To raise or not to raise

How Europe can use tariffs as part of an industrial strategy

March 2024

Summary

The sales of battery electric cars in Europe have been growing quickly, with 2 mln cars sold across Europe in 2023 alone. But given China's edge in battery technology and some feet dragging by European legacy carmakers, more and more of those electric cars are imported from China. The European Commission launched an anti-subsidy investigation into Chinese EVs. With the preliminary ruling expected soon, T&E's paper is looking at the EV imports into Europe and what an effective response on both EVs and batteries might be.

This paper is part of our work on industrial and trade policy. Europe's goal should be to decarbonise as fast as possible but to do so in a way that safeguards essential economic, social and security interests. Decarbonisation in the EU should not mean deindustrialisation, and trade policy has a key role to play.

19.5% of all electric cars sold across the EU last year, or 300,000 units, were built in China. In France and Spain close to every third BEV sold in 2023 was made in China. More than half of those come from Western carmakers: 28% of all China made EVs were imported by Tesla, with Renault's Dacia adding a further 20%. But the Chinese homegrown brands are quickly catching up: from 0.4% of the EV market in 2019 to 7.9% in 2023. T&E projects the likes of BYD, MG and others could reach 20% of the BEV market by 2027.

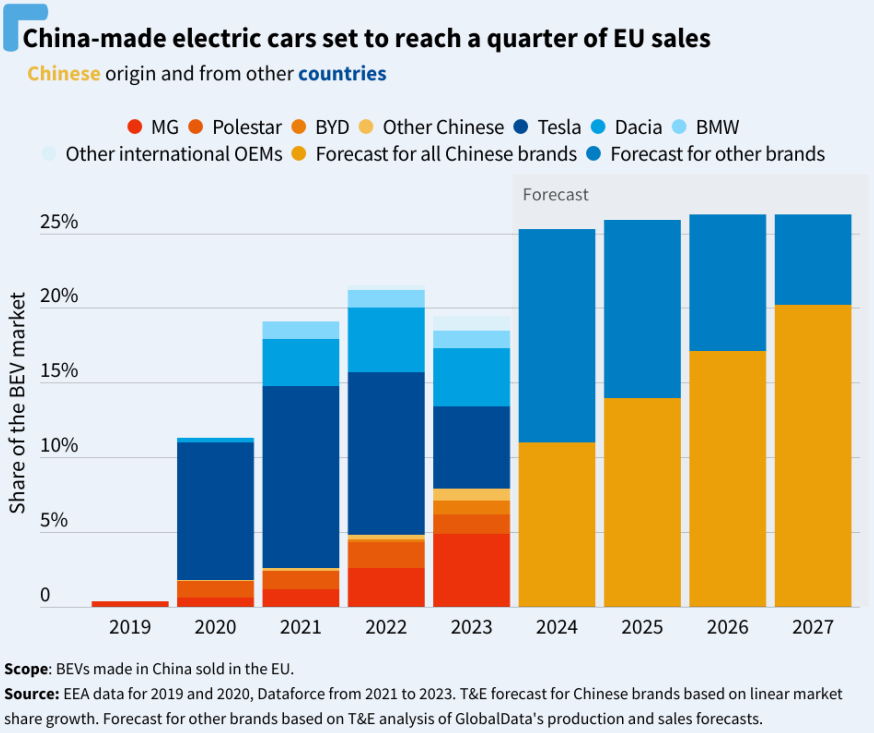


Figure: Share of the EU BEV market imported from China

This shows the challenge Europe is facing. Raising the tariffs to at least 25% (from 10% today) would match the tariff the US originally imposed. Based on the current average vehicle prices, it is expected to make medium cars (both sedans and SUVs) imported from China more expensive than EU equivalents, while compact SUVs and larger cars will remain slightly cheaper. It would also raise between €3-6 bln in additional annual revenue, most of it for the EU general budget that should be reinvested into scaling local clean tech supply chains. The UK should follow suit and adjust upwards its EV import tariffs, while agreeing a European battery alliance with the EU for a tariff-free EV supply chain.

Tariffs will not stop Chinese companies from building factories in Europe as BYD and CATL are already doing. Nor should governments' aim be to shield legacy carmakers from meaningful competition or lead to a shrinking offer of affordable BEVs for European consumers. The aim should be to localise EV supply chains in Europe while accelerating the EV push, in order to bring the full economic and climate benefits of the transition. It is therefore critical that a higher tariff is accompanied by a regulatory push to ramp up the mass market BEV plans, including in the corporate channel, focusing on sustainable and more affordable offerings.

But Europe should not stop at EVs. Trade policy should become an integral part of a more strategic green industrial strategy. Lithium-ion batteries are at the heart of this: more than EUR 180 bln has been invested into the EU battery value chain, predominantly gigafactories, to date. Billions of state aid have been committed to projects such as Northvolt in Germany and Verkor in France. As a

result, Europe is expected to supply two-thirds of the demand locally this year and, potentially, could become self-sufficient from 2026 onwards.

But executing this won't be easy: China manufactures over three-quarters of global capacity with prices at least 20% lower than in Europe (though it is rumoured that Chinese brands get their cells at much higher discounts). Chinese companies are ahead of Europe on technology and supply chain preparedness. The gap with the US is smaller but made-in-America cells benefit from $45/kWh IRA subsidies.

At the same time, the EU battery cell import tariff is the lowest compared to China (10% for EU) or the US (10.9% for China), at a mere 1.3% currently. Without decisive protective and supportive measures, the EU battery industry risks losing out to foreign competition. Therefore, if it is Europe's goal to have significant battery manufacturing in Europe it will need to introduce measures to create a pull to manufacture locally. Such measures can include:

- Strong battery sustainability requirements that reward local clean and circular manufacturing. But the carbon footprint methodology being currently developed under the new EU Battery Regulation is not sufficient and lacks strict CO2 thresholds.
- Strong "Made in EU" requirements. But the current 40% target in the Net Zero Industry Act lacks teeth.

This leaves tariffs. Higher tariffs can be done in a way that does not cause a trade war. Many Chinese players are already planning battery investments into Europe. Similar to previous trade disputes, an amicable solution can be found. This can include a lower tariff up to a certain volume of imports (e.g. 10-15% of the market) at an agreed minimum price, with the higher tariff kicking in afterwards. To create a pull for local battery cell manufacturing, Europe would need to increase tariffs to at least 20% by 2027 to close the average cost gap with China (likely more, something the investigation should look into). Unlike solar, Europe should act preemptively before it is too late. This should be accompanied by stronger "Made in EU" requirements in public tenders, subsidies and EU grants and loans given to EV and battery makers.

