Talking point

False start for electric cars - dilemma facing the automotive industry and the state

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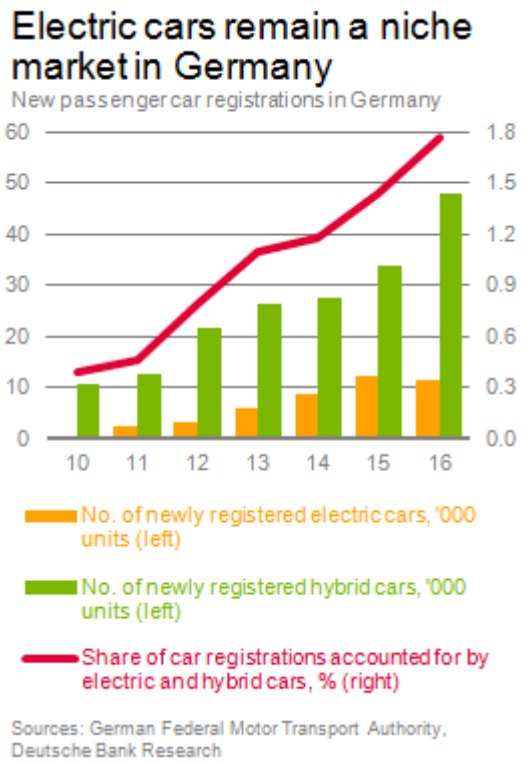
In 2016, electric cars and hybrids represented only 1.8% of all new passenger car registrations in Germany. It therefore remains a niche market – despite the introduction of subsidies last year. The average car buyer steers clear of electric vehicles because of high purchase costs, uncertainty about resale value and battery life, limited range, a lack of charging stations and lengthy charging times. This reluctance to buy presents the automotive industry and the state with a dilemma: strict CO_2 limits for new vehicles mean that the industry has to invest heavily in electric-car technology, but it cannot expect an equivalent payback in terms of revenue in the foreseeable future. For the state, it can come down to a straight choice between granting expensive subsidies or failing to reach climate change targets.

According to the Federal Motor Transport Authority, exactly 11,410 purely electrically driven cars were registered in Germany in 2016, which is down by 7.8% on 2015. Commercial and public-sector car buyers account for the bulk of these registrations. This is more than disappointing, given the EUR 4,000 buyers' incentive for electric vehicles that was introduced in spring 2016 – half of which is paid by the German government and half by the automotive industry. Hybrids are faring better: in 2016, a total of 47,996 new hybrids, including plug-in hybrids, were registered in Germany, up by 42.7% on 2015. The buyers' incentive for plug-in hybrids, also introduced last year, is EUR 3,000.

Electric cars remain a niche market in Germany, as evidenced by the proportion of all new passenger car registrations accounted for by electric and hybrid cars. Although this has increased steadily in recent years, it stood at only 1.8% in 2016. This reticence on the part of buyers cannot be explained by a lack of supply alone. Lots of automotive manufacturers have launched electric cars and plug-in hybrids over recent years. The choice of vehicles is now actually quite wide. The voices championing electromobility from within politics, industry, academia, NGOs and the media can emphasise the actual or putative benefits of electric driving as much as they like, but the average (private) car buyer has yet to be persuaded. There are various reasons for this: high purchase prices in comparison with cars with conventional combustion engines, particularly in the mass market segment, fears and lack of empirical data regarding resale values and battery life, the low range of most battery-driven vehicles, limited charging networks and lengthy charging times.



Sources: German Federal Motor Transport Authority, Deutsche Bank Research

This reticence to buy is not an exclusively German phenomenon either. Electric cars may have a much higher and/or much faster increasing market share in a number of other places, such as Norway, the Netherlands and China, but this is almost always because those countries subsidise the purchase of electric vehicles far more heavily than Germany. In some cases, government policy actively prevents or disincentivises the purchase of conventional cars. In some regions of China, for example, only a limited number of licenses are issued for the purchase of new cars with combustion engines. There is not one automotive market in the world in which electric vehicles are making inroads without state assistance. However, this should not be taken as a plea for even higher German subsidies!

Dilemma for the automotive industry and the state

Without substantial state intervention, it is likely that both the price and supply of electric vehicles would fall in response to the low demand. Car makers do not have the option of decreasing supply, however. This is because ramping up the electrification of new models is the only way for the industry to achieve the CO_2 limits for new cars that have been imposed in the EU and other automotive markets. There are also discussions about potential regional bans on cars with certain types of combustion engine or (for example in China) on quotas for electric vehicles that have to be met by car makers. It's easy to see why the automotive manufacturers are continuing to invest in electric cars in order to improve the technology and bring down costs. However, this requires a vast commitment of financial resources with little or no prospect of payback in terms of revenue in the foreseeable future.

But it's not just the automotive industry that is in a quandary. The state is too. Governments in lots of countries have set climate targets that directly or indirectly include the transport sector. Electric cars are seen as a key part of the journey towards a largely carbon-neutral transport sector. The implicit assumption is that the requisite electricity will increasingly be generated using renewable energies, which in itself is an ambitious target. Ultimately, the subsidies for electric vehicles in many countries are motivated by climate policy. The fact that electric cars produce low levels of local pollution is, of course, also an important argument. The dilemma is as follows: if subsidies for electric cars are generous enough to rapidly increase market share, it will quickly become very expensive for the state. However, if the programme of state incentives are not attractive enough for the average car buyer, as is evidently the case right now in Germany, it is likely that the ambitious climate protection targets will not be attained.

Ultimately, this is a problem shared by a number of other green or low-carbon technologies. Without any state subsidies at all they are often not sufficiently attractive for the average consumer or commercial investor to the extent that is desired politically. Added to this is the fact that electromobility, as a technology, represents a particularly expensive means of avoiding CO_2 emissions. The benefits for climate protection would actually be greater if the financial resources that are currently being pumped into electric cars were to be used for other low-CO_2 technologies. However, a policy turnaround in the regulation of CO_2 emissions in road traffic is not expected any time soon. For now, we can remain hopeful that the technology will advance quickly and bring us to a point where buyers no longer need to be incentivised by the state to choose an electric vehicle, but do so because it represents the best option for them from an economic perspective.

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