

## Briefing

17 September 2020

The Greenpeace logo is written in a bold, green, sans-serif font.The logo features the words "CUTTING CARBON NOW" in a blue, sans-serif font. A blue arrow points downwards from the word "NOW", with a small "2" positioned near the arrow's tip.The logo consists of a red double quotation mark icon followed by the text "green alliance..." in a white, sans-serif font, all set against a dark blue square background.

## Ending the sale of new diesel, petrol and hybrid cars and vans: the contribution to UK emissions targets

**The 2030 phase out of all new internal combustion engine and hybrid cars and vans is the single most important measure the government can take to get the UK on track to meeting its existing carbon targets.**

### Summary

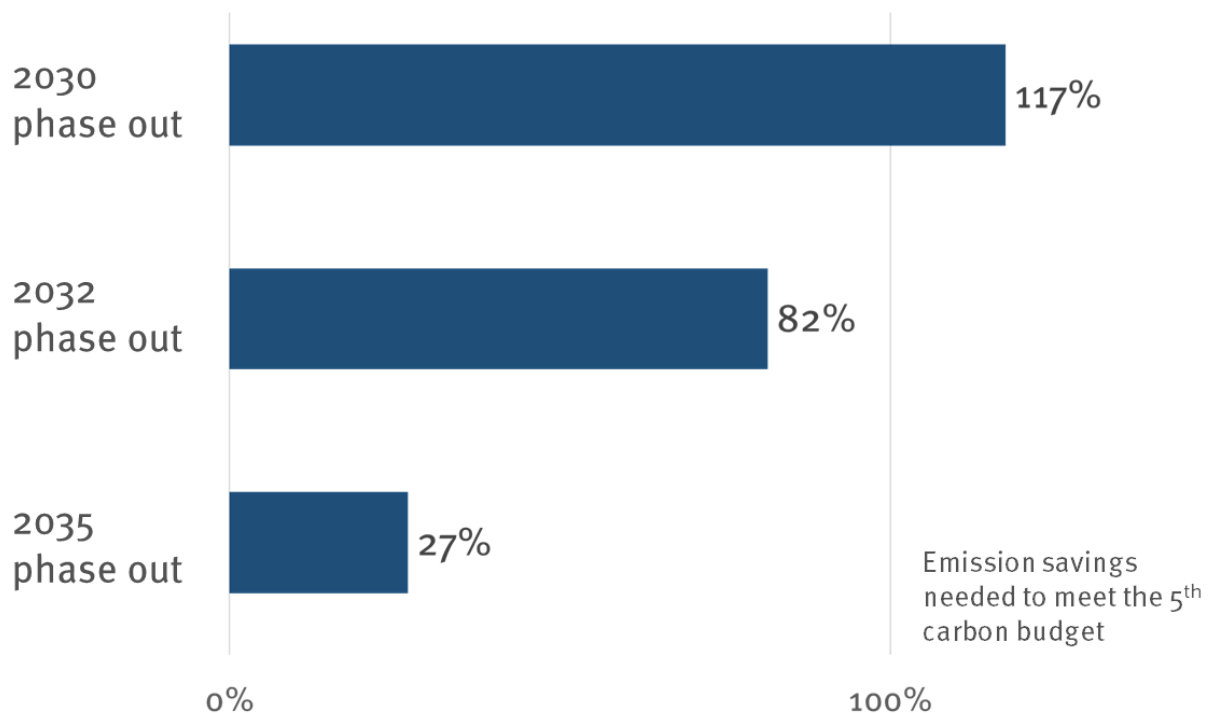
- Transport accounts for 34% of UK greenhouse gas emissions, the highest contribution of any sector. Its emissions have grown by 12% since 1990, and cars and vans account for 70% of the total.<sup>1,2</sup>
- The UK is not on track to meet its decarbonisation commitments to 2032. We estimate that an additional 77 million tonnes of carbon dioxide equivalent (MtCO<sub>2e</sub>) must be saved to meet the fifth carbon budget, set for the period 2028 to 2032 inclusive.<sup>3</sup>
- In February, the government announced plans to bring forward the phase out date for the sale of new petrol, diesel and hybrid cars and vans from 2040 to 2035 or possibly earlier.
- We show why the phase out date for the sale of new internal combustion engine and plug-in hybrid cars and vans must be brought forward to 2030. Other target dates will not put the UK on track to meet the fifth carbon budget.
- The current legal target for the fifth carbon budget is likely to be required to be tightened to account for the government's binding 2050 net zero emissions target, but that process will only conclude next year. In that scenario, the emission reductions that will be needed between 2028 and 2032 are likely to be even greater than at present, which further underscores the need to go for the 2030 date.

