

Energy

UK

Delivering the
2030 and 2035
phase outs



Delivering the 2030 and 2035 phase outs

Recommendations



The UK Government's announcement to phase out the sale of new petrol and diesel cars and vans from 2030 and new plug-in hybrid electric vehicles from 2035 are very welcome. Strong uptake of zero emission vehicles over the next decade will be essential to meeting these targets. While the current set of policies have successfully supported an early market, mainstream and widespread zero emission vehicle adoption will require a new level of ambition from Government policy-makers. The upcoming green paper will set out proposals on how to do so.

Energy UK proposes the following changes to meet the new 2030 and 2035 targets:

- **Introduce a zero emission vehicles (ZEV) mandate to provide a clear and binding trajectory for the increase in ZEV sales leading up to 2035.**
A ZEV mandate requires an increasing share of vehicle manufacturers' sales to come from ZEVs, either through their own sales or by purchasing tradable credits. This provides certainty to the market while increasing the supply and market share of ZEVs at no cost to the public purse.
- **Introduce a Bonus-Malus scheme, following on from the current Plug-in Car Grant scheme, to make ZEVs more affordable.**
By reforming the grant and vehicle taxation system, new vehicles receive either a grant (bonus) or a first-year registration tax (malus). Replacing the first year Vehicle Excise Duty tax, the registration tax on Internal Combustion Engine (ICE) vehicles would increase with a vehicle's emissions, providing a lasting, revenue neutral mechanism to make ZEVs more affordable. The bonus would be reduced in line with ZEV prices, reaching zero once ZEVs reach upfront price parity with ICE vehicles.
- **Strengthen and reform vehicle CO₂ emission performance standards to ensure that emissions from non-ZEV sales continue to drop ahead of their full phase out.**
Setting average CO₂ emissions targets for new cars and vans requires all new vehicles to become cleaner, year on year. It is an incredibly powerful policy. Strengthening the existing requirements will ensure continued progress across all new cars and vans, working alongside the increase in ZEV sales from the ZEV mandate and Bonus-Malus schemes.

Phasing out the internal combustion engine

Government has committed to phasing out the sale of new petrol and diesel cars and vans from 2030 and of plug-in hybrids by 2035. This has been brought forward from 2040 in a move that Energy UK strongly supports.

Achieving 100% ZEV sales by 2035 from a current market share of 7%¹ will be challenging. A comprehensive policy framework making use of the most effective levers will be necessary. To date, grants, and in particular the Plug-in Car Grant (PICG), have played an important role in getting the ZEV market going, however they will not be sufficient on their own to deliver the full phase out. The cost of doing so would be prohibitive, would provide poor value for money and is therefore not politically viable.

Instead, a more balanced approach that combines incentives and regulations will provide better value for money while remaining equitable. Subsidies will remain important while new ZEVs are more expensive to purchase than new ICE vehicles, however as this cost differential decreases so can the subsidy. In tandem, as subsidies are gradually withdrawn regulation should come into effect to ensure continued stable growth in ZEV sales.

¹ <https://www.zap-map.com/sales-of-electric-vehicles-in-q1-grow-by-80-per-cent/>

Strengthening the policy framework by reforming the PICG scheme and introducing new regulations will be key to achieving the 2030 and 2035 phase outs. Key objectives for the policy framework should be to:

- Make ZEVs more affordable, a key consumer concern² and important as part of a just transition.
- Grow the market share of ZEVs in a sustainable way, avoiding peaks and troughs in sales.
- Increase the supply of ZEVs, a key challenge at present.
- Continue to drive improvements in all new cars and vans, to avoid emissions from non-ZEVs increasing ahead of their phase out. This is to counter the fact that despite existing regulations, new vehicle emissions have crept up in recent years through the popularity of larger vehicles³ (e.g. “crossovers” and SUVs).
- Provide certainty to consumers and industry, to unlock private investment and provide a strong signal to the public about the direction of travel.
- Come at an acceptable cost to the taxpayer and provide good value for money.

Alongside policies to boost the uptake of ZEVs it will of course be essential to continue rolling out charging infrastructure across the UK. There is a considerable amount of work in train within Government and across industry looking at public and private charging infrastructure, however that is not the topic of this paper and will be addressed elsewhere.

The energy industry and electric vehicles

The power sector has a vital role to play in supporting the electrification of transport given the important, well understood impacts on the generation, transmission and distribution of power in the UK. Energy UK members are responsible for around 75% of GB power generation, 93% of domestic supply and for the transmission of power, granting them a key role in the electrification of transport.

