

Car CO2 standards

100% zero-emissions future, but lacking short-term ambition

Context

Following the entry into force of the 2020/21 EU car CO2 standards (the main tool to decarbonise cars in Europe) electric cars (EVs) have entered the mass market much faster than previously expected, reaching [10.5% of new sales](#) last year, and leading to an [unprecedented drop](#) in CO2 emissions of new cars by 12%. Getting to 100% zero emissions mobility is now within reach and – to ensure Europe can meet its own Green Deal goals – must be the ultimate objective of the new car CO2 regulation.

Analysis [shows](#) that if we continue to ramp up electric car production, via higher targets during the 2020s, **EVs will be cheaper to buy than equivalent petrol models in just six years time**, making them accessible and affordable to all Europeans.

EVs have zero tailpipe emissions, but are also by far the best option for the environment when taking into account lifecycle CO2 emissions. T&E [has shown](#) that, already today, an average EU electric car is already close to three times better than an equivalent conventional car – a ratio that will continue to improve for EVs as the grid and economy decarbonise.

What has the European Commission proposed?

Under the new proposal, carmakers will have to reduce by 55% the climate damaging CO2 emissions from their new cars sold from 2030, before going 100% emissions-free from 2035 onwards.

Regrettably, the Commission has only increased the targets from 2030 onwards, leaving the current weak 2025 CO2 target of just 15% untouched. This means that limited effort will be required by carmakers before 2030 and risks slamming the brakes on the recent EV momentum. Higher retail prices for EVs, slower uptake of charging infrastructure, and worse, supply from outside Europe will dominate if domestic supply – which closely mirrors the car CO2 standards – is insufficient.

Summary:

- All new cars sold in the EU to be zero-emission from 2035
- A new 55% EU fleet-wide CO2 reduction target (up from 37.5%) for new cars from 2030
- Current 2025 target of 15% remains unchanged, meaning limited progress in EV production needed before 2030

What's good? What's not?

The **2035 date to go 100% electric shows the Commission is serious about going carbon neutral by 2050** and will put European industry in the driving seat to dominate the new global EV market.

The trajectory to get there matters, though. While the new 55% target in 2030 is a move in the right direction (up from a paltry 37.5%), it is far from what is needed for Europe to be on a cost effective trajectory – i.e. at the lowest cost to society – to go fully electric by 2035. The proposed 55% target means that a maximum of half of all new car sales will be zero emission (ZEV) by 2030. This is well below the 67% ZEV sales needed for the cost optimal trajectory according to BloombergNEF's recent [analysis](#).

Problematic though is the absence of increased ambition before 2030. Because **the Commission has left several important loopholes in the legislation** – including CO2 credits for technologies such as LED lights (*Eco-innovation, Article 11, Regulation 2019-631*) and more lenient targets for heavier cars (*CO2 target mass adjustment, Article 14, Regulation 2019-631*) (see T&E [position paper](#) & [short briefing on flexibilities](#) for more details on: the ZLEV sales benchmark bonus; CO2 target mass adjustment; eco-innovation credits; and test manipulation), **the current 15% target in 2025 can be met with only a 2% cut in CO2 emissions until 2029** (before the new 2030 target comes into play). This risks EV

production stagnating, slowing down the point at which EVs become affordable to the mass market, and with cars being one of the single largest sources of CO2 emissions, this will seriously undermine Europe's climate ambition in 2030.

The decision to remove the so-called ZLEV (zero- and low-emission vehicle) credit system from 2030 – which gives generous credits to highly polluting PHEVs – is welcome, but comes far too late and means **carmakers can continue to comply with 'fake electric' cars that actually [emit 3-4 times](#) their official CO2 test results until 2029**. A big problem with the current ZLEV system is that it disproportionately rewards more polluting models (close to the 50g CO2/km threshold) via the 0.7 multiplier (see *Annex I, Part A, point 6.3, Regulation 2019-631*) that gives these vehicles a third of a credit, instead of zero that it would get without the multiplier.

If carmakers continue to produce and sell PHEVs, the number of ZEVs they need to comply with the 2030 CO2 target drops to just 43%. Carmakers who prioritise PHEVs as a compliance route will be able to go much lower than that, risking to slow down the transition to future-proof technology and putting European carmakers behind their global competitors who are going full electric.

How should it be improved?