- This analysis incorporates new data from Transport & Environment, showing that the real world performance of plug-in hybrids is far worse than that reported in official tests. Average real world emissions are more than two and half times test values and only reduce emissions by 30% when compared to the average emissions of conventional cars.<sup>4</sup>
- Crucially, such an ambitious target needs strong supporting policy and regulations to increase sales of electric vehicles in the 2020s. The new phase out date should be supported by a range of measures, including a mandate that requires manufacturers to sell an increased proportion of zero emission vehicles, an expanded charging network and incentives for consumers.

### The carbon impact of different phase out dates

Comparison of different phase out dates for new internal combustion and plug in hybrid cars and vans shows that only a 2030 ban would reduce emissions by enough to meet the fifth carbon budget emissions target. A 2030 ban would reduce emissions by 90 MtCO<sub>2e</sub> between 2028 and 2032, equivalent to 117% of the projected overshoot in emissions over the fifth carbon budget period.

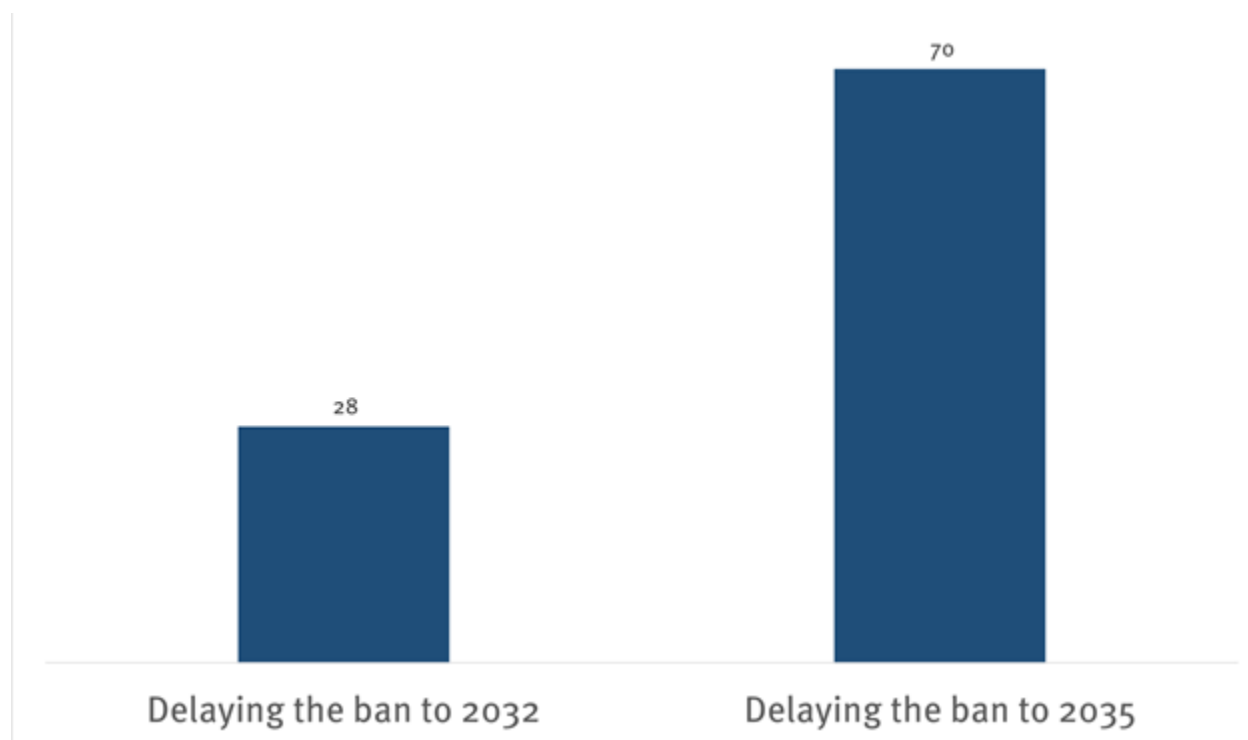
**Only a 2030 ban on the sale of new internal combustion engine and plug-in hybrid cars and vans will ensure the UK is on track to meet the fifth carbon budget.**



