



Reforming the UK's car taxation system

November 2022

Summary

With battery electric vehicles (BEVs) now the fastest growing car segment, [making up nearly 15% of sales](#), the Treasury must start to plan for when the right time is to start raising taxes on BEVs. The ultra-low tax status of BEVs cannot last forever. BEV drivers should start to contribute to the overall infrastructure and maintenance costs, as well as the UK's overall tax base. Getting the balance between not creating a black hole in revenue and stifling the BEV transition will be key.

As part of this reform, **a broader shift is needed in the UK to more effectively tax polluting cars based on their CO2 emissions**. In fact, [while introducing first year VED on BEVs in the next couple of years](#) would be the right thing to do, this must go hand-in-hand with widening, or at least maintaining, the tax differential between BEVs and emitting cars. The UK has [one of the lowest acquisition taxes in Europe](#), with a differential between BEVs and emitting cars up to ten times lower than its neighbours. **Levying higher acquisition taxes on new cars would be an equitable source of raising additional revenue**, as it would primarily impact people on higher incomes or businesses, who tend to be the main purchasers of new cars.

Meanwhile, the UK's Benefit-in-Kind (BiK) system has been a powerful tool in accelerating BEV uptake in company car fleets. The BiK reform in 2019 - setting 0% rates for BEVs, 1% in 2020 and 2% from 2021 to 2024/25 - has led to a massive acceleration of BEVs within company car fleets with [28% of new company car registrations now BEVs](#). Again, these rates cannot last forever. **The UK should look to start to raise BiK rates across the board from 2025/26, while maintaining a significant tax differential between BEVs and other powertrains, taxing heavier polluting models more in accordance with their emissions.**

Modelling carried out by Element Energy of T&E recommendations for reforming BiK and first year VED rates shows a path forward that could provide additional revenue by levying higher levels of taxation across the board, without negatively impacting the total cost of ownership (TCO) advantage of BEVs.

We recommend that the Treasury:

- From 2025/26, raise BiK rates for all powertrains, maintaining linearly increasing taxation with increasing gCO₂/km. BEV rates should be raised to 6% in 2025/26, 10% in 2026/27 and 16% in 2027/28, while bringing rates for vehicles with 110g+ CO₂/km to the current maximum rate of 37%.

- Introduces a first year VED rate of £50 for BEVs in 2024, rising to £90 in 2027 and £156 in 2029, while linearly increasing rates across other powertrains on a gCO₂/km basis. Vehicles with 110g CO₂/km and above should be taxed between £650 - £3,000 in 2024, £1,118 - £5,160 in 2027 and £1,934 - £8,926 in 2029.

1. Introduction

Taxation can be an important lever to incentivise behaviour; in this case, electric vehicle adoption. The UK is often a place of tax innovation and has shown this to be the case with its BiK regime for company cars. But taxation measures must continue to evolve - with BEVs becoming increasingly prevalent and the phase out of petrol and diesel sales fast approaching, the UK must start to plan for the future of vehicle taxation (i.e. how it will start to introduce and raise taxes on BEVs that won't risk slowing down the transition).

Everyone recognises that the ultra-low tax status of BEVs cannot last forever. Like any other car, BEVs use and cause wear on roads, which are paid for from tax revenues, as well as contributing to congestion. By applying the polluter pays principle (based on real world impact rather than laboratory testing) and tying taxation to regulation (e.g. the ZEV Mandate), the UK should be looking to levy higher taxes against polluting cars, while beginning to raise taxes on BEVs, as a fair and equitable way of raising public finances.

