experience engaging with companies is that, without strong and timely regulation, achieving the UK's ambitions for reducing vehicle emissions will be slower and less effective as some companies tend only to meet minimum regulatory requirements.

As has been noted, given the context of the average life span of an existing diesel bus, on public service routes, being around 15 years, even a 2025 cut-off date would mean some non-zero emissions buses could potentially continue to operate into the mid-2040s.

LAPFF supports proposals to enable a market for ZEBs to make them the default economic choice for operators to transition as soon as possible. It is encouraging that from the informal consultation, dates with the broadest support for ending sale of new diesel buses were from 2025 to 2030.

In practice, we note that several bus operators, manufacturers and local transport authorities have already committed to purchase only ultra-low or zeroemission buses from 2025. In London, the region with the highest volume of bus journeys, the Mayor has already committed TfL from 2021 to only buying zero emission buses.⁵

- 4. We also welcome views on the proposal to use an approach based on type approval categories i.e. that the end of new sales date would apply to Class I and II, M2 and M3 buses, i.e. those with a capacity exceeding 22 passengers, in addition to the driver.**

Our view concurs with that laid out in the consultation that alternative approaches suggested would be less clear and more difficult to define. LAPFF further concurs that this would provide the necessary clarity for clear and consistent national policy.

Charging and refuelling infrastructure

- 5. We welcome further views on the challenges arising from charging and refuelling infrastructure in ending the sale of new non-zeroemission buses and what more might be needed to address these challenges?**

LAPFF welcomes not only the identification of challenges, but also the positive implications for a fair and just transition in establishing charging infrastructure in the UK.

The UK energy white paper (December 2020), which addresses the transformation of the UK energy system, flags up the potential for high-skilled jobs and clean, resilient economic growth in the move towards delivering net-zero emissions.

LAPFF considers that a fair and just transition is crucial to ensure the success of transitioning to a zerocarbon economy. The global implications of a net-zero transition by 2050 are for a gain of 200 million direct and indirect jobs and a loss of 185 million⁶.

⁵ <https://www.london.gov.uk/press-releases/mayoral/mayor-host-zero-emission-bus-summit-at-city-hall>

⁶ [Charting net zero: Insights on what the transition could look like | McKinsey](#)

More specifically for the UK, around one-fifth of current jobs have skills for which demand could grow in the green economy or which could require reskilling, with transport being one of the three sectors that could require greatest reskilling⁷.

As noted in the consultation document, progress made in energy storage and smart charging technologies can mitigate the need for expensive grid connections in both rural and urban areas. With vehicle-to-grid (V2G) technology, battery electric buses can help balance the local distribution network. Additionally, the potential for third party EV charging at or near bus depots for other vehicles, while buses are out in service, could generate additional revenue and significantly improve the business case for infrastructure.

Liaising with companies that are successfully implementing zeroemission bus routes and (as proposed) with councils such as Coventry City Council who have established the UK's first all-electric bus city, will help promote best practice.

Response on ending the sale of new, non-zero emission coaches – call for evidence

The consultation document sets out that 'indications are that an ultra-low or zero emission coach currently costs around 75% more than the latest Euro VI diesel coach with additional costs related to the required charging infrastructure'.

LAPFF considers that appropriate provision of information as evidence would be to provide costs in terms of 'total cost of ownership' which factors in much reduced costs of running the vehicles, less maintenance and so on. In addition, it is clear there are health benefits of non-polluting vehicles, which would also have a 'cost' implication for government.

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

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

⁷https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2019/02/Investing-in-a-just-transition-in-the-UK_policy-brief_8pp-1.pdf

The challenges to transition to a zero-emission coach fleet are slightly different to buses given that coaches are typically used for travelling longer distances. Therefore, thought will need to be given to recharging for battery electric coaches, including the potential for partnerships with local bus recharging facilities.

LAPFF supports 2025 for the end of sale date for new non-zero emission coaches, thus in line with the same date as bus operators.