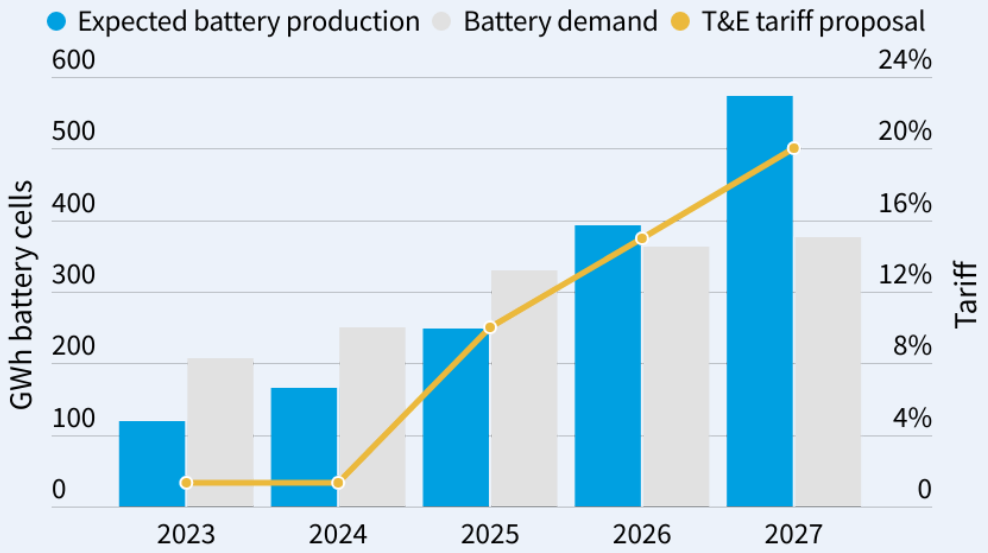


Figure: example tariff proposal

There is a real risk that automotive jobs and know-how will leave the continent as European legacy carmakers have been slow to transition to electric. The aim of Europe's trade policy going forward should be to secure local manufacturing, ie "made in Europe", not to shield incumbent companies from competition. Trade protection can give legacy manufacturers some reprieve, but ultimately whether they succeed or fail will depend on their business strategies and ability to compete with new entrants, both Chinese and American. Going faster, not slowing down, is the only way to fend off foreign imports into Europe.

1. Introduction

The EU and the UK have put in place policies to progressively increase the sales of zero emission vehicles (ZEV), largely battery electric (BEV) in order to phase-out combustion engines from new car and van sales by 2035. This is necessary to slash CO2 emissions from light-duty vehicles to zero, one of the single largest sources of carbon in western economies. Such policies also create certainty around the BEV market in Europe and send a strong investment signal, prompting dozens of billions worth of investment into EV production facilities and battery gigafactories already.

However, given China's technological edge in battery electric vehicle technology on the one hand, and slower transition by European legacy carmakers on the other, the imports of Chinese made electric vehicles have been surging in recent years. This poses risks to the EU automotive industrial fabric even if it does bring a better and more affordable offer to European drivers.

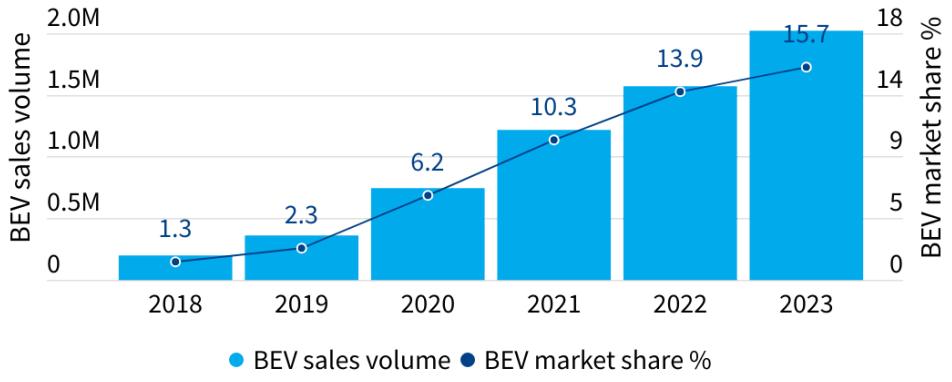
China's ascent in electric vehicles is at least partially attributable to generous government subsidies in all manner of areas: tax reductions on vehicles and battery production, subsidies to lower energy and land acquisition costs, as well as an aggressive policy to secure battery metals abroad. This is a similar strategy China has applied in other sectors, e.g. solar. To avoid what happened with the solar industry, the European Commission has launched an anti-subsidy investigation into Chinese EVs in September 2023.

This paper looks into Chinese EV imports in Europe and analyses the likely dynamics and impacts of higher EV import tariffs. It considers the possible additional revenue from such tariffs, as well as looks into extending these beyond electric cars only. Ultimately, T&E presents the policy recommendations for the European Commission as they deliberate ahead of the preliminary investigation results expected in early summer 2024.

2. Chinese electric car imports into Europe

After a steep x5 increase in the sales of electric cars between 2019 and 2021, driven by the entry into force of the EU 2020/21 Car CO2 targets, the electric car market has grown more slowly in 2022 and 2023. While the standards remain the same until 2025 (requiring only a minimal increase in ambition in 2022-2024 to account for tightening flexibilities), the battery electric car sales nonetheless grew by 28% in 2022, and by a further 37% in 2023[1], with around 1.5 mln battery electric cars sold last year alone. This reflects the growing consumer demand, as well as smart incentives - notably for corporate registrations - which allow countries like Belgium to see impressive growth.

[1] ACEA, Fuel Types of New Cars 2022 and 2023
https://www.acea.auto/fuel-pc/fuel-types-of-new-cars-battery-electric-12-1-hybrid-22-6-and-petrol-36-4-market-share-full-year-2022/#:~:text=%25%20Petrol%2C%2036.4%25-,In%202022%2C%20registrations%20of%20new%20battery%20electric%20vehicles%20(BEVs),a%20market%20share%20of%2022.6%25.