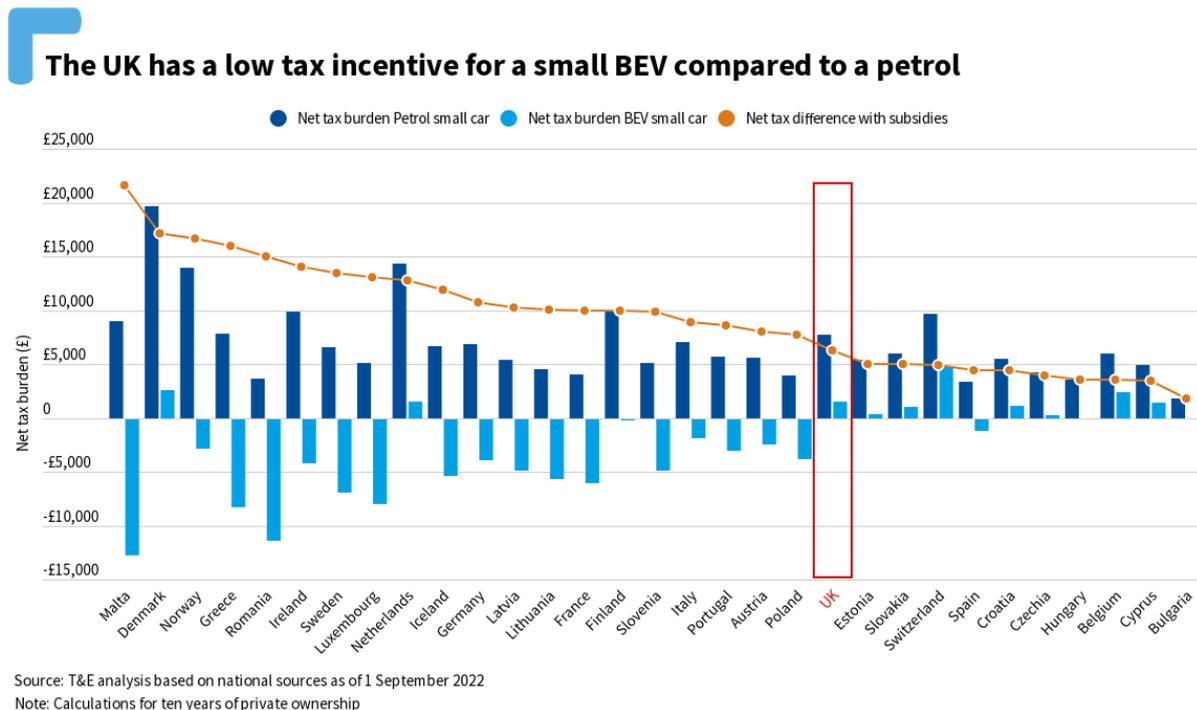


Figure 1 - Comparison of UK net tax burden for small petrol and BEV cars to other European countries

The tax regime should aim to maintain and, where possible, widen the tax differential between BEVs and other vehicle types to ensure people and businesses are incentivised to choose the greener option. There should be an ambition by the Government to not only replace lost revenue with new measures, but to do so in a more equitable way that helps to remove disproportionately high mobility costs for lower income groups. Raising first year VED is a good example of a quick and fair way of shifting the tax burden onto higher income groups and businesses who tend to be the main purchasers of new cars. As set out in this briefing, it is possible to create a system of higher first year VED that will not impact the TCO advantage of BEVs, meaning new car owners will not be worse off in the switch to BEVs compared to other powertrains.

Beyond the scope of this briefing, the Government must also consider the impact of future fuel taxes and potential introduction of road pricing schemes which, again, must be designed in a way that is equitable, that does not stifle the BEV transition or encourage further increases in road use. Further details on T&E’s recommendations on this area will be set out in future publications.

2. UK is failing to use acquisition tax to incentivise BEVs

Up until June 2022, the UK’s Plug-in Car Grant (PICG) played an important role in subsidising BEV cars at the point of purchase to lower their upfront cost. This grant has been rightly ended, having played its role in getting BEV uptake up and running. This leaves VED as the main mechanism at the point of purchasing a new vehicle to incentivise people to choose an electric vehicle over an emitting one.

VED applies to both the acquisition of the vehicle and the ongoing ownership. The acquisition taxes under VED are based on a vehicle’s CO2 emissions to create a tax differential between BEVs and other vehicles. Specifically, BEVs do not pay any VED at all while PHEVs pay £10, HEVs pay around £25 to £170, and petrol and diesel cars pay from around £190 up to £2,365 for the most polluting.