Later phase out dates will not cut emissions enough to close the gap in meeting the fifth carbon budget. A 2032 or 2035 phase out date will result in additional emissions of 28 MtCO<sub>2e</sub> or 70MtCO<sub>2e</sub> respectively over the course of the fifth carbon budget.

**Delaying the ban on the sale of new internal combustion engine and plug in hybrid cars and vans to 2032 or 2035 will cause higher emissions over the fifth carbon budget period (2028-32), requiring even deeper short-term emission cuts to be made in other sectors to avoid missing the legally binding target.**

**Additional emissions generated, MtCO<sub>2e</sub>**



The fifth carbon budget was set before the net zero target in 2050 was made law and it is likely it will have to be adjusted to get the country on track for the new target. Our analysis suggests this will require additional savings of 274MtCO<sub>2</sub>, compared to the current baseline set for the period 2028 to 2032 inclusive.<sup>5</sup> A 2030 phase out date would help to meet a third of that emissions gap (2032 or 2035 phase out dates would meet only 23% and 8% respectively of the additional emissions savings needed).

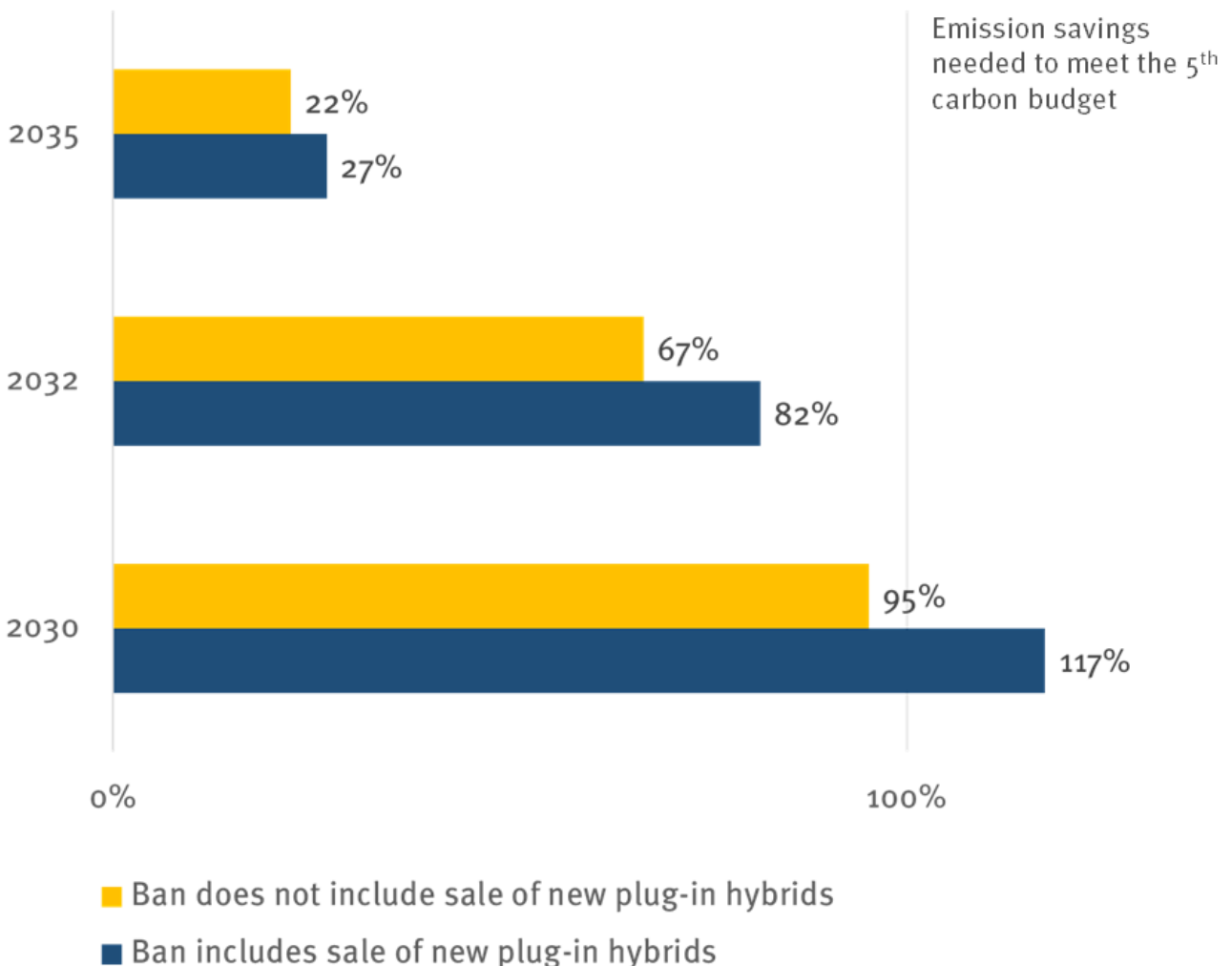
## The ban must include hybrid vehicles

All hybrids, including plug-in hybrids, need to be included in the ban. The graph below shows that failing to include them would reduce emissions savings to such an extent that even a 2030 phase out date will fail to meet the government's carbon targets.

New data from Transport & Environment shows that the real world performance of plug-in hybrids is far worse than that reported in official tests. Average emissions of plug-in hybrids are over two and half times those of official test values and lead to only a 30% emissions savings, compared to an average new conventional car.<sup>6</sup>

Failing to ban the sale of new plug in hybrids will also lead to additional emissions being generated after 2032, compared to a scenario where only sales of new zero emission vehicles are allowed, making it harder for the UK to meet its decarbonisation commitments.

