



ZENOBE

Cleaning up our communities

Electrifying the UK's
buses and trucks

Electric buses and trucks have been missing from national conversations about transport, air quality and climate. They break down less often than diesel equivalents, run on cheap power, and are already cleaning up our towns and cities.



To ensure everyone can benefit from clean and effective public transport, we need to upgrade our buses. As well as service reforms, this means making buses more reliable and cheaper to fuel, while halting their contribution to air pollution. In short, it means we must electrify.

Communities across the UK are calling out for better public transport. Over the years, as services have been cut and fares have risen, people have come to see buses as expensive, unreliable and dirty. Increasingly, people use their cars because they feel they have no other option, polluting our air, driving up carbon emissions, and congesting our roads. But there is an alternative. By electrifying buses, we can get people from A to B, and we can make progress on clean air without penalising the public.

Policy support for electric buses can also unlock solutions to HGV decarbonisation. Road freight is arguably the most difficult part of the transport sector to decarbonise – but to electrify freight, we can use lessons learned while electrifying buses. A focus on buses and truck fleets can allow us to make rapid progress in decarbonising the transport sector, which accounts for a quarter of the UK's carbon emissions, by methodically removing large fleets of diesel vehicles from the road. In turn, this will help clean up the air in our towns and cities.

So why is the UK not already reaping the rewards of electric fleets? In short, there is a need for consistent, fair and clear long-term policy across national and local levels that builds business cases. The current DfT e-bus

funding programme awards large chunks of funding to winners of a competitive process. This leads to bottlenecks in supply chains and means that the benefits of electric fleets are not evenly shared across the country. Additionally, funding competitions are unpredictably scheduled, making it difficult for operators and manufacturers to plan investment. And meanwhile, bus services themselves remain

unreliable, which depresses ridership levels. In turn, this depletes operators' revenues and prevents investment in low-carbon technologies.

To meet the needs of communities, we need to be looking at new opportunities to help deliver more services that serve them, allowing them to feel more confident in connections around their towns and cities.

This manifesto sets out five steps that Government must take to accelerate the electrification of the UK's bus and heavy fleets over the next decade:

- 01. Continuous and consistent funding** Introduce a long-term funding mechanism by replacing the ZEBRA model with an enhanced per-mile BSOG that gives operators reliable and predictable support. This would be announced annually as an 'electric miles' success metric for the government.
- 02. A clear route forward** The Government should set more ambitious targets for introducing zero-emission buses and phasing out diesel/hybrid models, to provide the bus industry – from manufacturers to operators – with a clear sense of direction.
- 03. Clean and green public procurement** Build market confidence by introducing decarbonisation criteria across all public procurement, merging depot and fleet procurement, and boosting the development of green skills.
- 04. Modal shift** Introduce measures to incentivise people to get out of their cars and onto buses, supporting the business case for bus.
- 05. A strategy for HGVs** Apply lessons from bus fleet decarbonisation to the freight sector, introducing targets and scrappage schemes, and a per-mile capital pot.

01. Continuous and consistent funding

The key solution to the uncertainties that slow bus decarbonisation in the UK is a sustainable, long-term funding model that incentivises operators to make the switch from diesel to electric. To achieve this, Government must move away from intermittent grant funding to a more consistent, miles-based model.

The Government's main instrument for supporting zero-emission buses is a periodic grant funding competition known as the Zero-Emission Bus Regional Areas (ZEBRA) scheme. ZEBRA sits within a patchwork of further funding schemes that can support ZEB rollout both directly and indirectly. These include the Scottish Zero-Emission Bus Scheme (ScotZEB), the Bus Service Operators Grant (BSOG), and Bus Service Improvement Plan (BSIP) funding.

Introduced in 2021, ZEBRA allocates grants to local authorities in England to work with private operators to introduce clean buses and the infrastructure to support them. ZEBRA funding is allocated through intermittent, unpredictably scheduled competitions. This results in sudden bottlenecks in demand for electric vehicles, making it difficult for local authorities, bus companies, and manufacturers to plan. ZEBRA's structure also concentrates funding among a relatively small number of local authorities. As a result, certain areas of the UK do not benefit from bus electrification. The most recent ZEBRA funding round sought to address this by ring-fencing £25m for rural local authorities. However, we need to go further to ensure that all fleet operators have the opportunity to electrify.

The most efficient way to accelerate electric bus deployment across the UK is to adapt the existing BSOG model once the current ZEBRA round is complete. BSOG, on which the Government currently spends an average £250m per year, provides a subsidy to operators and local

authorities in line with fuel used for the provision of bus services. As such, it provides a consistent stream of funding that incentivises vehicle usage, and is more predictable and evenly distributed than ZEBRA. However, while zero-emission buses are eligible for BSOG money, they currently only receive 22p/km, which is not enough to contribute meaningfully to the high capital expenditure costs of bus electrification. Allocating more funding via BSOG would create confidence among operators and investors and accelerate fleet electrification. Government should commit to a substantially higher BSOG rate for zero-emission vehicles – accompanied by regular monitoring through continuing BSIPs – allowing operators and manufacturers to form a long-term business case around decarbonisation. Each year, Government should announce a new funding pot for BSOG and confirm the per-mile incentive.