Vehicle type (CO2 g/km)	1st year VED current (RDE2 compliant) ¹	1st year VED current (non-compliant)	Alternative fuels
BEVs	£0	£0	£0
PHEVs (1-50)	£10	£25	£0
HEVs (~51-109)	£25-170	£120-190	£15-160
ICE (~110+)	£190-2,365	£230-2,365	£180-2,355

Figure 2 - Current UK first year VED rates

Although this does create a differential between different fuel types, the [UK actually has one of the lowest acquisition taxes in Europe with the tax differential between BEVs and polluting cars up to ten times](#)

¹ RDE2 refers to the “Real Driving Emissions standard on nitrogen oxide emissions.

[lower than other European countries](#). For example, for the C SUV category, the UK differential is ~£225, while in 12 European countries it is more than ~£2,250.

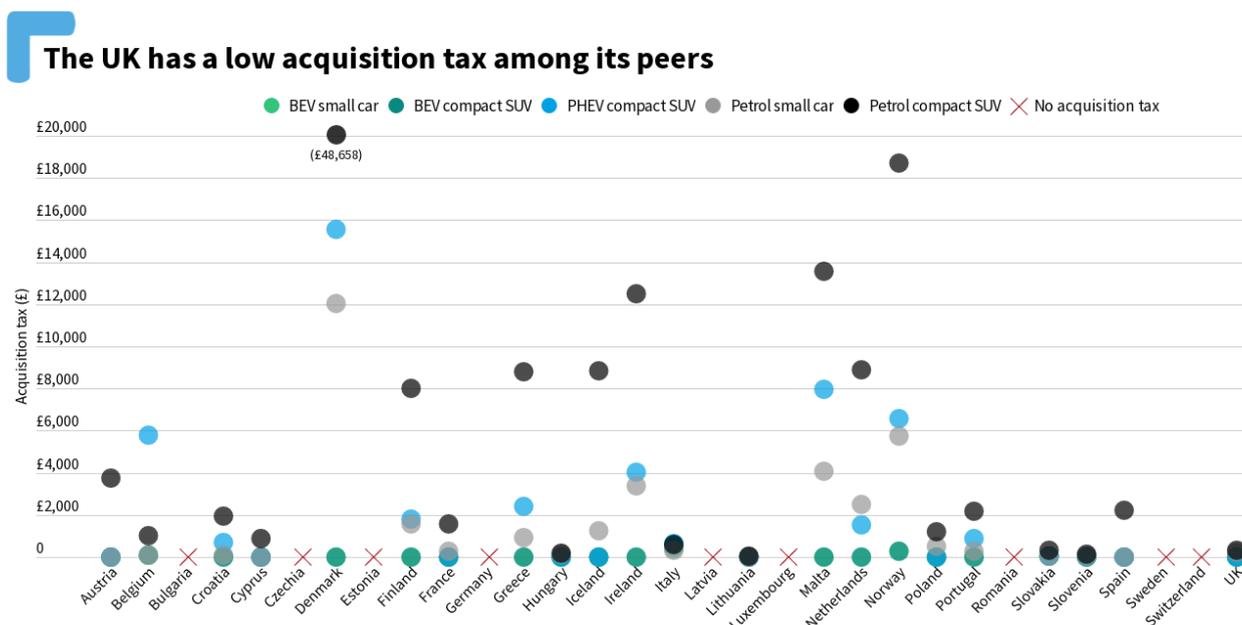


Figure 3 - T&E analysis of acquisition taxes across Europe based on national tax sources as of 1 September 2022

The ownership tax element of VED is also based on the CO2 emissions of a vehicle. Again, BEVs do not get taxed on this while all other vehicles get taxed £165, or £520 for cars with list price over £40,000.

The [UK Government consulted on reforming VED in March 2020](#), which gave the UK an opportunity to use the system as a more effective mechanism at supporting BEV uptake. However, largely due to the impact of the pandemic, plans to take this forward have been dropped.

2.1. Reforming first year VED

Raising first year VED across all powertrains can be a quick and fair way of replacing some of the lost fuel duty revenue by targeting wealthier consumers who can afford to buy a car brand new. On average, the highest income decile [spends nearly 2.5 times more](#) of its weekly household expenditure on new cars than people in middle income deciles. The top three income deciles also spend a [significantly higher share](#) of their weekly household expenditure on new cars and vans compared to lower groups. This can be a quick and fair way of replacing some of the lost fuel duty revenue by targeting wealthier consumers who can afford to buy a car brand new.