Providing such certainty on a date to end the sale of new non-zero emission coaches would encourage local authorities, bus and coach operators to plan together to achieve an integrated recharging solution.

The government could take several measures to accelerate the transition. These include:

- providing certainty on the 2025 date to end the sale of new non-zero emission coaches
- providing examples and evidence of existing best practice in terms of companies operating battery electric coach services. These include Ember⁸ and National Express which has already committed not to buy any new diesel coaches⁹
- providing evidence and examples of other methods of a rapid and cost-effective transition to battery-electric coaches, such as publicising overall lower cost of ownership for the vehicles.

Ending the sale of new, non-zero emission minibuses – call for evidence

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

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

The challenges to transition to a zero emission mini-bus fleet are in line with any vehicle change from internal combustion engine to electric, including ensuring appropriate charging infrastructure.

⁸[Electric bus between Edinburgh, Dundee, Kinross, Edinburgh Airport and more - Ember](#)

⁹[National Express vows to not buy another diesel coach - AirQualityNews](#)

LAPFF would promote 2025 for the end of sale date for new non-zero emission minibuses, thus in line with the same date as bus and coach operators.

Providing such certainty on a date to end the sale of new non-zero emission minibuses would encourage local authorities to work in partnership with other operators and charging infrastructure providers to plan together to achieve an integrated recharging solution.

The government could take several measures to accelerate the transition. These include

- providing certainty on the 2025 date to end the sale of new non-zero emission minibuses.
- providing examples and evidence of existing best practice in terms of companies manufacturing and selling battery electric minibuses.
- providing evidence and examples of other methods of a rapid and cost-effective transition to battery-electric mini-buses, such as publicising overall lower cost of ownership for battery electric mini-buses.

The costs and benefits of ending the sale of new non-zero emission buses – Consultation Impact Assessment

Further questions for the consultation (please feel free to comment on some or all of these questions):

9 How do you expect the upfront cost of:

a. Battery electric buses

b. Hydrogen fuel-cell buses

c. Battery replacements

d. Fuel-cell replacements

e. Electric powertrains

to change over the period 2025 to 2032. Please provide, or cite, any evidence you may have, or which informed your understanding.

Bloomberg NEF has noted that increasing demand for battery electric-buses could bring associated battery prices down faster than previously estimated and determined that electric buses would reach cost parity with diesel buses by the mid-2020s¹⁰.

If viewed by 'total cost of ownership' BNEF considers that we have already passed the point (2019) where electric buses in almost all charging configurations

¹⁰[BNEF Long Form Template \(Grid\) \(bloomberglp.com\)](https://www.bloomberglp.com)

have a lower total cost of ownership than conventional municipal buses¹¹ and that electric models are on track to dominate the global market by the late 2020s.

There is also the assumption that all purchases will be new vehicles, which disregards the sizeable second-hand market and scope for converting diesel buses to electric drive¹².

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?

Electric car sales increased by 76.3% in 2021 with electric cars making up 16.1% of all newcar registrations in the UK during March 2022. The Society for Motor Manufacturers and Traders is forecasting registrations of battery-electric cars and plug-in hybrids to grow by 61% and 42% respectively in 2022, representing one in four cars by the end of the year, with one in five being pure battery-electric¹³.

According to BNEF¹⁴ the advance of e-buses (globally) will be even more rapid than for electric cars.

It would be speculative to state an expected uptake of zero emission buses over the period. However, the pace of adoption of electric cars in this year alone, shows that it is likely there will be an uptake of zero emission buses even in the absence of additional policy measures.

Existing uptake has benefitted from government schemes and support (such as the ZEBRA scheme) and certainty of phasing out of petrol and diesel cars is likely to have had some effect on the car buying public.

Part of this may also be related to a better understanding of overall cost of ownership. This has led to an increasing take-up of electric buses in the United States where it is recognised that electric buses have lower operating costs (including benefitting from cheaper off-peak electrical costs at night) and have fewer moving parts and maintenance needs¹⁵.