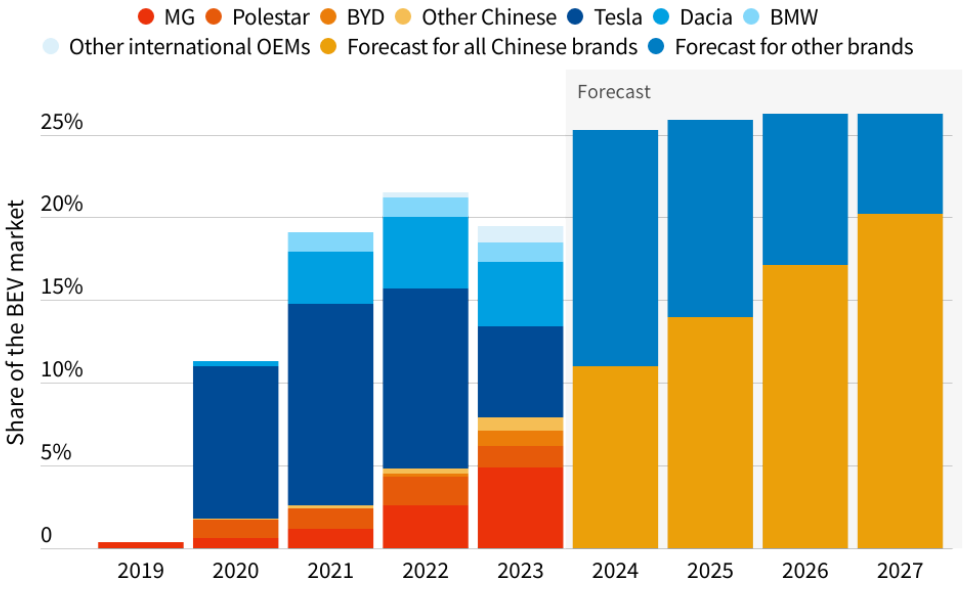


Scope: EU+EFTA+UK
Source: ACEA registration data

Figure 1: BEV sales in Europe

However, a question often posed is where these battery electric cars are produced: locally in Europe or imported from China? When looking at imports, one might also differentiate between electric cars by Chinese brands (that benefit from decades' long state support across the value chain) and electric cars by European and American brands that are similarly manufactured in China to benefit from lower costs (but to a smaller degree).

Over the past 4 years, both the share of electric cars sold in Europe by Chinese brands and the share of European and American brand cars produced in China and exported into Europe have increased. In 2023, 19.5% of all EV sales in the EU - or 290,000 units - were imported into the EU market.

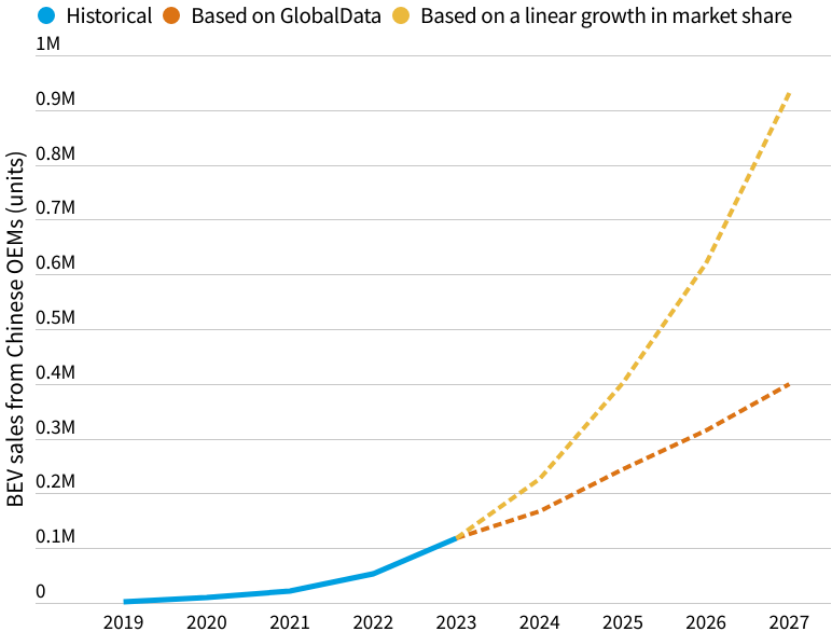


Scope: BEVs made in China sold in the EU.
Source: EEA data for 2019 and 2020, Dataforce from 2021 to 2023. T&E forecast for Chinese brands based on linear market share growth. Forecast for other brands based on T&E analysis of GlobalData's production and sales forecasts.

Figure 2: Share of the EU BEV market imported from China

Until recently, the imports have been dominated by western brands exporting the vehicles from China into Europe, notably Tesla and Dacia by Renault (as seen in the graph above). In 2023, Tesla accounted for 28% of all China made EVs imported into Europe, while Dacia's Spring added an additional 20%. Unless action is taken, based on GlobalData forecast[2], T&E expects 296,000 units by by Tesla, Renault, BMW and other international OEMs (Smart, Volvo and Cupra) to be shipped into Europe in 2024, a jump of 70% compared to 2023, due to the increased production of multiple models in China including the Volvo EX30[3], the Mini Cooper[4], the Smart #3[5] or the Cupra Tavascan[6] . In 2025, the imports are expected to be a further 340,000 units, representing 12% of the BEV market.

On the other hand, the Chinese brands grew from 0.4% of the European BEV market in 2019 to 7.9% over the full 2023, or by a factor of 20. They continue to grow and are expected to reach 8.1% of all EU BEV sales in 2024 (168,000 units) and 8.5% in 2025 (243,000 units) based on GlobalData's forecast. Assuming a linear growth in market share based on the last two years, T&E projects that Chinese OEMs alone could even reach 11% of the EV market in 2024, 14% in 2025 and 20% in 2027.



Scope: Passenger car registrations in the EU

Source: EEA registration data (2019-2020), Dataforce (2021-2023) and T&E estimates.