While this will increase the costs of the scheme, we believe it is possible to reduce BSOG outlay through the following measures:

- Government should incentivise fleet transition by tapering BSOG for Euro 4, 5, and 6 vehicles over time, reducing costs. They should also apply a BSOG multiplier to franchising operators, helping link bus service reform measures to decarbonisation.
- The average person travels 107 miles by bus per year. Of this, approximately 58% is undertaken on urban routes. It is therefore reasonable to focus BSOG on

electrifying urban public transport first.

- An additional option is to convert BSOG into a competitive process in which participating operators bid for a price per mile and a volume of miles to be driven. Such an allocation process could be undertaken once per year, providing ongoing competitive pressure and a clear forward income stream against which manufacturers can invest.



02. A clear route forward

In a second step, the Government must provide certainty for local authorities, operators and investors about zero-emission buses. This means setting a target to achieve a net zero bus system by a specific date.

The current target of 4000 electric buses by the end of 2024 is too vague. It is not clear whether it includes London and the devolved nations, or whether it refers to buses that are operational or ordered. Nor does it set out a timeline beyond 2024. The Government should follow the example of London and commit to a long-term date for achieving a net zero bus system before 2050.

In turn, this requires a date for the phase out for the use of new and existing non-zero-emission buses. These should be 2040 and 2035, respectively.



03. Clean and green public procurement

The public sector should be setting the example and building market confidence, by reshaping road transport procurement around decarbonisation. There are three key approaches Government can take to ensure this happens.

Firstly, the Government should make decarbonisation criteria mandatory in public sector fleet tenders (e.g., councils, MOJ, or MOD contracts). Currently, value for money is the key objective in public sector procurement, but this is often poorly defined and only measured against cost. Value should be linked to wider objectives, including decarbonisation. This would incentivise public sector organisations to decarbonise in a cost-effective and value-oriented manner.

Secondly, due to historic practices, local authority fleet and depot teams work separately to procure low-carbon assets. This results in increased costs due to operational issues and lack of expertise: often, separately sourced chargers and vehicles do not work together. To reduce friction and improve efficiency, public sector organisations should buy entire electric transport systems, rather than sourcing charging infrastructure and vehicles separately.

Finally, we believe that local authorities can deliver clean fleets at least cost to the public by working with partners who take on technical risk. By financing and project-managing the transition to low-carbon fleets themselves, public sector organisations take on significant capital and delivery risks. As a result, any problems with procurement, depot conversion, or equipment performance incur further public costs. Third-party electrification specialists protect the public purse from these delivery risks. In these models, electric buses and charging infrastructure are delivered, owned and maintained by a third party, who match-fund public and private money.





04. Modal shift

The Government should support policy measures that promote modal shift – i.e., policies to incentivise people to get out of their cars and onto buses. As well as delivering a wide range of public benefits, such as lower congestion or improved access to work and public services, increased bus ridership supports the business case for operators to electrify.

We therefore propose the Government implement the following measures:

Network enhancement

Enhancing bus routes, especially by introducing new bus lanes and gates, making buses more frequent, and providing more bus services at peak times, will bring more passengers onto buses.

Ticketing enhancements

Removing price differentials between multi-trip tickets, integrating all bus tickets in given regions, introducing a tap and go service, and coordinating bus services with other public transport services make the bus a more attractive option.

Fares initiative

One-off reductions across fares and a commitment not to increase fares above inflation can make the bus more affordable.



05. A strategy for HGVs

Several of the above policy innovations should also be applied to a strategy for electrifying HGVs – arguably the most difficult vehicles to electrify given their high daily mileages and unpredictable routes.

Another benefit will be the range of lessons that can be applied to HGVs – arguably the most difficult vehicles to electrify given their size and range. As with buses, a clear timeline for taking heavy ICE vehicles off the road would significantly push HGV operators into investing in electric fleets. A staged approach to removing these vehicles – starting, for example, with 2030 for Euro 4 or 5 – would create a significant demand driver. The Government should therefore introduce fleet electrification targets, for which, as noted above, there is a precedent in London for buses as well as internationally.

Government should also introduce a scrappage subsidy, in which operators receive a proportion of the capital cost of an EV in return for scrapping an ICE vehicle. Smaller, more financially constrained operators should receive bigger scrappage subsidies.

As above, public procurement should lead the way by ensuring all HGV fleet tenders have zero emissions as a mandatory criteria. Finally, policy makers in this space should monitor the progress of bus decarbonisation and ensure that lessons are applied to HGV policy and funding.



Supporting UK manufacturing

The measures set out above will improve bus services and clean up our air. But to ensure that the UK can maximise the benefits of fleet electrification, we also need to consider how and where we can capture key parts of the value chain to create green jobs where they are most needed.

We already have a strong bus manufacturing sector, with approximately 20% of the UK bus market served by British manufacturers. The policies listed above will incentivise the purchase of vehicles, batteries and charging infrastructure made in the UK.

Additionally, there is an opportunity to take the lead in supporting the

UK's nascent 'repowering' industry – i.e., retrofitting diesel or hybrid buses with electric engines. Policymakers have an opportunity to ensure the UK electric bus manufacturing sector reaps the benefits of repowering. The UK has a large fleet of buses that could be retrofitted by small, innovative UK companies, boosting domestic manufacturing, reducing the UK's reliance on EV bus imports, and minimising the environmental impact of electrification. With the right policy measures in place, the Government can create an order pipeline for UK production.

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