

Adopting an Oslo-style approach to electric vehicle policy in Bristol



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About the research

Achieving Bristol's goal of net-zero carbon emissions by 2030 will require a significant reduction in greenhouse gas (GHG) emissions. Car commutes are responsible for a third of Bristol's direct emissions, having reduced only 7% since 2005. With UK car traffic forecast to grow, mitigating transport emissions in Bristol is likely to remain challenging. Electric vehicles (EV) offer one way to decarbonise urban transport and reach emission targets.

Oslo has the most advanced EV market worldwide, with 50,000 EVs in the city. National tax exemption has lowered the cost of EVs across Norway, whilst local initiatives have made ownership affordable and convenient. To encourage uptake, Oslo has invested substantially in EV infrastructure, implemented an EV-only congestion zone, and provided EV users with subsidised parking and bus lane access.

Bristol has recently announced the goal of matching Oslo's 50,000 EVs by 2030. With comparable sizes in population, area and vehicle numbers, the scale of Oslo's EV strategies can be realistically considered for Bristol.

Bristol City Council's (BCC) One City Plan aims to make Bristol 'fair, healthy and sustainable' by 2050. The plan's transport goals largely focus on addressing congestion, connectivity, and inclusivity via the development of public and active transport (PAT) systems and reduction of private transport use. Some progression of EV infrastructure is included, but current strategies are insufficient to support 50,000 EVs.

Holistic policy analysis has identified an Oslo-style policy approach that will boost EV uptake potential in Bristol whilst also continuing to address BCC's transport objectives. This policy strategy requires a moderate investment shift from PAT to EV development, the introduction of EV bus lane access as well as an EV-only congestion zone but does not include subsidised parking.

Policy implications

Adopting Oslo-style incentives:

- Adopting Oslo-style EV incentives can work towards carbon neutrality without undermining development plans for more complex PAT networks.
- EV bus lane access and a new congestion zone would lower congestion and improve overall air quality while making active transport options more appealing and helping to reduce the premature deaths that occur from poor air quality in Bristol.
- Omitting parking subsidies allows for Bristol's annual parking earnings of £11.4 million to be reinvested into transport initiatives, reducing the amount of funding having to be redirected from PAT.
- Congestion charges may disproportionately affect low-income groups, further augmenting EV affordability barriers and undermining Bristol's 'fair' transport vision. Congestion zone revenues must help fund sustainable transport for less wealthy communities.

Future proofing policies:

- For long-term success, EV policies and infrastructure must remain adaptable. Incentives can be modified should congestion levels rise with EV uptake, and funding adjusted as technology develops.
- Simultaneous development of Bristol's smart grid network and vehicle to grid integration will support the reliability of access to renewable energy across the city.
- Comprehensive EV infrastructure has the potential to accommodate public transport electrification through sharing charging points and grid capacity.

EV infrastructure in Bristol must:

- Comprise 847 charging stations. Bristol is heavily reliant on a robust infrastructure to incentivise EV uptake and will mitigate challenges in charger availability.
- Use a strategic charging site selection method that prevents gaps in infrastructure and decentralises charger distribution. This will improve inclusivity, connectivity, ease range anxiety, and help to instil confidence in perspective buyers.
- Have numerous charging outlets per station.
- Commit to a long-term roll-out in order to encourage initial EV uptake, secure sustainable private investment and maintain access to a fast-growing global market.

Key findings

- Electric vehicles (EV) are increasingly considered an effective method for reducing transport emissions and could help progress Bristol towards carbon neutrality.
- Bristol's current transport development plans are insufficient to support the goal of 50,000 EVs by 2030.
- Adopting Oslo-style incentives and increasing EV funding will boost EV uptake potential, whilst also meeting BBC's transport development objectives addressing congestion, connectivity and inclusiveness.
- With the lack of national incentives, optimised public EV-infrastructure will be integral to the success of EVs in Bristol and will require the widespread distribution of 847 EV charging stations.
- Charging station locations should prioritise areas of prolonged parking times, high traffic, office clusters and on-street residential parking.
- Cost-saving methods can reduce expenses to minimise a PAT-EV funding trade-off.
- Futureproofing policies will improve long-term effectiveness of EVs in Bristol.

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