There is an opportunity to create a new system that puts a real incentive on buying BEVs, but also brings taxes for BEVs towards normal levels. BEV drivers contribute more to infrastructure and maintenance costs, as well as the UK's overall tax base. Higher levels for emitting cars can be justified, more and more so as we get further into this decade as the number of available BEV models continues to increase and charging infrastructure continues to develop. With new vehicles committed to the UK parc for 15 years, it is only right that heavier polluting models are taxed more in accordance with their emissions.

VED is a well established tax mechanism that people are well acclimatised to. Adjusting VED rates is immediately actionable and would help ensure that the most polluting vehicles - with the higher environmental and social cost through air pollution - are priced more appropriately. This system could also look to drive a bigger tax wedge between BEVs and PHEVs, which have significantly higher real world emissions.

Vehicle type (CO2 g/km)	T&E average proposed VED from 2024 (+20% for non compliant)	2027	2029
BEVs	£50	£90	£156
PHEVs (1-50)	£75-150	£129-268	£223-464
HEVs (~51-109)	£300-575	£515-985	£890-1,704
ICE (~110+)	£650-3,000	£1,118-5,160	£1,934-8,926

Figure 4 - T&E proposed first year VED rates

3. Company car fleets leading the way

With over half (56%) of new vehicles purchased in corporate channels, the decisions of fleets and their employees have a big impact on the car market. With corporate cars going into the used car market after 3 to 5 years, the sooner those cars are BEVs, the sooner the general public will be able to access affordable BEVs in the used car market. It's for this reason that company car fleets have been seen as a crucial avenue to accelerate the switch to electric cars. BEVs make up nearly 30% of new registrations in fleets currently with the [order books for salary sacrifice over 80% for EVs](#) as of July.

As well as having lower fuel and maintenance costs, company car drivers can also benefit from preferential BiK rates for BEVs compared to polluting alternatives. BiK is applied to a car if an employer provides an employee with a car they can also use for private journeys. The amount paid is based on the vehicle's taxable value and is taxed out of an employee's monthly salary.

The UK has a linearly increasing BiK rate based on the CO2 emissions of the vehicle, which is relatively unique in Europe. As part of this, a 2% BiK rate is applied to BEVs in 2022, compared to 2% to 14% for PHEVs, around 15% to 26% for HEVs and around 27% to 37% for petrol and diesel vehicles. This provides a clear incentive for employees when selecting their company car to choose a BEV. These BiK rates are set until 2024/2025, after which there is no certainty for how company cars will be taxed under this scheme.

While there could be a larger differential between BEVs and PHEVs/HEVs, this system creates a clear incentive for employees to select a BEV as their next car. Overall, the UK's BiK regime has been successful in driving BEV uptake in company car fleets.