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).

¹¹[E-buses to surge even faster than EVs as conventional vehicles fade | Bloomberg Professional Services](#)

¹² <https://www.urban-transport-magazine.com/en/retrofitting-instead-of-new-built-conversion-from-diesel-to-electric-buses/>

¹³ [One in five UK car sales now of battery-electric vehicles | Autocar](#)

¹⁴[E-buses to surge even faster than EVs as conventional vehicles fade | Bloomberg Professional Services](#)

¹⁵ <https://www.advancedenergy.org/2020/02/24/beneficial-buses-electric-buses-bring-benefits-to-businesses-communities-and-utilities/>

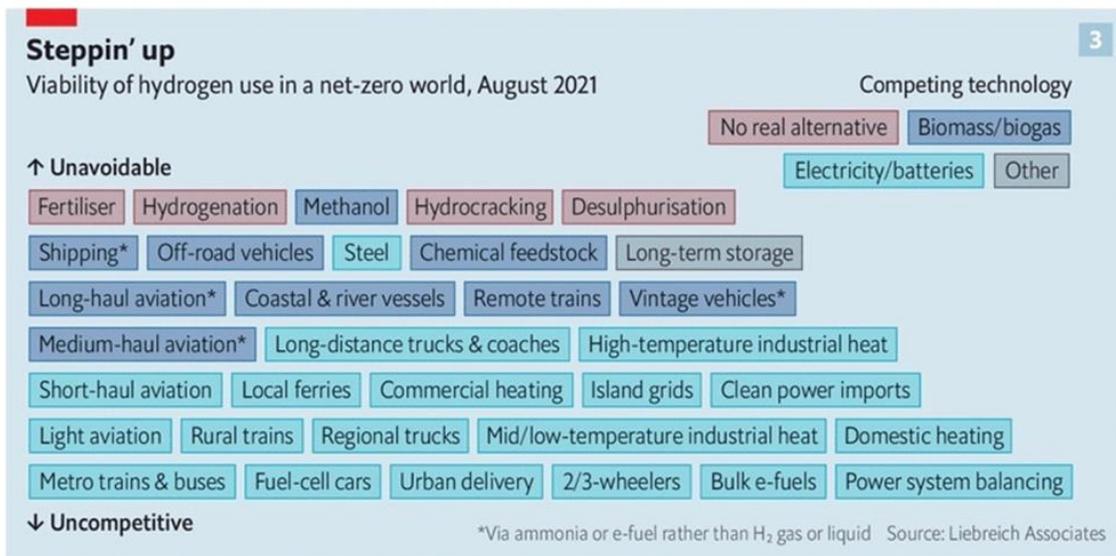
Investments in battery electric buses and associated charging infrastructure can be cost-effective in many cases. An average fleet in one study achieved a NPV of \$785,000 and discounted payback of 3.6 years on such an investment¹⁶.

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?

The advantages of electric buses for school children and communities should be noted. A programme to deploy school buses in Virginia outlined benefits including inside air quality being six times better than non-electric models and greenhouse gas emission reductions of 54,000 pounds each year.¹⁷

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.

Our understanding is that the apportioning of the bus fleet should be 100% battery electric buses. There are applications where hydrogen has clear benefits over renewable electricity, but as one moves away from these applications it is more difficult to make the case for the use of hydrogen fuel cells. Michael Liebreich of Liebreich Associates has developed a ‘hydrogen ladder’ which ranks hydrogen usage from indispensable to unaffordable.



The Economist

¹⁶ https://afdc.energy.gov/files/u/publication/financial_analysis_be_transit_buses.pdf

¹⁷ <https://www.advancedenergy.org/2020/02/24/beneficial-buses-electric-buses-bring-benefits-to-businesses-communities-and-utilities/>



From this, it is evident that battery-electric buses, mini-buses and long-distance coaches are the affordable and more viable option over hydrogen.