



Climate Neutrality  
Foundation

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# Smart Carbon Pricing for Cars

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**Regulatory proposal**

**Berlin, 25 March 2021**



## **How can a ramp-up to 14 million electric vehicles by 2030 succeed?**

The study "Towards a Climate-Neutral Germany"<sup>1</sup> has shown that a switch to 14 million electric vehicles by 2030 must succeed in order to achieve an interim target of 65% GHG reduction and put us on a path to climate neutrality. Since motorized road transport is responsible for 94% of the transport sector's GHG emissions (59% passenger cars, 35% commercial road vehicles),<sup>2</sup> the switch to electric vehicles has a central role to play in GHG reduction in the transport sector.

One instrument for the ramp-up of electromobility are the CO<sub>2</sub> emission standards at EU level. In their current form, however, they are not sufficient to achieve the targeted climate goals. By June 2021, the EU Commission will present a proposal to adapt the CO<sub>2</sub> emission standards to the new EU climate target of 55% GHG reduction by 2030. At present, it is not possible to predict what the proposal will look like, when it will be adopted by the EU Council and Parliament and come into force, and whether it will be suitable for bringing about the necessary changeover.

At the national level, the German government is promoting the purchase of electric vehicles through subsidies. The Fuel Emissions Trading Act introduced a surcharge on the price of gasoline and diesel. However, the current instruments are far from sufficient to achieve the climate targets.<sup>3</sup>

### **National instruments and their legal admissibility**

Climate Neutrality Foundation has commissioned the law firm Becker Büttner Held to conduct a legal opinion of possible national instruments that could be considered for accelerating the transition to electromobility. The experts came to the following conclusions:

- A **registration ban** on passenger cars and light commercial vehicles with combustion engines that run on fossil fuels would be constitutionally permissible, but would be in conflict with EU law. A registration ban would need to be implemented at EU-level.
- A **quota system** for the registration of electric vehicles and the introduction of stricter national fleet limits would be permissible under EU law; they would also not violate provisions of our constitution. However, such regulations would be complicated to implement because evasive behavior via the purchase of vehicles in neighboring countries and their import would have to be taken into account in an appropriate and legally secure manner.
- A **bonus-malus system** consisting on the one hand of tax-financed subsidies or tax concessions and on the other hand of higher vehicle taxation, the introduction of a CO<sub>2</sub> component in the energy tax or a registration tax for vehicles with internal combustion engines would be permissible both under EU law and under constitutional law.

### **Our proposal: A smart carbon pricing on cars**

Carbon pricing of fuels primarily affects investment decisions from the past. In the case of European emissions trading, it is the power plants and industrial facilities that have already been built; in the

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<sup>1</sup> Prognos, Öko-Institut, Wuppertal Institut (2020): Towards a Climate-Neutral Germany. Executive Summary conducted for Agora Energiewende, Agora Verkehrswende and Stiftung Klimaneutralität.

<sup>2</sup>

[https://www.bmu.de/fileadmin/Daten\\_BMU/Pool/Broschueren/klimaschutz\\_zahlen\\_2020\\_broschuere\\_bf.pdf](https://www.bmu.de/fileadmin/Daten_BMU/Pool/Broschueren/klimaschutz_zahlen_2020_broschuere_bf.pdf)

<sup>3</sup> Deloitte (2020): Elektromobilität in Deutschland – Marktentwicklungen bis 2030 und Handlungsempfehlungen.



case of national fuel emissions trading, it is the diesel or gasoline cars or gas heating systems that have already been purchased. Since consumers are also voters, experience shows that at the end of every political debate we have always ended up with carbon prices that affect consumption but are clearly too low to trigger investment in climate-friendly technologies. We therefore need a mix of instruments. In addition to carbon pricing that addresses fuel consumption, we need a smart form of carbon pricing that stimulates investment in e-mobility.

Against this backdrop, Climate Neutrality Foundation proposes a carbon price that starts with the purchase of new vehicles, and which is based on the annual vehicle tax. The above-mentioned legal opinion has shown that the vehicle tax can be redesigned in such a way that new vehicles with CO<sub>2</sub>-emitting combustion engines no longer have a price advantage over those with CO<sub>2</sub>-free drives.

We propose to restructure the annual vehicle tax for new vehicles only as follows:

- **Assessment basis:** In the future, the CO<sub>2</sub> emissions alone will be decisive for the annual tax rate (engine capacity will be eliminated).<sup>4</sup>
- **A distinction is made between three vehicle categories:**
  - **Battery electric vehicles (BEV):**

Battery electric vehicles with emissions of 0 g CO<sub>2</sub>/km will remain exempt from the vehicle tax. The current time limit of the tax exemption to 31.12.2030 will be lifted.
  - **Gasoline and diesel vehicles:**

For gasoline and diesel vehicles, CO<sub>2</sub> emissions (in grams per kilometer according to manufacturer specifications) will be taxed in such a way that, calculated over a 10-year period, the average price differences to battery-electric vehicles are compensated.
  - **Plug-in hybrid vehicles (PHEV):**

The real-world fuel consumption, and thus CO<sub>2</sub> emissions, of plug-in hybrid vehicles are generally significantly higher than indicated on the vehicle label.<sup>5</sup> To address this disparity, plug-in hybrid vehicles are subject to a higher tax rate for each gram of CO<sub>2</sub> emitted per kilometer. Plug-in hybrid vehicles are also excluded from purchase incentives.

<sup>4</sup> Currently, the motor vehicle tax consists of two components: an engine capacity component and a CO<sub>2</sub> component. The engine capacity component is differentiated according to diesel and gasoline vehicles. For diesel vehicles, the engine capacity component accounts for the significantly higher share of the vehicle tax.

<sup>5</sup> For private vehicles, real CO<sub>2</sub> emissions are about two to four times higher than in the test cycle, and for company vehicles about three to four times higher.  
Vgl. Plötz, P., Moll, C., Bieker, C., Mock, P., Li, Y. (2020): Real-world usage of plug-in hybrid electric vehicles - Fuel consumption, electric driving, and CO<sub>2</sub> emissions. ICCT White Paper, September 2020.



- Financial support for the purchase of electric vehicles is limited to 4.3 billion euros and should be phased out, as it is not one of the primary tasks of the state to subsidize the purchase of passenger cars with tax money. Therefore, different tax rates are needed for the period with and without government subsidies. What is relevant in each case are the real price differences, i.e. based on the average costs including the subsidy.

**Accompanying instruments:**

Our proposal for smart carbon pricing for vehicles is flanked by the following instruments.

- When a vehicle is sold, the amount of the vehicle tax must also be shown in the future (together with the CO<sub>2</sub> values).
- The promotion of charging infrastructure will be intensified in order to create the necessary infrastructure for the switch to electric vehicles.

**What are the advantages of this proposal?**

1. Carbon pricing via the annual vehicle tax for new vehicles creates cost parity for the purchase of electric vehicles and internal combustion vehicles.
2. Vehicle owners who made their purchase decision in the past are not affected.
3. Purchase decisions for company cars are particularly stimulated, since the employer bears the vehicle tax.
4. The federal budget is not burdened but relieved.