Corporate car taxation in the UK penalizes the most polluting cars

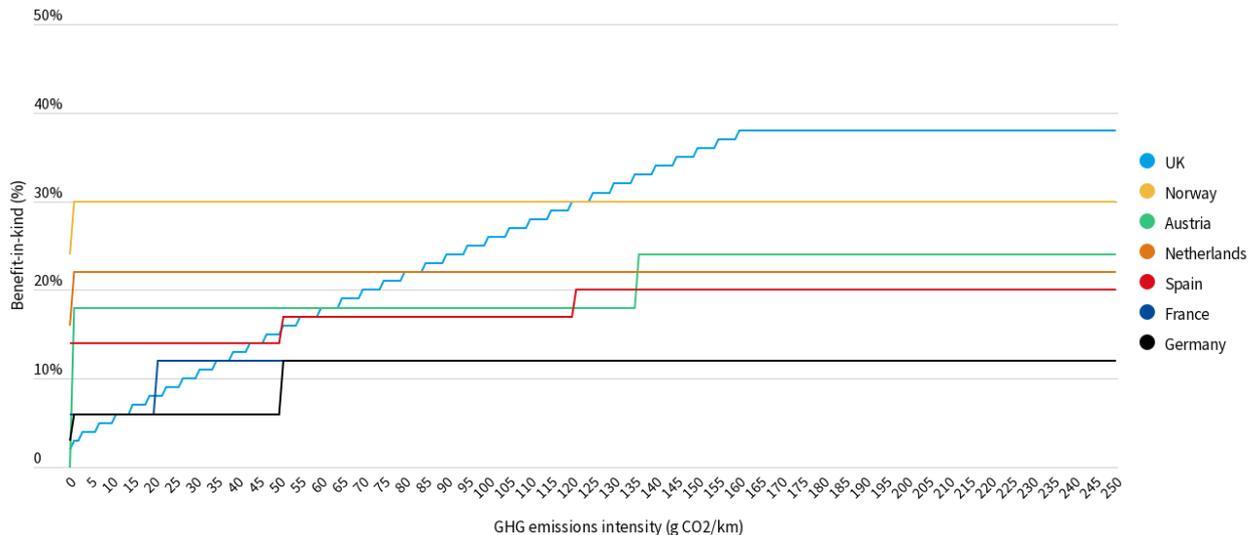


Figure 5 - T&E analysis of UK BiK rates compared to other European countries based on national tax sources as of 1 September 2022.

3.1. Reforming BiK from 2025/26

Company cars cannot benefit from extremely low rates forever - beginning to raise them in 2025/26 would be the right time, but there needs to be a balance between cliff edging rates that would crash demand for BEVs, but also moving towards what would be considered a more “normal” tax system for BEVs.

To ensure the Government gets this balance right, the BiK rates on non-BEVs need to be raised at similar, if not higher, rates as the Government proposes for BEVs so that the tax differential between BEVs and other vehicle types remains. Kicking the can down the road on providing certainty on future BiK rates will only result in hurting today’s market with company car drivers unable to decide on their next vehicle with confidence.

BiK should actively discourage emitting cars, but that doesn’t need to mean rates for BEVs must stay as low as 2% in future years. This is particularly the case as the ZEV mandate kicks in in 2024 and does its job on getting BEVs on the roads and eventually lowering prices.

Plug-in Hybrids (PHEVs) can provide a cost competitive option to BEVs due to low BiK rates. BiK reform should aim to remove disproportionate tax breaks for PHEVs, that [carry far higher real world emissions](#), and ensure BEVs are the obvious choice for company car drivers.

Our proposals lead to BEVs being taxed at 16%, the rate that low emission vehicles were taxed at under BiK in 2016. Meanwhile, all ICE vehicles should be taxed at the highest rate, with significant increases also for HEVs and PHEVs to reflect their real world emissions. This would be a straightforward way of raising tax revenues and bringing BEV taxation up to what can be considered a normal level in the long-term.

Vehicle type (CO2 g/km)	2024/25 (%)	2025/26 (%)	2026/27 (%)	2027/28 (%)
BEVs	2	6	10	16
PHEVs (1-50)	2-14	11-19	15-23	23-31
HEVs (~51-109)	15-26	22-36	25-37	30-37
ICE (~110+)	27-37	37	37	37

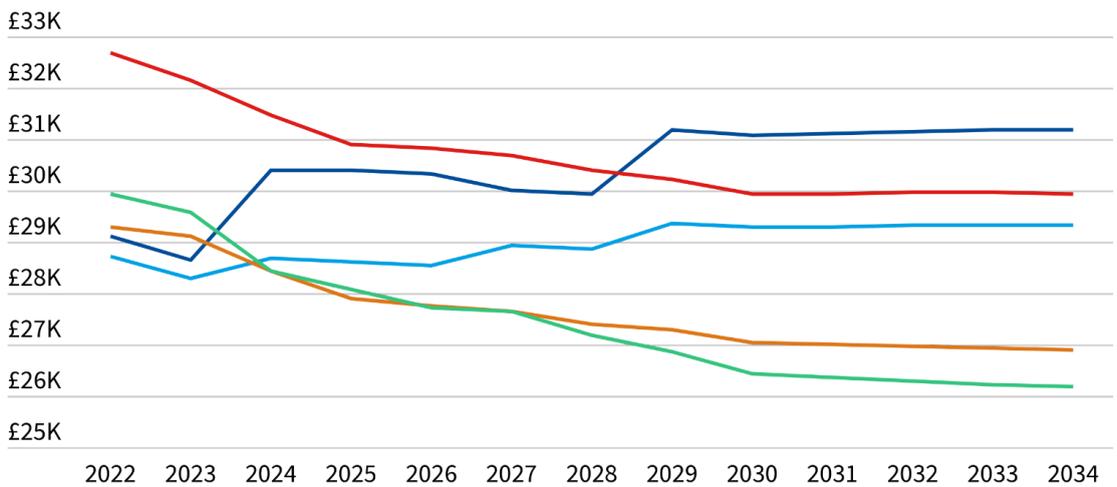
Figure 6 - T&E proposed BiK rates from 2025/26 to 2027/28