### Plug in hybrids need to be included for the UK to decarbonise fast enough



## A 2030 phase out date needs supporting policy to make delivery possible

An ambitious phase out date of 2030 will require rapid uptake of electric vehicles. To achieve the emissions savings we have estimated, battery electric vehicles would need to be 38% of the market share in 2025, compared to the current estimate of 3-4% in 2020.<sup>7</sup> Achieving this cannot be left to the market alone and will require strong supporting measures, including:

- A mandate on manufacturers, requiring them to increase the proportion of zero emission vehicles they sell, with specific interim targets, increasing as the years pass, alongside a credits trading system to ensure that between them they meet growing domestic demand. The zero emission vehicle mandate should include strong penalties for anyone in the industry that fails to comply, including failing to meet interim targets.
- An expanded network of public rapid and ultra-rapid chargers.
- Stronger consumer incentives to purchase electric vehicles.

**For further information, please contact**

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## Endnotes

<sup>1</sup> Department for Business, Energy and Industrial Strategy (BEIS), [2018 UK greenhouse gas emissions spreadsheet](#), tables 3 and 8

<sup>2</sup> Department for Transport, [2018 greenhouse gas emissions by transport mode spreadsheet](#)

<sup>3</sup> Calculations are based on analysis by Green Alliance, based on data from Committee on Climate Change (CCC), 2015, *Advice on the fifth carbon budget*; and BEIS, April 2019, *Updated energy and emissions projections 2018*

<sup>4</sup> The Plug-In hybrid con, Transport and Environment, September 2020  
[https://www.transportenvironment.org/sites/te/files/publications/2020\\_09\\_New\\_evidence\\_PHEV\\_emissions.pdf](https://www.transportenvironment.org/sites/te/files/publications/2020_09_New_evidence_PHEV_emissions.pdf)

<sup>5</sup> Calculations are based on analysis by Green Alliance, op cit

<sup>6</sup> The Plug-In hybrid con, Transport and Environment, September 2020  
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<sup>7</sup> Transport and the Environment (2020) *Phasing out sales of new cars with engines- a UK approach*