E-Mobility – not like this by 2030!

A current study of the European industry initiative mobilityFACTS shows that the present political targets for the development of electromobility by 2030 cannot be met. Clear physical and organizational boundaries are restricting potential growth and are taking the current sanction policies of the EU to the point of absurdity. The discussion needs to be placed on a more objective footing and the focal points must be shifted.

The uncertainty when it comes to the development of electromobility and the effects thereof on the supplier industry is huge. Political targets and the heated public discussion are leading to horror scenarios that envisage production dips of up to 50%. The European industry initiative mobilityFACTS pursues the issue of realistic development goals for the electrification of mobility, and in so doing analyzes in particular the hard physical and organizational factors that influence potential growth.

When and on what scale will electrification come? Clear growth limitations of E-Mobility

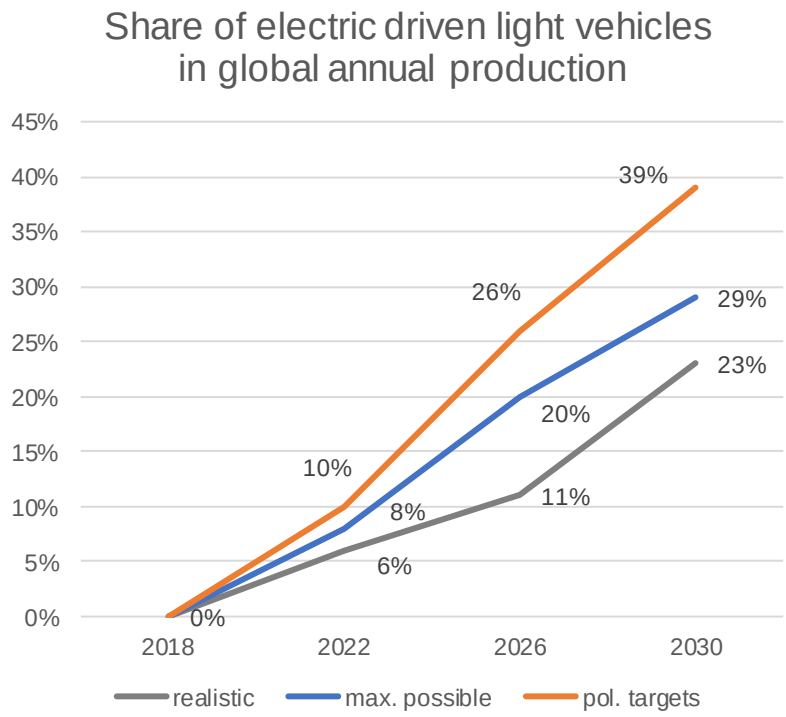
Over the past few years, there have been a number of publications and prognoses on the anticipated increase in electromobility, sometimes with euphoric growth scenarios. However, none of these prognoses – some of which have been made by renowned consulting firms and other institutes – takes into account really all the factors that are relevant for the development of E-Mobility. In the neutral study generated by the management consultancy Schlegel und Partner on behalf of mobilityFACTS, particular emphasis was thus placed on a complete and detailed consideration of all important qualitative and, above all, quantitative influencing factors. These were then compared with the development that is necessary to achieve the current European and global political goals for reducing CO_2 emissions by 2030.

Most of the analyzed factors, including energy availability, range and loading times, were not assessed as restrictive to achieving the spread of electric drives on the scale envisaged by politicians. Even if the prerequisites for achieving the goals of 2030 do not yet exist, a rapid technological development is nevertheless taking place that will no longer pose any limitations in future.

However, clear physical growth limits for the future development of E-Mobility have been identified when it comes to the expansion of

- cobalt mining systems (triplication necessary whereas only doubling is realistic),
- production capacities for battery cells (increase by factor 20 is needed but only factor 9 is achievable) and the
- expansion of the public loading station infrastructure (growth from 430 k up to 12 mn points targeted with only 9 mn feasible).

So, while electrified drives (battery and hybrid vehicles) would need to achieve an overall market share of 39 % in 2030 to fulfil the political objectives, the above-mentioned restrictions shall render a maximum growth to 29 % possible. Bearing in mind the usual delays and temporary bottlenecks, a growth to only 23 % (10 % of this would be purely battery driven) would even be more realistic.



Share of electric driven light vehicles in global annual production

Based on the assumption that the global automotive market will continue to grow, the number of passenger cars with a combustion engine (incl. hybrid technology) will thus see a further increase by 2030. And even looking ahead to 2050, no global decline in vehicles powered by combustion engines is expected thanks to the anticipated mix of battery and hybrid drives in the electrification process and based on a realistic growth rate.

“No one will buy a battery-driven vehicle if there is no loading infrastructure in place for it. And even if people wanted to, it would not be possible, as the vehicles cannot be produced in the required volume. The combustion engine will thus continue to play a dominant role in drive technology far into the future. The further development of the combustion engine in the direction of CO_2 reduction and pollutant minimization should thus be pursued with the same level of energy as the technical market viability of electromobility!” says Tobias Hain, General Manager of the German Forging Association (Industrieverband Massivumformung e.V.) and Spokesperson of mobilityFACTS.

What does this mean for the supplier industry and politics?

Electromobility will definitely come – but more slowly than is being currently discussed and demanded by some politicians!

However, automotive suppliers must still consider early on the precise effects which electromobility will have on their particular business model. In so doing, the much lower volumes of parts for electromobility that are anticipated must be taken into account – with respect to both the expected order scopes as well as to the design of production processes and relevant new investments.

Political decisionmakers must recognize the restrictions to potential growth and take these into account. Placing the discussion surrounding E-Mobility on a more objective footing is urgently needed in order to avoid further increasing the uncertainty of the automotive supply industry and to generate investment and job security.

“Either the above-mentioned restrictive influencing factors must diminish quickly and significantly by 2030, which would require much faster political decision processes worldwide and considerable private and public investments in a very short space of time, or the goals for reducing CO_2 emissions need to be adapted to what is realistically possible,” says Hain. Imposing sanctions for “breaking” the current goals (e.g. CO_2 fleet targets of automotive manufacturers) are not only unfair against the backdrop of this non-attainability, as the goals are simply not possible based on the facts, but also damaging, as they take away the urgently needed means for the affected companies to develop emissions-reduced drive concepts.

mobilityFACTS

mobilityFACTS stands for the “Future of Automotive Concepts and Technology in the Supply Chain” and is an initiative of Industrieverband Massivumformung e.V. (D), Deutscher Schraubenverband e.V. (D), Industrieverband Härtereitechnik (D), Fédération Forge Fonderie (F), Unione Nazionale Italiana Stampatori Acciaio (IT), Dövme Sanayicileri Derneği (TR) as well as the companies Hans Ziller GmbH, Scherdel Innotec Forschungs- und Entwicklungs GmbH and Johann Vitz GmbH & Co. KG. All in all, the initiative represents 263 companies of the European supplier industry. It pursues the goal of providing scientific- and fact-based support to the public discussion on achieving mobility with greater energy and CO_2 efficiency.

Industrieverband Massivumformung e. V. (German Forging Association)
Industrieverband Massivumformung e.V. in Germany, with its 115 members, represents the interests of the industry with sales of 6.7 billion euros and almost 30,000 employees. A core task is organizing collaboration across the member companies, most of which are medium-sized businesses, with the aim of working together to increase the competitiveness of the technology. Germany is the technology leader when it comes to forging and, after China, is the world’s second largest producer of forged parts.

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