



Edition #6 – DATA DIGEST is CLEPA's monthly publication shedding light on the health and resilience of the European automotive supply industry through latest facts and figures

Nearly half of vehicles produced in the EU are expected to be electrified in 2023

But are supply chains set up for this growing trend?

What you will find in this edition

- 1 – Electrification to lead vehicle production growth
- 2 – Acceleration of EU battery supply chain critical
- 3 – As demand grows for chips, EU investments lag behind
- 4 – Volatile costs of energy and materials continue to be a challenge

EU countries are set to produce nearly two million battery electric vehicles (BEVs), despite concerns over material prices and a slowdown of the pace at which batteries costs were falling. Approximately 50% of cars manufactured in the EU are projected to be electrified, including various (mild) hybrids, in 2023. BEV and plug-in hybrid vehicles, which have a battery that can power the car alone, are expected to represent 21% of manufactured cars, up from 17% in 2022. [Forecasts suggest](#) that at as early as 2027, BEV sales are likely to have surpassed other powertrains in Europe.

While the transformation of the industry producing the vehicle and its components maintains a steady pace, the upstream supply chains remain underdeveloped. Despite significant investment commitments until 2030, only 3% of the needed investment in the battery (materials) plants has been completed, less than in China and US. Significant investments have been announced in chip manufacturing globally, but the EU still lags behind the US, China, and Taiwan.

” Electric vehicles projections are a bright spot in an EU automotive market that is still producing significantly lower volumes of cars than before the pandemic. This growth will continue in the years ahead, but only if the transformation of supply chains follows suit.

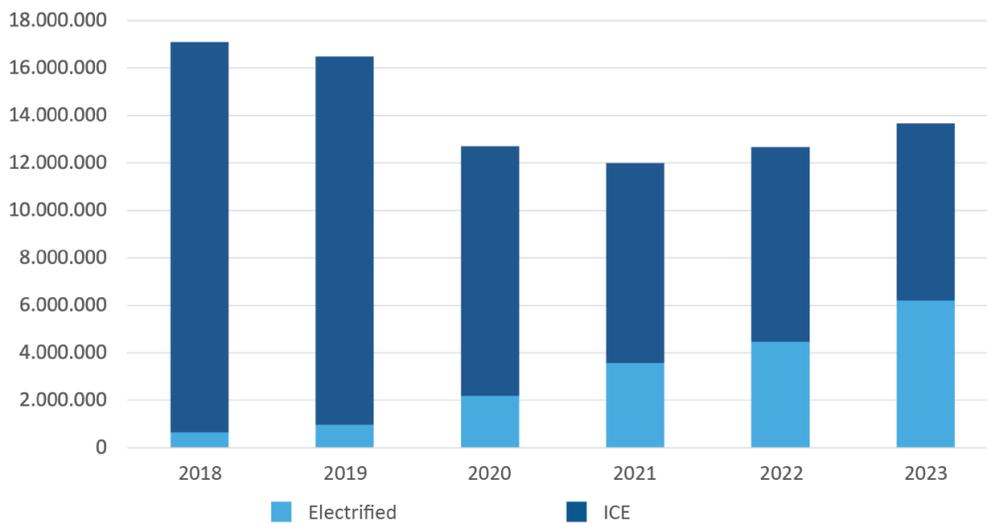


Nils Poel
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1 – Electrification to lead vehicle production growth

Market forecasts by LMC Automotive suggest another strong year of double-digit production growth of battery electric vehicles (+43%), mild hybrid electric vehicles (+45%) and plug-in hybrid electric vehicles (+25%) across the EU. The mobility transition is approaching a tipping point where 1 in every 2 vehicles is electrified, when accounting for mild and full hybrid EVs. The car and light-duty vehicle segment is expected to increase by 5-8%, but still likely to remain 17% below pre-pandemic production levels.