The power industry cut its greenhouse gas emissions by 62% between 1990 and 2018⁴ meaning that battery electric vehicles are cleaner than petrol and diesel vehicles over their whole life cycle⁵, in addition to being zero emission at tailpipe. Continued decarbonisation over the coming decades will further cut emissions from electrified transport.

On the end user side, Energy UK members are working tirelessly to improve the customer experience. Suppliers are bringing new tariffs to market to cater to users’ diverse needs while cutting the cost of running an Electric Vehicle to a fraction of running an ICE vehicle. They are also rolling out smart meters across the country, a key piece of national infrastructure that unlocks smart tariffs for customers as well as improving our understanding of the energy system.

It is this work, along with a strong desire to increase the uptake of ZEVs to meet our net zero targets, that has informed this Energy UK policy paper.

“ Continued decarbonisation over the coming decades will further cut emissions from electrified transport. ”



² <https://www.theaa.com/about-us/public-affairs/aa-populus-driver-poll-summaries-2020#october2020>

³ <https://www.smm.co.uk/industry-topics/emissions/facts-and-figures/>

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/862887/2018_Final_greenhouse_gas_emissions_statistical_release.pdf

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739462/transport-energy-model.pdf

A zero emission vehicle mandate

What?

In its simplest form, a zero-emission vehicle (ZEV) mandate requires vehicle manufacturers to sell an increasing proportion of ZEVs over time, or to buy credits from other manufacturers.

Under the scheme, tradable credits are awarded by selling ZEVs. Each manufacturer must meet an annual credit requirement based on its overall vehicle sales. Failure to do so results in a fine. The annual credit requirement increases gradually over time. In this way, vehicle manufacturers are required to increase the supply of ZEVs over time, buy credits from another manufacturer or pay financial penalties, in a similar way to a cap and trade scheme.

The policy has proven to be effective in China, California and British Columbia (Canada) and is advocated by Green Alliance⁶, the Environmental Defense Fund⁷ and Policy Exchange⁸.

Why?

A ZEV mandate has a number of features that make it a credible and attractive policy mechanism to support the uptake of ZEVs in the UK:

- Proven to be **effective**
- By its very nature a ZEV mandate increases **ZEV market share**
- Increases **the supply of ZEVs**
- **Negligible cost** to the public purse
- Sends a very **strong and clear signal** to industry and consumers
- Provides **certainty** to industry about the trajectory of ZEV uptake leading to the full phase out

How?

Leaving the European Union makes it possible for the UK Government to introduce mandatory ZEV sales targets leading into the full phase out, something that was not previously allowed.

There are many design features that will need to be considered, learning from what has worked in other countries. While Energy UK does not have a position on the specifics, which should be considered in full as part of the policy design process, we believe that it will be important that:

- The ZEV credit requirements for all years out to 2035 are set out ahead of time. This provides certainty to manufacturers and the public, and will build investor confidence and unlock private investment.
- The mandate comes into force by the mid-2020s at the latest. There must not be a gap between the ZEV mandate coming into force and upfront purchase grants for ZEVs coming to an end. Until the ZEV market is fully established there will need to be regulatory and policy backstops.

Recommendation: The UK Government should introduce a **Zero Emissions Vehicle** mandate to provide a clear and binding trajectory for the increase in ZEV sales leading up to 2035.



⁶ https://www.green-alliance.org.uk/resources/going_electric_how_everyone_can_benefit_sooner.pdf

⁷ <https://www.edf.org/sites/default/files/documents/EDFE%20EV%20electrification%20report%20Oct%202019%20FINAL.pdf>

⁸ <https://policyexchange.org.uk/publication/route-35/>

A Bonus-Malus system

What?

A bonus-malus policy, also known as ‘feebate’, is a revenue neutral grant (bonus) and tax (malus) system that offers purchase grants for ZEVs paid for by levying a tax on new vehicles with an engine.

Under the scheme, a first-year registration tax is levied on new ICE vehicles, the revenue from which covers the cost of grants for ZEVs. The tax rises with the CO₂ emissions of the vehicle, providing a clear signal and financial incentive to drivers to buy cleaner vehicles. The tax is only levied on new vehicle purchases and only applies once, at point of purchase.

This policy was successfully adopted in France in 2008 and has been advocated for use in the UK by Transport and Environment, a group of European NGOs that campaign for cleaner transport.

Why?

