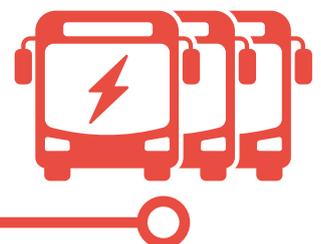
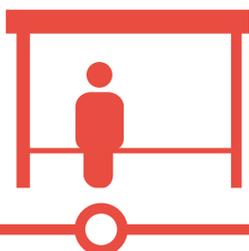


Zero Emission Bus Summit:

How can we speed up the transition to zero emission buses?

October 2021

On 17 September, Campaign for Better Transport led a Zero Emission Bus Summit and private roundtable in partnership with Transport for London and the Mayor of London. It brought together central government, local authority representatives from across the country, bus manufacturers, transport operators and energy providers to discuss how to speed up the introduction of zero emission buses across the country. This paper summarises the main discussion points at the event and call for action.



Progress so far

In February 2020, the Government [announced](#) an ambition to deliver **4,000 zero emission buses (ZEBs) in four years, alongside funding to “transform” bus services across the country.**

This commitment was reiterated in [Bus Back Better](#), the National Bus Strategy published in March 2021. It aims to incentivise the adoption of ZEBs and sets out government plans to consult on a date for ending the sale of new diesel buses. It is currently offering competitive funding for English regions to proceed on ZEBs, including:

£120 million

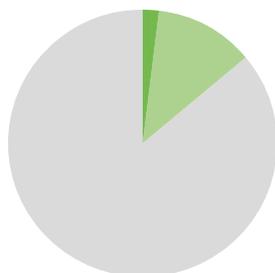
through the Zero Emission Bus Regional Areas (ZEBRA) scheme to support at least three areas to purchase up to 500 ZEBs and the infrastructure needed to support them.

£50 million

awarded to Coventry to become the UK’s first All Electric Bus Town assisting with the introduction of up to 300 ZEBs and associated infrastructure.

While buses are already one of the greenest forms of transport – contributing only three per cent of the UK’s domestic transport emissions – accelerating the roll-out of ZEBs will drive further improvements to air quality and emissions to our towns, cities and rural areas.

There are around 38,000 buses nationally, of which approximately 9,000 are based in London. Yet as of 2019, only 12 per cent of the fleet were hybrid and only two per cent (four per cent in London and one per cent in the rest of England) were zero emission.

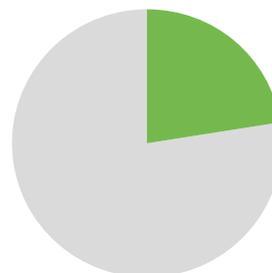


- Zero emission: two per cent
- Hybrid: 12 per cent
- Fossil fuels: 86 per cent

Since the government’s commitment in February 2020 to deliver **4,000 ZEBs**, only around [50-100 are on the road](#).

Together with the ZEBRA and All Electric Bus Town schemes, this means that funding for up to **900 ZEBs** [has so far been made available](#).

This leaves the question of how the remaining **3,100** of the government’s commitment will be delivered, and in what timeframe we can expect the remaining 34,000 of the bus fleet to shift to zero emission.



- Funding already made available
- Funding still outstanding

Action from cities and other local transport authorities will be crucial. At the Summit, the Mayor of London, Sadiq Khan, [announced](#) that all new buses ordered by Transport for London (TfL) for the capital will now be zero emission. This will help bring its commitment to a fully zero-emission fleet forward from 2037 to 2034, but with further government funding this could be achieved by 2030. TfL's ambition to have 3,000 ZEBs on the road by 2025 would save 1.7m tonnes of carbon.



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Speeding up the rollout of ZEBs will also enhance economic objectives as the UK's bus manufacturing industry supports 10,000 skilled jobs and apprentices. With London making up a third to half of all new bus orders in the UK in any given year, the Mayor's additional commitment should also give manufacturers confidence in the pipeline, enabling them to ramp up production and to invest in new jobs and training.

Other large UK cities are also making progress leveraging government and private funding sources. For example, in 2020 Greater Manchester introduced a fleet of battery electric buses on two routes with support from the government's Ultra Low Emission Bus fund and its ZEBRA fund submission could support the roll-out of 170 ZEBs by 2025.

But many cities around the world are further ahead.

Several cities in China, including Shenzhen, have already hit their goal of

100 per cent
electric buses

Moscow has the largest electric bus fleet in Europe with

700
already on the road and another
1,000
expected by the end of 2021



Measures to accelerate the transition

The cost of ZEBs remains the main challenge. At the event we heard a significant capital investment gap remains as whole-life costs, including purchase and maintenance, still favour diesel buses.