In order to provide certainty for company car drivers, the Government should consider including a three year grandfathering clause into its BiK regime so rates remain stable during the ownership period of the car. For example, if someone got a BEV in FY 2025/26, their BiK rates would remain at 6% until 2028/29. Once that three year period is over, rates of the renewal year would apply (e.g. 16% in 2028/29). This is not factored into the Element Energy study detailed below.

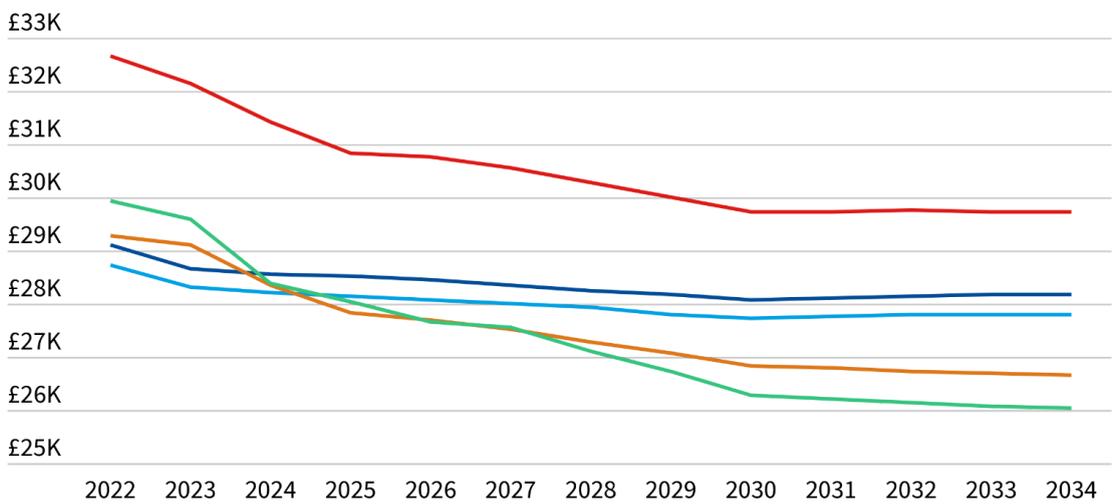
4. Impact of reforms on TCO

T&E commissioned Element Energy to analyse the impact of new tax levels on the TCO of electric vehicles (and other vehicle types) over the coming years.

The impact of T&E’s proposed VED rates accelerate the rate at which medium-sized cars become cheaper on a TCO basis, becoming substantially cheaper in 2024 based on a four year ownership period, providing a saving of £2,000 for first owners. This would have a significant impact on BEV demand in the mid-2020s, enabling the UK’s ZEV Mandate targets to be more ambitious than they currently are and giving confidence to manufacturers to switch to BEV production faster. The proposed VED rates help to ensure BEVs remain cost competitive to maintain strong demand as the ZEV Mandate comes into effect in 2024.