Figure 3: Forecast of BEV sales from Chinese carmakers in the EU

[2] Estimates based on Globaldata's global light vehicles production forecast, and their global hybrid and electric vehicles sales forecast (Q3 2023)

[3] https://www.topspeed.com/volvo-ex30-everything-we-know/

[4] https://europe.autonews.com/automakers/bmw-shift-uk-production-electric-mini-china

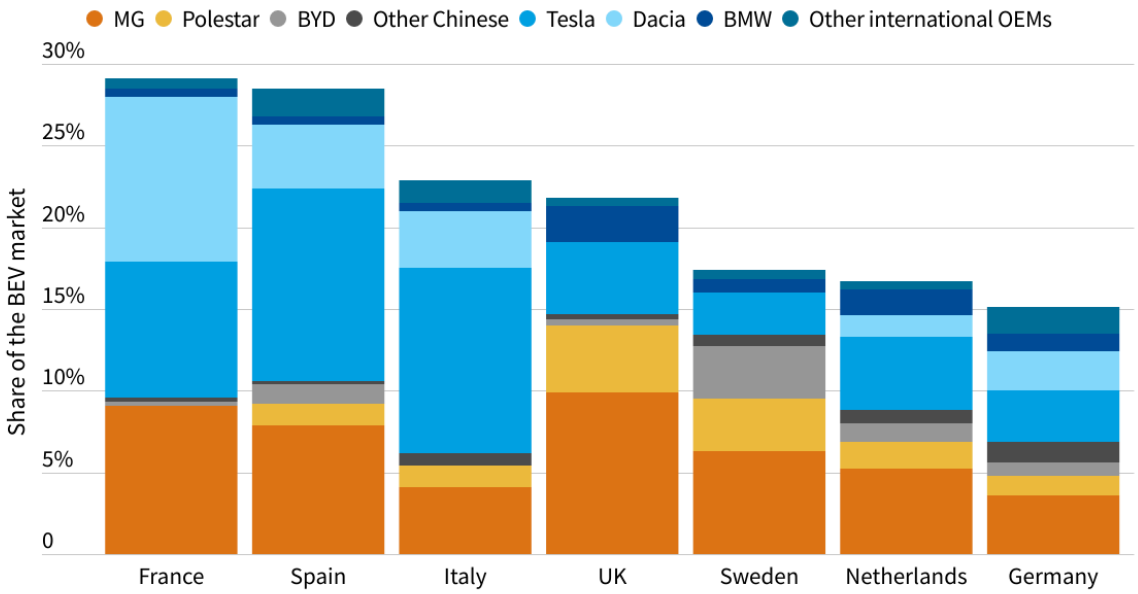
[5] https://europe.autonews.com/shanghai-auto-show/2023-shanghai-auto-show-smart-3-joins-revamped-lineup

[6] https://cnevpost.com/2023/12/30/vw-anhui-starts-production-cupra-tavascan-export-europe/

Currently MG is the leading Chinese carmaker in the EU with 25% of BEVs imported from China and four models selling more than 5,000 units (MG 4, ZS, 5 and Marvel R). Polestar is the second largest Chinese OEM with its Polestar 2 model accounting for 7% of Chinese imports. The third largest Chinese carmaker in the EU is BYD (4% of Chinese imports), mainly thanks to the Atto 3 model, which sold just over 10,000 units. Other major Chinese car manufacturers include Great Wall Motors with the Ora brand, Nio and Xpeng.

When we look across the European markets, Chinese brands seem to be targeting both mature and less mature BEV markets. In Germany their share was 6.9% in 2023, in Spain; 10.6%. In France the share was 9.6% in 2023, but is expected to drop significantly this year due to the introduction of the new EV subsidy scheme, or "eco-score" that would in effect eliminate subsidies to most China made EVs. While in Sweden and the Netherlands their share is 13.3% and 8.9% respectively.

Looking at all BEVs imported from China, including those from Western carmakers, almost a third (29%) of BEVs sold in France and Spain come from China, mainly due to the large share of Dacia and Tesla cars. In Italy and the UK, more than a fifth of BEVs come from China (23% and 22% respectively). Their share is 17% in Sweden and the Netherlands, and 15% in Germany. Among the largest car markets, France, Spain and Italy have the highest share overall, while the UK and Sweden have the highest share of Chinese brands.



Scope: BEVs made in China in 2023
Source: T&E estimates based on Dataforce

Figure 4: Chinese BEV sales in some large car markets

If growth continues as in 2023/4, T&E estimates that electric cars made in China by all brands will account for 26% of all BEV sales in 2027. Within that, the share of Chinese brands is expected to

overtake that of western ones, while the share of western carmakers' imports will shrink, in part due to Tesla reducing imports.

On average, 9,800 electric cars were shipped into Europe by Chinese brands monthly in 2023, a figure that is likely subdued by the recently reported[7] shipping container shortage. In 2024, this is expected to rise to 19,000 per month. In a sign of what's come, BYD has recently started leasing[8] its own cargo ship, the Explorer No. 1, to ship electric cars into Europe. The Chinese carmaker is expected to have 7 dedicated vehicle carrier ships (or "ro-ro's") in the future[9], as it targets the current logistics bottleneck. SAIC is following suit[10], likely not to be the only one. Given this, it is possible that the above figures are on the conservative side and without action, a much bigger proportion of EU's BEV sales will be coming from China in the coming years.

3. Impact of increased EV tariffs

3.1 Cost comparison

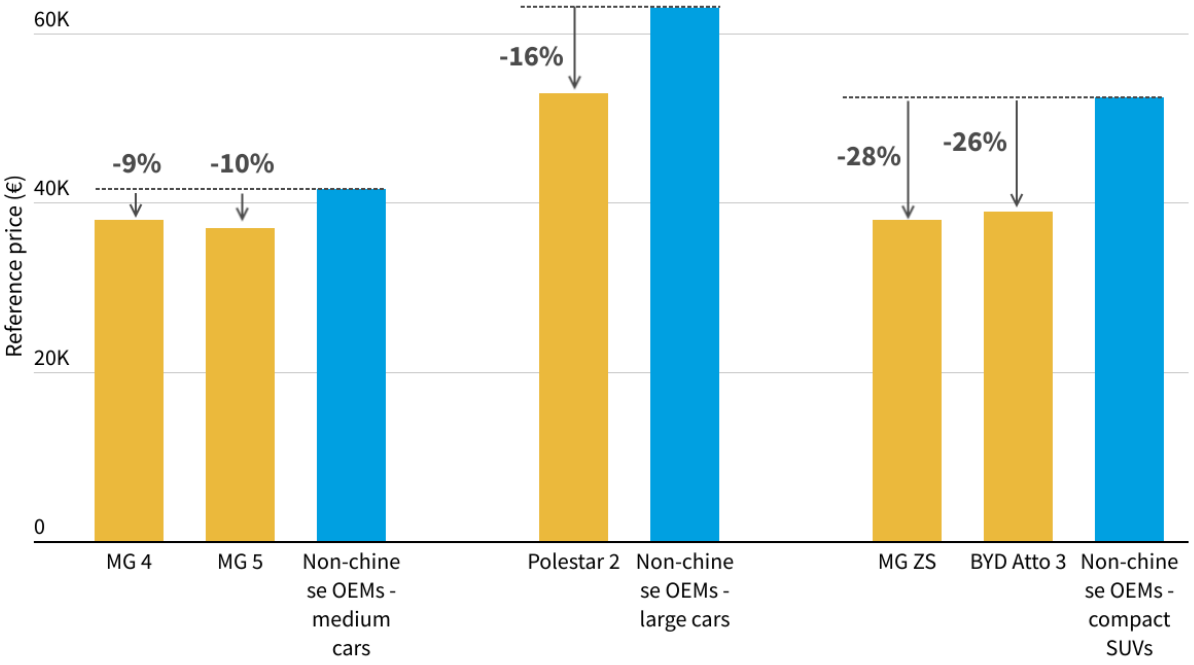
While Chinese electric car models sold in Europe are above the prices sold in their home market, they are nonetheless cheaper than the European alternatives. Looking at the average EV prices based on 2023 sales, cars from Chinese OEMs are on average 5-27% cheaper depending on the segment.