Campaign for Better Transport research found ZEBs can represent a large proportion of local authorities' total public transport budgets and – although the National Bus Strategy states “both operators and LTAs must play their part” in the transition – many smaller or more rural authorities see this as a concern for operators. Operators in turn expressed concern that lower bus use post-pandemic has affected fare revenues making investment difficult. Some said that even a small uplift in patronage would help them invest in ZEBs. Smaller operators particularly cautioned that they should not be left behind in the transition.



Therefore, there is a clear role for **government funding** to support the transition, but as the current ZEBRA funding only covers a handful of pilot areas, what is unclear is what will follow this. In addition, the reliance on competitive funding pots means that many local authorities will miss out. There are also short-term funding allocations, which produces significant uncertainty and year-to-year variability in council and operator budgets.



Manufacturers at the roundtable also spoke of a desire for improved visibility of the pipeline. While they have the technical capability and the skills, they need oversight to ensure they can meet demand as production cannot be ramped up suddenly. The Department for Transport and HM Treasury must work together to ensure that funding streams that support local bus services are focused over the long-term to give certainty to industry.

At the event, the C40 Cities Climate Leadership Group shared examples of innovative business models involving separation between vehicle ownership and operation. The investor provides and maintains the vehicles and charging infrastructure, while the operator is responsible for operating the buses. At the event operators pointed out that leasing ZEBs ends up more expensive than purchasing them upfront, but if the government was to guarantee the residual value in the event of company failure this would help ease the costs.



Additional funding streams for local authorities could also facilitate investment in ZEBs. For example, revenue from schemes such as Clean Air Zones that charge polluting lorries, vans and private cars (as well as buses) and Workplace Parking Levies would both help increase patronage levels and provide an additional revenue stream to support local investment. In London, revenue from the expanded Ultra Low Emission Zone will support ZEBs investment as well as discouraging car use. It will be important, if we are to see strong investment from operators, that they in turn see steps being taken to constrain and discourage the use of private cars.



Infrastructure and grid capacity were another barrier to electrification. Operators and authorities at the event spoke of slow progress for improving electricity supply at depots. With competing demands on electricity provision, some thought power companies need to be asked to keep a given level of capacity for public transport operators. The Department for Transport described “whack-a-mole” issues with charging infrastructure that surface when you start to tackle them and encouraged stakeholders to flag any potential solutions. Prioritisation at the local and regional level will require close collaboration between operators, fleet managers, local authorities and industry.



Skills and know-how within some local authorities were also flagged as an issue. Campaign for Better Transport [research](#) found that an overall reduction in expertise and staffing within local authorities over time, meant many are struggling to dedicate resource to achieving all the priorities within the National Bus Strategy. Some are also unsure how best to support the increased adoption of ZEBs and how to drive investment in electric vehicle charging infrastructure. While areas with franchising arrangements can directly specify particular minimum standards for fleets in the contracts, those moving towards the new Enhanced Partnerships model are encouraged to include local standards for zero emissions in their plans for bus improvements, but it is not clear how this requirement would be delivered or enforced. In addition, more rural areas were frequently unable to invest due to technical barriers (such as route lengths, hilly terrains or poor grid capacity) and low bus usage levels.

Opportunities for government

Operators, manufacturers and authorities at the event committed to working collaboratively towards accelerated adoption of zero emission buses across England.

However, it was clear that government support is crucial to reaching the 4,000 ZEBs target as well as cleaning up the rest of the 38,000 bus fleet. This could be done through:

- **Setting out a clear timeline and a long-term funding plan** for ZEB delivery to give industry confidence to invest
- **Exploring the role of innovative funding mechanisms** and guaranteeing residual value in leasing schemes
- **Leading a communications campaign** alongside industry to increase public transport use post-pandemic
- **Incentivising local authorities to explore innovative ways to increase bus use** and provide additional revenue streams, including measures to discourage car use
- **Providing detailed guidance, templates and standardised procurement frameworks** and fostering collaboration through the Bus Centre of Excellence.

Next steps

We will be looking at the outcome of the Autumn Budget and Spending Review as well as the level of ambition shown by local authorities in their Bus Service Improvement Plans due for submission by the end of October.



The Department for Transport suggested Campaign for Better Transport should organise a follow-up event in early 2022, and there was general agreement that this event could usefully review progress against ZEBs delivery and identify any lessons from the level of ambition shown in local authorities' Bus Service Improvement Plans.

Campaign for Better Transport will therefore reconvene the Department for Transport, HM Treasury, authorities, operators and industry.