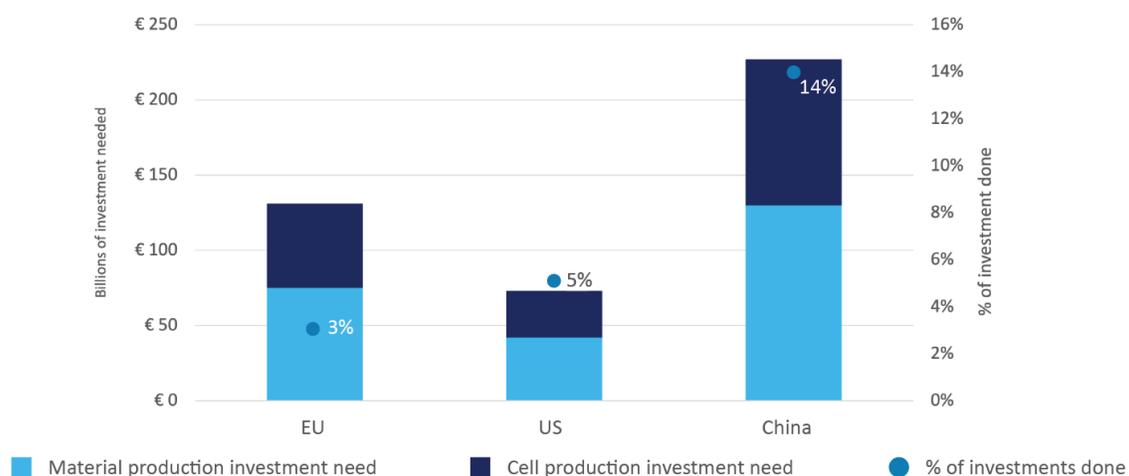
Figure 1
Light vehicle production forecast
Source: LMC Automotive, a GlobalData company



2 – Investments and deployment of battery supply chain will need to accelerate

PwC Strategy& estimates that Europe has currently completed 3% of the €131 billion needed for investments in material and cell production until 2030. China has so far conducted 14% of the €227 billion investments needed to meet its demand by 2030, and US stands at 5% of its €73 billion demand. Globally, around €500 billion in capital investment would be needed to achieve 3.6 TWh of battery production capacity, equivalent to the sale of 42 million light vehicles. Nevertheless, analysts of Goldman Sachs are confident that the EU could reach self-sufficiency in battery cell manufacturing by 2027. However, where the US is likely to become a net exporter of battery cells, the EU is unlikely to follow suit due to higher energy costs and the absence of US-style subsidies to lower the running costs of battery plants.

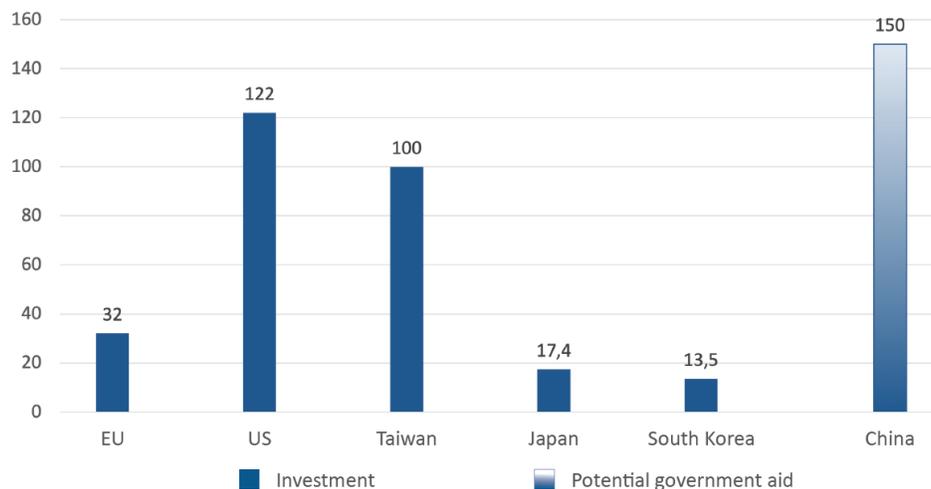
Figure 2
Investment needs in battery supply chain until 2030
Source: PwC Strategy&, December 2022