The main benefits of using a Bonus-Malus system are:

- It's **revenue neutral**, with the revenue from the first-year registration taxes offsetting the expenditure on ZEV grants
- Provides a sustainable way **to make ZEVs more affordable**, tackling a key consumer concern
- **Strengthens incentives** for drivers to make cleaner vehicle purchases
- Builds on **existing policies**, bringing together the Plug-in Car Grant with Vehicle Excise Duty
- It's **tried and tested**, with the policy already in use in France for over a decade
- **Adaptable**, the bonus and malus can be set at whatever level is deemed appropriate and adjusted as vehicle sales change over time

How?

Transport & Environment suggests that the tax should start at £250 for vehicles emitting over 60g CO₂ / km, reaching a maximum of £2,000 for the most polluting vehicles (in line with the current upper limit of the VED first year payment). Under these proposals, plug-in hybrid electric vehicles face neither a grant nor a tax, zero emission vehicles are eligible for a grant of £3,500 and vehicles emitting more than 60g CO₂ / km pay between £250 - £2,000 as a registration tax.

The specific values for the bonus and malus will need to be carefully considered based on modelling of vehicle sales over the coming years. The scheme doesn't have to be based on hypothecated taxes, which can be overly restrictive for Government. Instead it can be more indirect, whereby the revenue raised from the vehicle taxes is at least equivalent to the cost of the grants.

As the ZEV market grows and emissions from new non-ZEV emissions continue to drop the values can be adjusted to maintain revenue neutrality. The grant level should be reduced over time to reach zero once ZEVs and ICE vehicles reach upfront price parity, which should be 2027 at the latest⁹. To provide added certainty to industry, we suggest that grant adjustments are communicated all at once, in advance, and linked to an easily observable indicator, such as ZEV market share.

Recommendation:

The UK Government should introduce a **Bonus-Malus** scheme following on from the current Plug-in Car Grant scheme to make ZEVs more affordable.



⁹ <https://www.transportenvironment.org/press/evs-will-be-cheaper-all-fossil-fuel-cars-2027-uk>

CO₂ emission performance standards

What?

CO₂ emission performance standards set a maximum average level of CO₂ emissions for new cars and vans that are broken down into specific targets for each individual manufacturer.

At present, EU regulations set targets for average CO₂ emissions of all new cars and vans: for 2021 these were 95g CO₂/km and 147g CO₂/km respectively. These targets are then broken down into specific targets for individual vehicle manufacturers based upon the average weight of vehicles sold. If a manufacturer fails to meet its target it faces a hefty fine, providing a strong incentive to comply.

The standards have been in place as an EU-wide policy for over a decade and have been effective in driving incremental improvements in emissions from new cars and vans. The UK Government confirmed its transition arrangements for vehicle emissions standards as the country leaves the EU however the long-term framework has yet to be set out.

Why?

CO₂ emission performance standards:

- Provide a way to **incrementally reduce emissions** from new non-ZEVs, which will continue to make up a significant proportion of vehicle sales over the coming 14 years
- Build on **existing policy**
- **Counter the increase in average emissions** from new cars that has been taking place over recent years, as drivers have opted for larger vehicles
- Represent an opportunity to **strengthen UK standards** after Brexit

How?

Government recently announced its plans for 2021, which are aimed at a continuation of the existing EU-wide standards to minimise disruption for vehicle manufacturers after the transition period ends.

The longer-term future of vehicle emissions standards in the UK is yet to be confirmed. Government will need to undertake a full consultation exercise as it develops its new policy outside of the EU. This provides an opportunity to introduce standards that are more ambitious than the EU scheme and are better aligned with our wider decarbonisation targets.

To make the CO₂ emissions standards more effective, Government should consider:

- Increasing the ambition for the 2025 and 2030 targets and allow for rewarding actions taken ahead of 2025
- Replacing the 5-year fleet level reduction targets with annual targets to allow for more incremental, regular progress and set appropriate incentives for early action. Limit eco innovation benefits and flexibilities for the 2021 – 25 period, to ensure that concrete meaningful progress is made in this period
- Replace the current pooling system with a simpler trading system with open and fair competition
- Remove super credits for ZEVs to avoid double counting between the ZEV mandate and the CO₂ emissions standards

Combined with a ZEV mandate and a bonus-malus scheme, there is a clear opportunity to use emissions standards to achieve significant progress decarbonising cars and vans.

Recommendation:

The UK Government should strengthen and reform vehicle **CO₂ emissions performance standards** post-Brexit to ensure that emissions from non-ZEV sales continue to drop ahead of their full phase out.





www.energy-uk.org.uk

[@EnergyUKComms](https://twitter.com/EnergyUKComms)