MG 4, Polestar 2, MG ZS, BYD Atto 3 and MG 5 were the 5 top selling Chinese models in Europe in 2023. When one compares their average price to the BEV models from non-chinese OEMs, they are 9-28% cheaper on average, as detailed below.

- MG 4 at an average[11] price of €38k compared to an average price of €42k for C-segment BEV models from non-Chinese carmakers, or 9% cheaper;
- Polestar 2 at an average price of €53k compared to an average price of €63k for D-segment BEV models from non-Chinese carmakers, or 16% cheaper;
- MG ZS at an average price of €38k compared to an average price of €53k for JC-segment BEV SUV models from non-Chinese carmakers, or 28% cheaper;

[7] FT, https://www.ft.com/content/4e85e5d6-82a8-457d-87a5-b2a15e396475
[8] Electrek, https://electrek.co/2024/01/11/byd-shipping-evs-first-ship-europe/#:~:text=BYD-,BYD%20is%20now%20shipping%20its%20own%20EVs,cargo%20ship%20heads%20to%20Europe&text=After%20overtaking%20Tesla%20in%20global,to%20carry%20domestic%20EVs%20overseas.
[9] Global Times, Feb 2024, https://www.globaltimes.cn/page/202402/1307230.shtml#:~:text=Chinese%20carmaker%20BYD%20said%20it,of%20BYD%2C%20said%20on%20Sunday.
[10] Handelsblatt, https://www.handelsblatt.com/unternehmen/industrie/autohersteller-chinesischer-autobauer-saic-baut-transportflotte-aus/100007868.html
[11] Average based on starting price in the Netherlands of each version of the car (each version based on different battery size), from EV Database.

- BYD Atto 3 at an average price of €39k compared to an average price of €53k for JC-segment BEV SUV models from non-Chinese carmakers, or 26% cheaper; and
- MG 5 at an average price of €37k compared to an average price of €42k for C-segment BEV models from non-Chinese carmakers, or 10% cheaper



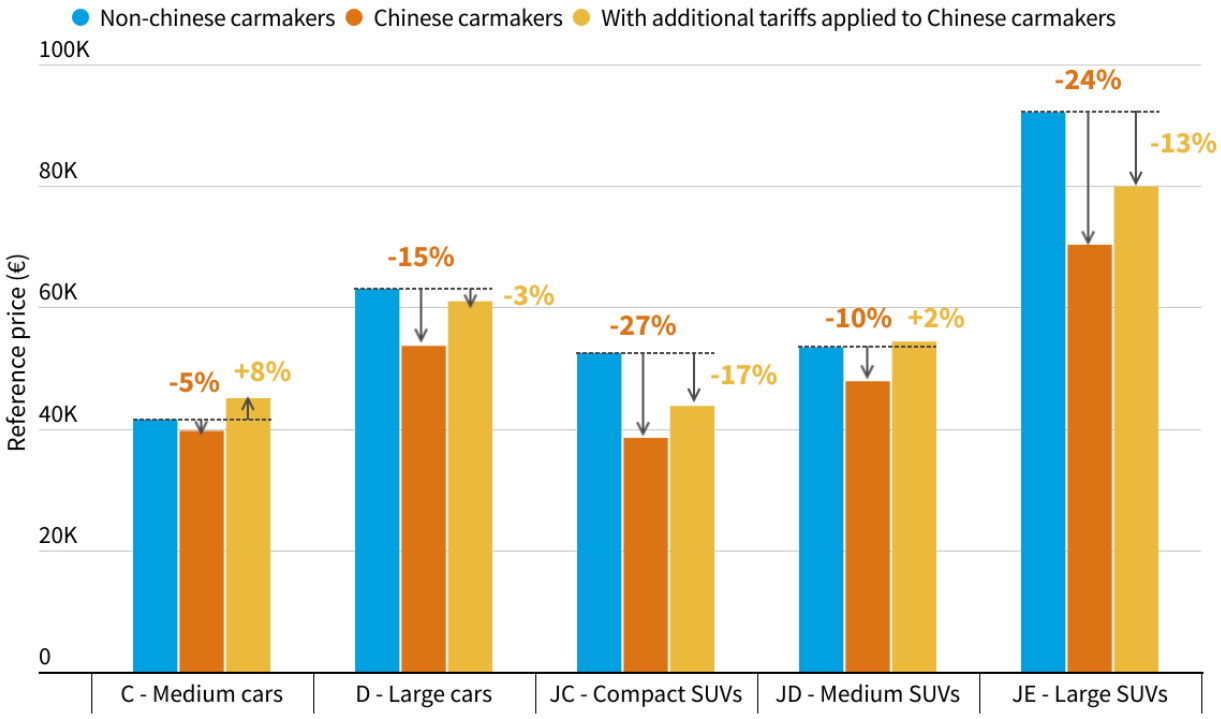
Scope: BEV models sold in the EU in 2023.
Source: Reference price: average starting price in the Netherlands from EV-Database.

Figure 5: Price comparison between Chinese and other carmakers

Those with knowledge of China often point to a significant level of government subsidisation for Chinese EV brands. State support allegedly covers some of the battery and battery component costs, as well as lower land acquisition and energy costs. On top, companies throughout the battery value chain have access to cheap credit often underwritten by the local and national Chinese government. This, coupled with the EV production overcapacity vs the domestic demand, enables Chinese companies to significantly lower the final price of their electric vehicle models (or batteries sold to them). E.g. an MG4 model in China (as MG Mulan) costs a mere USD 23,500, while a BYD Atto3 equivalent (Yuan Plus) has recently been discounted to less than USD 17,000. Whether or not high levels of direct and indirect subsidisation take place are rightly part of the anti-subsidy investigation launched by the European Commission.