TCO for a medium car under T&E's proposed VED scheme

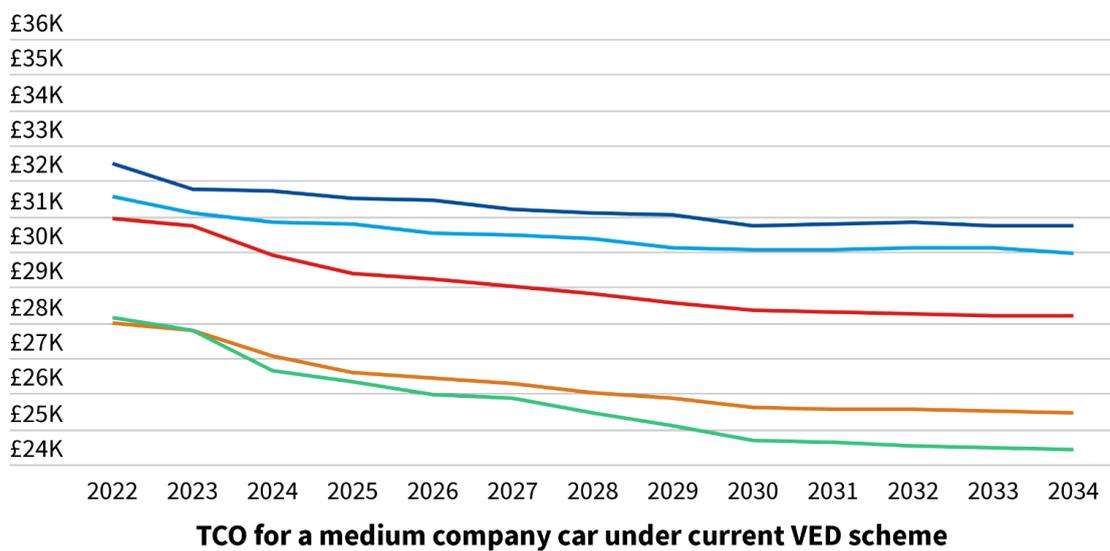
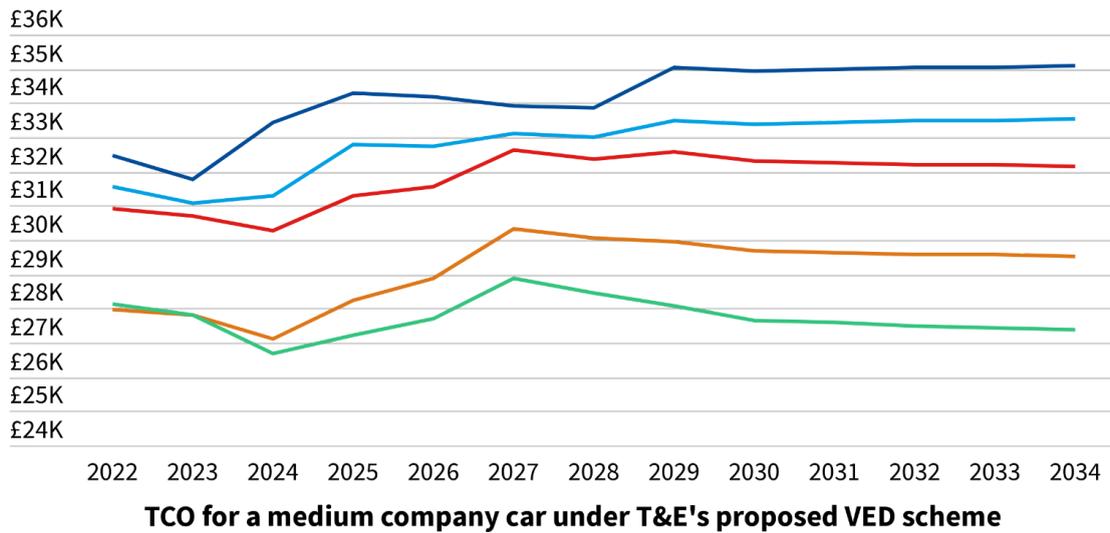


TCO for a medium car under current VED scheme

- Petrol ICE
- Petrol HEV
- Petrol PHEV (High charging)
- Petrol PHEV (No Charging)
- Electric

Figure 7 - Impact of T&E proposed VED rates on TCO of medium cars for a first owner for up to four years

When you factor in T&E’s proposed BiK and VED rates for company cars, it shows that you can maintain a strong TCO advantage for BEVs with these measures and widen the differential between BEVs and other vehicle types, while removing the significant tax break for BEVs.



