

## Talking point

### Cash incentives to purchase electric cars are not the ideal solution

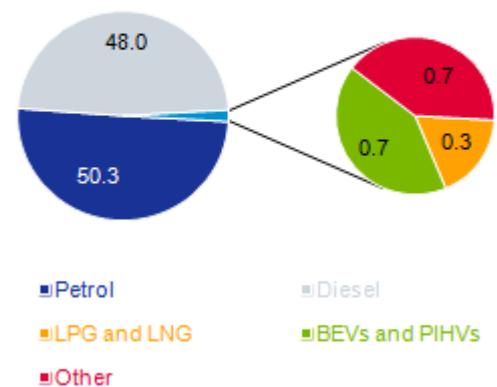
February 5, 2016

**The demand for electric cars in Germany remains low. Their share of total new car registrations was less than 1% in 2015. The clamour is increasing among policymakers in favour of stimulating demand with the aid of cash incentives. The argument is that if such incentives were high enough the market share of electric cars would indeed increase faster than has been the case to date. Nevertheless, there is a host of economic, regulatory and social policy reasons that argue against cash incentives. We continue to favour an integration of road traffic into the EU Emissions Trading System in order to limit the sector's CO<sub>2</sub> emissions.**

Electromobility stubbornly remains a niche segment in all the world's major auto markets; this is also the case in Germany. In 2015 battery-electric vehicles (BEVs) and plug-in hybrid vehicles (PIHVs) made up less than 1% of total new car registrations – the share is rising, however. Private car buyers in particular have failed to be fascinated by the new technology, although the number of models available has grown considerably in recent years. The main reasons for buyers' reticence include the cars' short range and the patchy charging infrastructure. The most important reason, however, is probably the high acquisition cost. Especially in the volume segment, i.e. small and compact cars, the relative price premium on electric cars compared to petrol or diesel cars remains substantial. The currently very low prices of petrol and diesel at the pump also reduce the cost advantages of BEVs or PIHVs with respect to variable operating costs, especially as electricity prices – not least because of the German 'Energiewende' – are set to continue rising. That is why there is currently a growing clamour among politicians and industry representatives in Germany to subsidise the purchase of electric cars via direct cash incentives. A figure of EUR 5,000 per car has been mentioned, for example. It is a fact that the electric car share is relatively high only in those countries where government measures provide direct or indirect financial incentives (Norway, for example).

#### "New" propulsion technologies remain niche segments

Fuel types/propulsion technologies as share of new car registrations, %, Germany, 2015



Source: Kraftfahrt-Bundesamt

#### High CO<sub>2</sub> abatement costs for electromobility

How are such cash incentives to be assessed? Firstly, it is interesting to clarify what arguments are presented in favour of such subsidies. There are different motives for this. Some supporters of purchase incentives argue that without these subsidies it will not be possible to meet the federal government target of increasing the number of electric vehicles on German roads to 1 million units by 2020. This is of course a poor argument, because the target of 1 million electric vehicles was set randomly and has primarily a symbolic value. At any rate it does not have an economically sound basis. Another argument in favour of subsidies is the potentially positive impact on environmental and climatic conditions. The absence of local harmful emissions and the (for now still marginally) lower CO<sub>2</sub> emissions are indeed benefits generated by electromobility. With regard to the impact on the climate there is, however, one major downside: the reduction of CO<sub>2</sub> emissions via electromobility entails very high abatement costs. Were such funds to be spent on measures with lower abatement costs rather than on incentives to purchase electric cars, the impact on Germany's overall CO<sub>2</sub> footprint would be much better. What should also be taken into account is that ecological aspects of road traffic are already addressed via CO<sub>2</sub> limit values for cars, energy tax (petroleum tax) and motor vehicle tax. Is yet another instrument really necessary?

The economic and industrial policy justifications proffered by several advocates of cash incentives are certainly comprehensible. If these incentives are large enough, the share of electric cars ought to rise quickly. As a consequence the costs of the technology could decline, for example by generating economies of scale in manufacturing and speeding up technical progress. The cost gap compared to traditional propulsion technologies would shrink faster than under a regime without subsidies. To effect such an outcome, however, would require substantial funding for several years. Otherwise there would be a danger of the subsidies going up in smoke as a one-off effect. Ultimately it would thus be expensive for the public purse. The fiscal argument also remains prominent in years when budgets are balanced.

### **Reducing subsidies is not a minor issue**

There are also fundamental regulatory concerns that argue against cash incentives. For instance, past experience shows that once subsidies have been granted it is very difficult to phase them out. As a rule subsidies result in vested interests. What happens if the cost gap between electric cars and vehicles with internal combustion engines in the volume segment, for example, persists for longer or does not narrow? Will policymakers then show the will to cut subsidies if, for example, there is a threat of redundancies? In the end, cash incentives are interventions in the market that favour one certain technology, even though politicians cannot know in advance when the technology will establish itself in the market without the aid of subsidies. In a worst case scenario, other technologies that would deliver greater long-term economic and/or ecological benefits might be hampered by subsidies for electromobility. Subsidies for electromobility would also result in rent-seeking. In the end, the main beneficiaries of an incentive to buy electric cars would be wealthier car buyers, so such a measure would cause redistribution from “bottom to top”.

### **Evolution, not revolution**

When all is said and done, the transition in roadgoing vehicles from internal combustion engine to electromobility represents evolution rather than a revolution. The reasons for this include the durability of vehicles, the only gradual change in customer preferences and also the continuing technical advances similarly being made with petrol or diesel cars, which makes these cars attractive to the majority of customers. How quickly this transition towards increased electrification of the powertrain occurs is dependent on a variety of factors. One factor is government regulation. The above-mentioned CO<sub>2</sub> limit values for new cars that will apply in the EU from 2020 cannot be met without a certain degree of electrification, especially in the premium vehicle classes. Accordingly, there is an increasing choice of vehicles not least supplied by German carmakers, which is of course a prerequisite for electromobility to gain market share. In the meantime the relative price premia, for instance of PHEVs compared to cars with internal combustion engines, have become very small or no longer exist in some upscale vehicles. The range of the cars is set to continue increasing, and the costs will decline further. The supply side is thus making its contribution.

A key factor in the market success of electromobility is certainly the demand side, i.e. customer preferences. This factor is seemingly being forgotten in the whole discussion about electromobility and possible incentives. Currently the customer is at least still very reticent about the new technology. Granting government incentives that virtually “propel” consumers into purchasing such cars is not the ideal solution in such a situation. As soon as the overall package for electric cars is right (purchase price and other aspects such as design, safety, comfort etc.), more and more customers will “take the electric plunge” of their own volition. And ultimately it should be the aim of politicians and the industry to achieve the transition to an electric automotive era primarily by providing customers with convincing technology. It should be accepted that such a process will take somewhat longer than would be the case with government incentives to buy.

As an alternative to cash incentives we call for road traffic to be integrated into the EU Emissions Trading System using an upstream approach. This would be the most efficient way to limit CO<sub>2</sub> emissions (not only) from road traffic and would boost the ecological accuracy of climate policy.

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Current Issues “CO<sub>2</sub> emissions from cars: Regulation via EU Emissions Trading System better than stricter CO<sub>2</sub> limits”, 2014

Current Issues. “Electromobility: Falling costs are a must”, 2011



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