The current tariffs applied to imports of China-made EVs into the EU is 10%, compared to the 15% tariffs that China levies on imports of European EVs into the country (and 27.5% in the US). If one assumes an increase in the EU (or UK) tariff by 15 percentage points (tariff of 25% of the pre-tax value of the car instead of 10% today), medium C-segment cars and medium SUVs (JD-segment) sold by

Chinese carmakers are expected to become more expensive than non-Chinese brands by 8% and 2% respectively. Other segments, including large cars (segment D), compact SUVs (segments JC) and large SUVs (segment JE), would remain cheaper by an average of 11%.



Scope: BEV models sold in the EU in 2023. Additional tariff based on a +15pp increase in tariff for Chinese carmakers
Source: Reference price: starting price in the Netherlands from EV-Database. Weighted average based on sales volumes reported by Dataforce.

Figure 6: Price comparison with additional tariffs

3.2 Revenue generated

It is important to remember that the revenue generated goes back to the public budgets, with 75% of it going to the general EU budget (as Own Resources) and the remaining 25% to the member states.

If the tariff was 15 percentage points higher than it is today, an additional EUR 1.4 billion would have been generated in 2023 based on all BEVs imported from China. This represents an additional revenue of over EUR 1 billion for the European Commission alone. This is more than the current annual budget for the cleantech calls under the European Innovation Fund, and could have been used to support more local battery manufacturing.

Assuming a constant average market price of €42,700 for BEVs imported from China, T&E forecasts that the 740,000 BEVs imported from China in 2025 would generate total revenues of €5.9 billion for the EU with a 25% tariff. If half of these cars were produced in the EU (i.e. the tariff was proving effective), the revenue would still be €3 billion. This could be directly channelled into the EU

Innovation Fund (or a similar green industry funding mechanism) to support local cleantech scale up.

3.3 EU-UK relationship

The EU and UK are important trade partners, with 18% of EU's car exports going to the UK in 2023. Following the UK's exit from the EU, the current trade in vehicles is governed by the Trade and Cooperation Agreement (TCA). TCA includes provisions on the rules of origin, which define the required local content for electric vehicles and their batteries, to avoid tariffs on EV trade between the two regions. If these are not met by the end of 2026, a tariff of 10% will be imposed from 2027 onwards. This is designed to stimulate local manufacturing and scaling of the battery supply chain on both sides of the Channel.

However, rather than thinking of the two blocks separately, a lot of synergies and benefits can be achieved by looking at Europe (the EU + the UK + Norway, etc) as one single battery supply chain block. T&E analysis of the public pipeline of projects shows that while there is no cathode material manufacturing currently planned, around a third of all European lithium processing projects are expected to be in the sited in the UK.

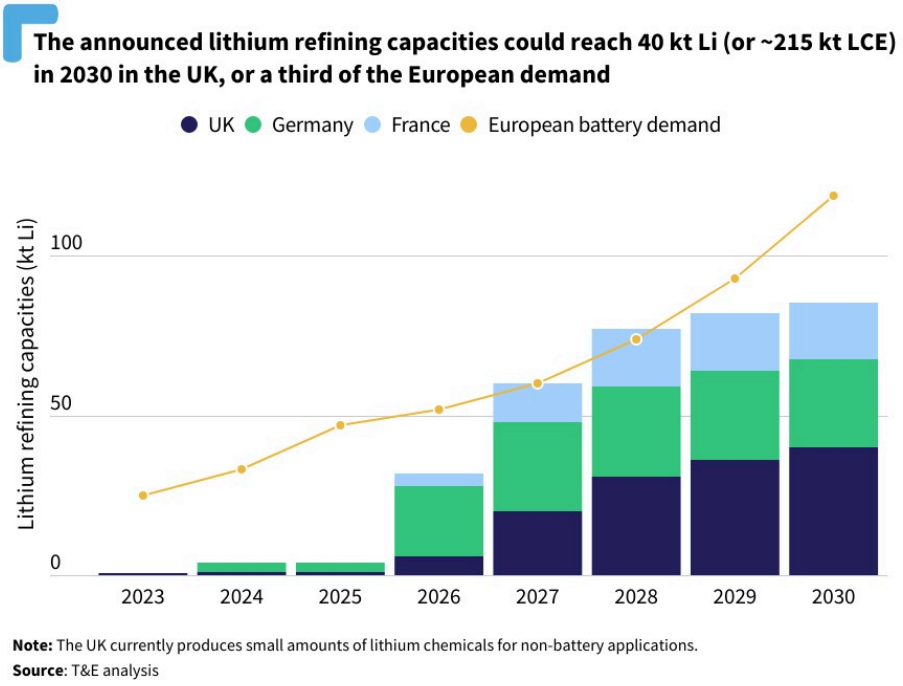


Figure 7: Lithium refining capacity in the UK, Germany and France

Similarly to the green alliance currently in place with Norway, the EU and the UK should form a strategy battery supply chains alliance. As an example, lithium processed in the UK can be sent across the Channel to the hub of battery component makers in Northern France, with resulting batteries then fit into EV manufacturing sites across Europe and electric cars sold (and recycled)

across the alliance countries tariff-free. On recycling, the UK is estimated to account for up to 30% of the capacity to recycle lithium-ion battery scrap and end-of-life batteries by 2030. Many of the UK's EV manufacturing facilities already plan to use battery cells produced elsewhere in Europe, either in Germany or France, so creating such a tariff-free alliance is economically and strategically necessary.