- Petrol ICE ● Petrol HEV ● Petrol PHEV (High charging)
- Petrol PHEV (High charging, RW emissions) ● Electric

Figure 8 - Impact of T&E proposed BiK and VED rates on medium sized company cars for a first owner for up to three years²

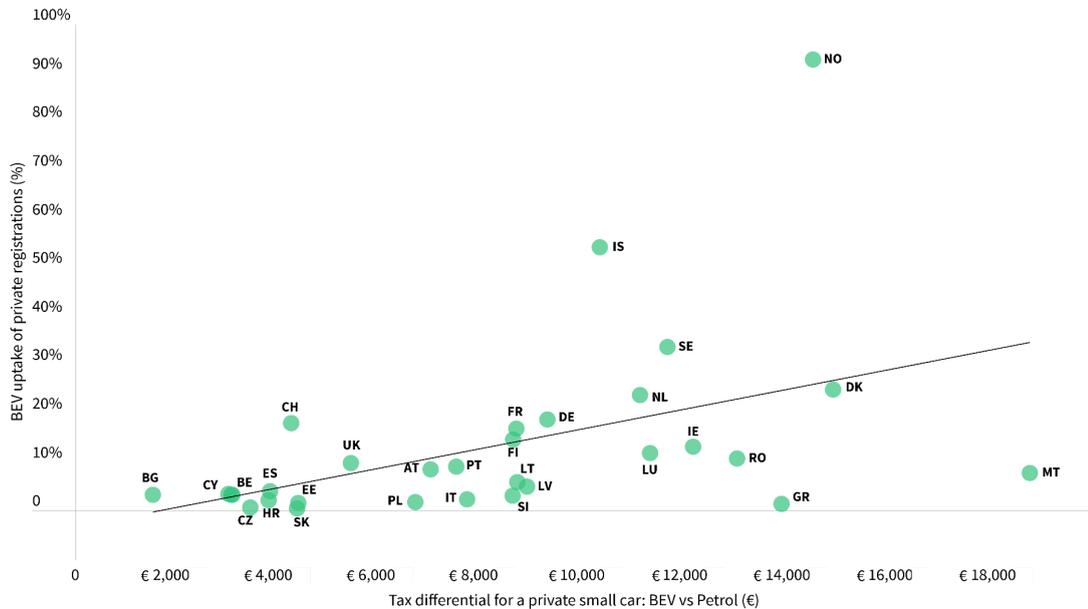
5. Conclusions

Green taxation can be a vital weapon in the Government’s arsenal to not only drive further BEV uptake, but also raise vital public finances in a fair and equitable way. Analysis produced for T&E clearly shows that higher taxes can be levied on EVs without materially impacting the TCO. The UK Government should not kick the can down the road any further in giving certainty on the future of vehicle taxation with dwindling revenue from internal combustion engine vehicles.

² Earlier recommendation of grandfathering of BiK rates not factored into Element Energy analysis

T&E's [Good Tax Guide](#) analysis of car taxation mechanisms across Europe clearly shows a correlation between countries with higher tax differentials between BEVs and emitting cars and higher levels of BEV uptake.

Private correlation between Tax differential for a small car and BEV uptake



Source: ACEA 2022 - Alternative Fuel Vehicle Registrations Data

Figure 9 - Tax differential between a small BEV car and small petrol car over ten year ownership period compared to private BEV uptake

BiK has played an important role in getting company car electrification well underway and has shown how innovative tax policy can make an almost immediate impact on choices of people and businesses. Now is the time, however, to begin bringing taxation on BEVs towards what would be considered a “normal level”. We recommend that the UK should aim to get BiK levels for BEVs back up to around 16% by 2027/28.

With VED, there is an opportunity for the UK to catch up with European neighbours and raise tax on all vehicle types, at the same time as creating a wider differential between BEVs and non-BEVs. This would be a fair way of applying the polluter pays principle on those who can afford to pay for it. As well as not impacting on the TCO of BEVs, the proposals put forward by T&E will not require major restructuring of the UK tax system.

There lies ahead an opportunity for the UK to futureproof its tax system, by using it to a) continue to incentivise BEVs by maintaining and widening the tax wedge between clean and emitting vehicles, as well as to b) start to introduce and normalise taxation on BEVs which should be contributing to infrastructure and the overall tax base. But the Government cannot kick the can down the road for much longer. A

poorly designed tax system risks stalling the progress the UK has made to date in getting BEVs on the roads.

The Government should aim to identify ways of making the vehicle taxation system fairer and alleviate barriers facing lower income groups when it comes to high cost of mobility. Re-focusing some revenue collection on purchasers of new cars and company car drivers would help to achieve this.

Further information

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