3 – EU lags US and Taiwan in investment to meet continued growth of chip demand

Global automotive demand for chips is forecast to grow by another 50% and reach around €60 billion in 2023. By 2025, global demand could surpass €80 billion, with vehicle digitalisation and electrification responsible for around 75% and 25%, respectively. Investment commitments suggest that the semiconductor market is getting ready to meet demand growth. Nevertheless, investments in 65 nanometer chips, representing 60% of all automotive demand for chips, remains limited. Current investment announcements suggest that the EU has managed to attract €32 billion until 2025, far below the investment commitments in the US and Taiwan and significantly below public investment expectations in China.

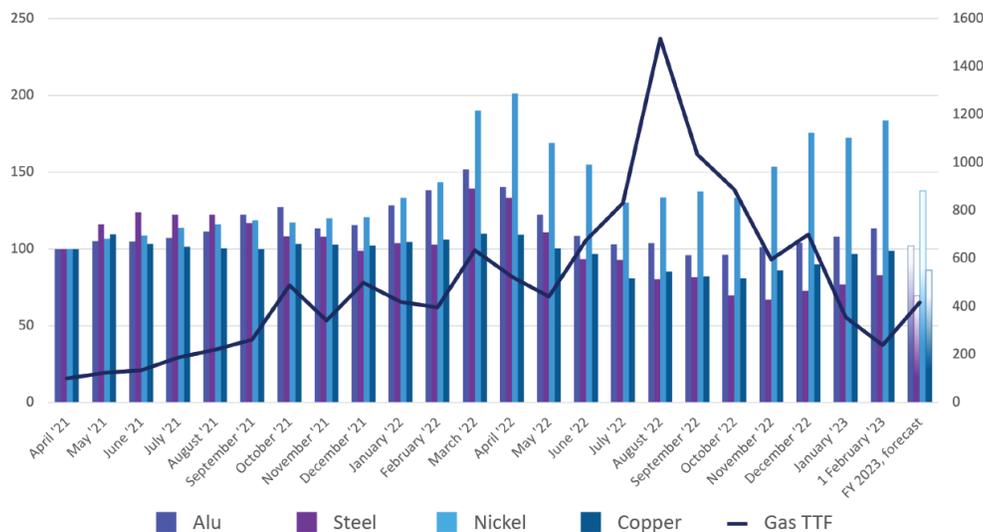
Figure 3
Investments in chip production expansion until 2025, €bln.
Source: Everstream for Handelsblatt, January 2023



4 – Volatile energy and material costs continue to be a challenge

The EU needs to deliver the transformation in a time of highly volatile energy and material prices. Despite a moderation of most material prices, the p cost of battery raw materials, such as lithium and nickel, remain elevated. The gas price remains highly relevant in determining the energy production costs in Europe, and despite a recent significant drop, it is still two to three times higher than in the year prior COVID-19, when it recorded between €20 and €30 per MWh, far from the current €53 per MWh. Furthermore, it remains unlikely that gas prices will remain at these levels and it is uncertain what the price peak in 2023 could be. The last Reuters poll of analysts gave an average price range of €60 to €95, but in December, the average forecast of leading commodity experts stood still at €130.

Figure 4
Energy and raw material cost index
Source: CLEPA Analysis, Westmetall and other publications



” The establishment of a robust and resilient e-mobility supply chain is a determining factor for the success of Europe in the transition. Automotive suppliers are heavily investing, but uncertainty around framework conditions, charging and refuelling infrastructure, energy costs, and access to finance present obstacles. The Green Deal Industry Plan and Critical Raw Materials Act launched by the Commission show competitiveness is on the agenda, but actions and policy outcomes are urgently needed.



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Interested in knowing more?

Contact CLEPA Communications Team at communications@clepa.be

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