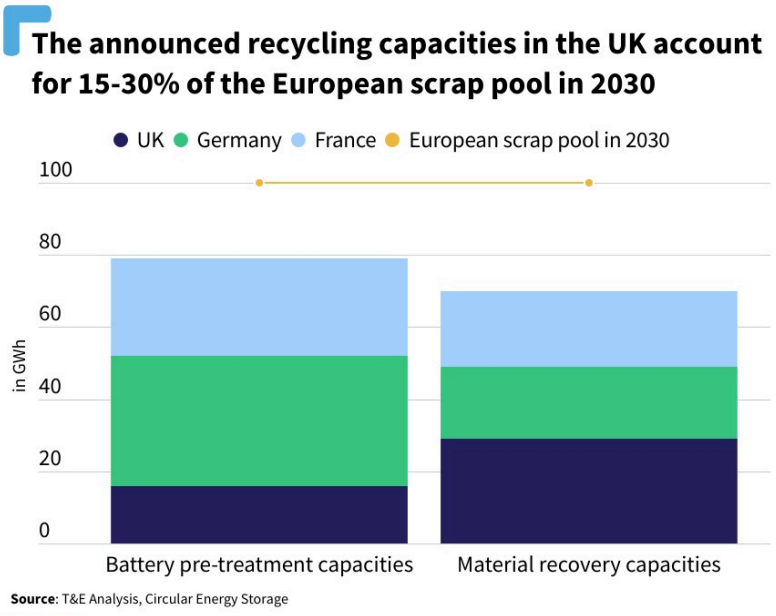


Figure 8: Recycling capacity in the UK

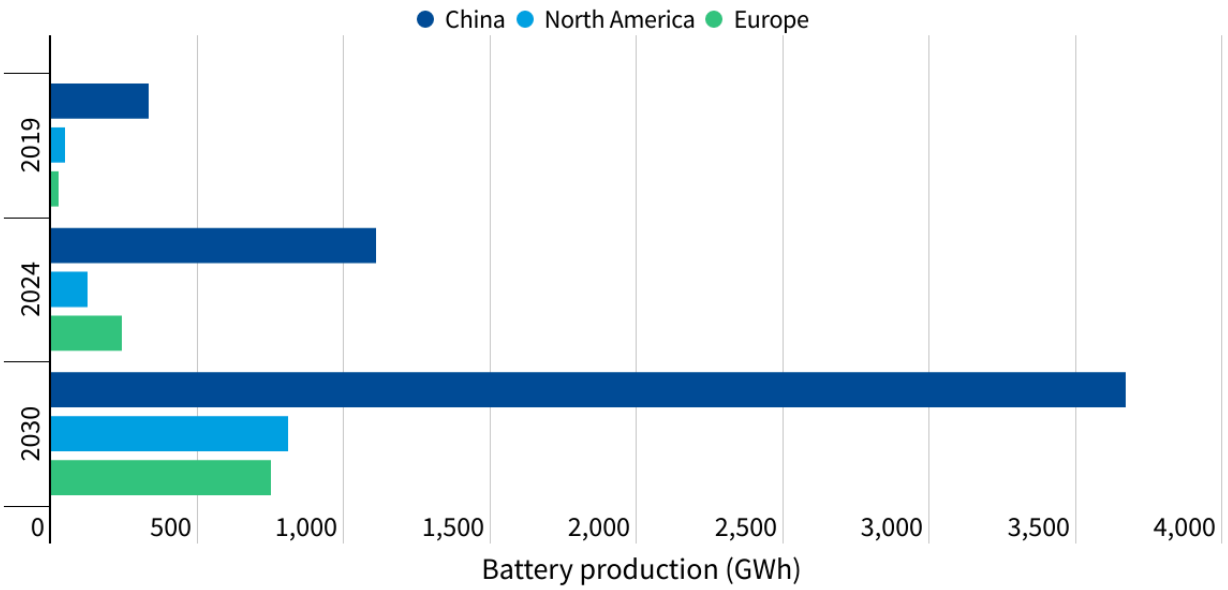
More imminently, with the EU likely to increase its EV import tariffs, there is a risk that much of the Chinese capacity will find its way into the UK market, potentially undermining local EV manufacturing plans. According to ACEA[12], the share of Chinese made cars in UK BEV sales stood at a significant 31,8% in 2022 and is likely to keep growing. The UK government should therefore commission an investigation by the UK's Trade Remedy Authority into its EV import tariffs policy and increase the import tariffs in line with the EU and US markets.

4. What about batteries?

China's playbook has often been to subsidise its own industry, limit foreign access to the domestic market, create overcapacity and then flood the other markets with those products. This enables Chinese companies to lower prices significantly, and it is therefore unlikely that raising the EV tariff on its own will tip the balance in favour of the "Made in Europe" EV supply chain.

On top of subsidies, what makes EV production in China so efficient and cost-effective is the commercial large-scale dominance in the entire value chain, from batteries to processing metals that go into them.

[12] ACEA, 2023, https://www.acea.auto/fact/fact-sheet-eu-uk-vehicle-trade/



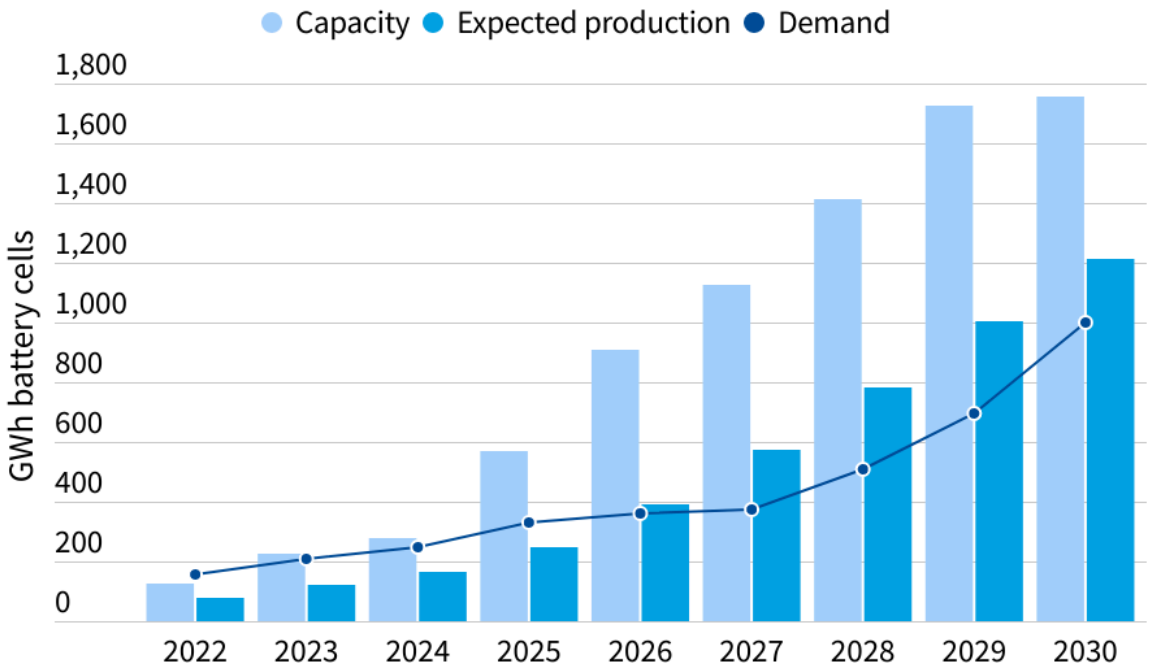
Source: 2019 and 2024 data from Benchmark Mineral Intelligence's Lithium-Ion Battery Megafactory Assessment (February 2020)
2030 data provided by Benchmark Mineral Intelligence in October 2023

Figure 9: Gigafactory capacity by region

At the heart of that value chain are lithium-ion battery cells. Over 80% of global lithium-ion battery manufacturing is today in China[13], expected to drop to 68% by 2030 thanks to the onshoring efforts in both Europe and the US. Battery cells represent up to 40% of an average electric car value, with over half of that locked in cathode active materials (including cobalt, nickel, manganese and lithium).