Targets

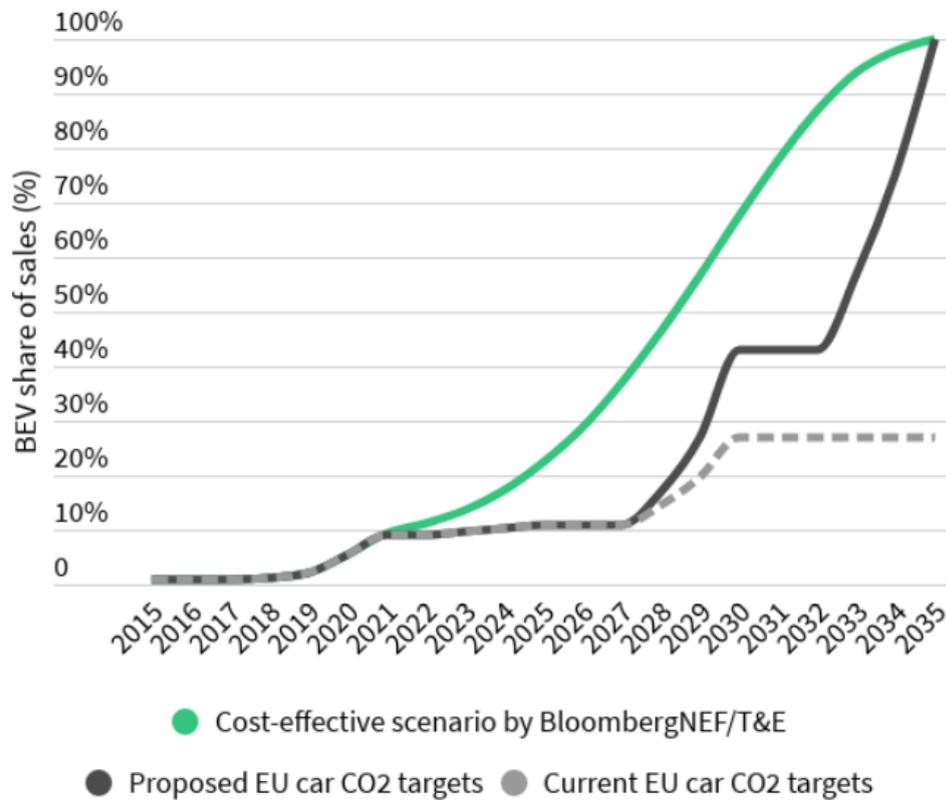
In order to reach zero emissions for all new cars by 2035 (and therefore stay on course for climate neutrality by 2050) on a cost-effective trajectory, **sales of ZEVs (primarily battery electric vehicles) need to hit 22% in 2025, 37% in 2027 and 67% in 2030**. Such a trajectory will also help drive down the cost of making an EV so that it is cheaper to buy than a petrol car in just six years' time. This will democratise EVs for all Europeans from small business owners to an average family, whether living in a city or a village. Targets should therefore be increased (and set where not already) for 2025, 2027 and 2030 in line with the

[BloombergNEF/T&E cost-effective trajectory scenario.](#)

PHEVs

Part of the problem with PHEVs – that tout low CO2 emissions on paper but in reality are driven on a petrol engine most of the time – lies with how their CO2 emissions are calculated under the WLTP type approval test. However, this regulation can already remove credits for the worst models and **ensure future PHEVs sold in Europe are designed to be driven mainly with zero emission**, and deliver the required CO2 savings for the transition.

First, MEPs and governments should phase out already from 2025 the 0.7 multiplier



Source: Bloomberg NEF (2021), *Hitting the EV Inflection Point* and T&E modelling of the EU CO2 standards for cars.

(see explanation above) for the PHEV ZLEV credits system, which, for a PHEV with emissions of 45g CO₂/km, awards 0.37 credits. Without the multiplier each PHEV would only be awarded 0.1 credits. **Removing the multiplier would require carmakers to sell more fully electric cars and also improve their PHEV offering, selling vehicles with lower emissions to gain the same number of credits.**

PHEVs today have high real world emissions largely due to their poor design; small batteries, underpowered electric motors and no fast charging, which make it hard for users to drive predominantly in zero emission mode. The new car CO₂ Regulation can help fix this by setting additional criteria that PHEVs would have to meet to receive ZLEV credits: 1) electric motor power should be equal to or more than ICE engine power; 2) have at least 80km electric only range; and 3) be capable of fast charging (50 kW) to ensure that PHEVs sold in the EU can easily drive zero emission on the road.

Don't forget...

The Commission was right to resist pressure from the oil and gas industry by not introducing a crediting system for advanced and synthetic fuels (e-fuels) in the new Regulation. T&E [has shown](#) that including them would not be credible – either from an environmental nor from an economic point of view. **Policymakers must keep e-fuels out of the car (and van) CO₂ standards**, which would only serve to delay electrification in road transport, prolong the life of polluting engines, hit drivers in their pockets, and postpone the economy-wide decarbonisation by diverting these fuels from where they are really needed (shipping, aviation and heavy industry).

Finally, in a scenario where loopholes and flexibilities in the regulation are not closed and the ambition level prior to 2030 is not increased, there is a risk that emissions from new diesel and petrol vehicles will actually increase in the 2020s ([see](#) pg. 21). T&E therefore recommends a cap on CO₂ emissions of ICE models (including hybrids), even when carmakers claim ZLEV bonuses and sell more EVs.

Further information

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