Europe has been catching up. A combination of long-term EV market certainty thanks to car regulations, the efforts by the European Battery Alliance and the influx of state aid in Germany and France (in response to the subsidies in the US Inflation Reduction Act) have resulted in a healthy pipeline of battery investments across Europe. More than EUR 180 bln has been invested into the EU battery value chain, predominantly gigafactories, to date. Billions of state aid have been committed to projects such as Northvolt in Germany and Verkor in France. T&E estimates that 1.8 TWh of capacity can come online this decade (with the production output of 1.2 TWh), more than enough for Europe's needs from all manner of electric vehicles, energy storage and other smaller applications.

[13] Benchmark MInerals Intelligence,
https://source.benchmarkminerals.com/article/where-are-the-worlds-gigafactories



Note: Demand in Regulatory Scenario follows the EU regulations on CO2 emission standards for light and heavy duty vehicles. Expected production was calculated based on varying capacity utilisation and scrap rates, depending on the maturity of each plant.
Source: T&E analysis of publicly announced battery cell projects

Figure 10: Battery production and demand in Europe

T&E analysis of the battery plant pipeline vs the expected lithium-ion battery (LIB) demand shows that:

- 66% of Europe's needs can be met in 2024, rising to 75% in 2025,
- Self-sufficiency is possible as early as 2026 if all projects come online on time and capacity planned.

This indicates that Europe has potential to produce most of its lithium-ion battery demand locally.

But executing all those plans on schedule and successfully will not be easy. Many are at risk, with Britishvolt in the UK and allegedly Italvolt in Italy just a few latest examples that failed. China is years ahead in terms of technology commercialisation, mass manufacturing and supply chain preparedness. The US has both a strong anti-China policy that prevents easy access to the market and generous production credits under the US IRA. Europe has neither, with the support announced via national subsidies and the recently announced Battery Fund nowhere near the EUR 68 bln that the Commission estimates[14] will be needed for the project pipeline to materialise.

Therefore, if it is Europe's goal to have significant battery manufacturing in Europe it will need to introduce measures to create a pull to manufacture locally. Such measures can include:

[14] European Commission NZIA assessment, https://single-market-economy.ec.europa.eu/document/download/680f052a-fa6c-4f63-a1ec-c4866fa25a27_en?filename=SWD_2023_68_F1_STAFF_WORKING_PAPER_EN_V4_P1_2629849.PDF

- Strong battery sustainability requirements should reward local clean and circular manufacturing. Notably, the new carbon footprint rules being developed under the Battery Regulation should reward companies that use direct connection to new and local renewable energy generation. Renewable energy certificates (RECs) should only be counted if the producer can reliably demonstrate a strict temporal (hourly) and geographic (same bidding zone) link to where the energy is generated. On top, an ambitious CO2 threshold is needed to create a pull for batteries produced locally and with cleaner electricity.
- Strong "Made in EU", or local content requirements. But only France has so far added such requirements to their EV subsidies via "eco-score", while the 40% local manufacturing benchmark in the Net Zero Industry Act lacks teeth and is not binding.

This leaves trade defence policy as another tool to use in the short term.

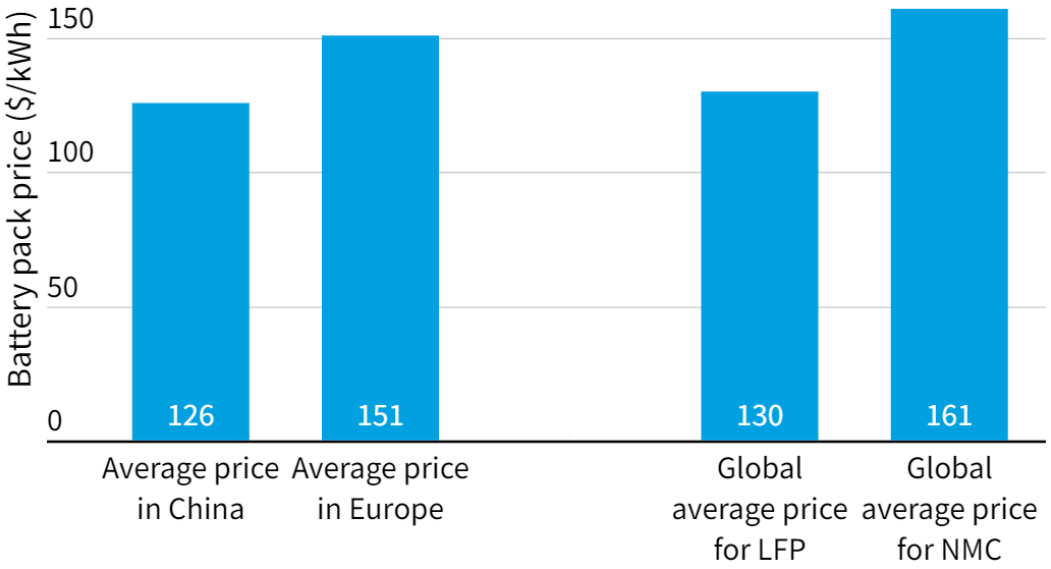
4.1 Trade policy & EU's battery cell ambition

If Europe's goal is to have local battery manufacturing, it might need to rely on trade defence tools to create the business case to invest here. Currently EU's import tariffs on lithium-ion batteries are the lowest compared to the US and China: at just 1.3% currently (2.7% without the Autonomous Tariff Suspension) vs 10% in China, and almost 15% for Chinese battery cells imported into the US.

European battery cell manufacturing is more costly and less competitive today. On CAPEX alone, the Commission estimates[15] that the difference between Chinese and European factories is 32%, or almost a third, on a GWh basis. Given the scale and knowhow, lower energy and labour costs and access to the well developed mid and upstream supply chain in China, it is hard to see why automakers would source a commodity made in Europe that is more expensive (and not necessarily of better quality). Unless they have to (via Made in EU or local content requirements) or unless it is made cheaper to source it locally.

The EU's goal should be to localise battery cell production. In this case, the battery import tariffs should reflect this ambition. According, to BNEF, the average prices of battery cells in China were around 20% cheaper than the European average in 2023:

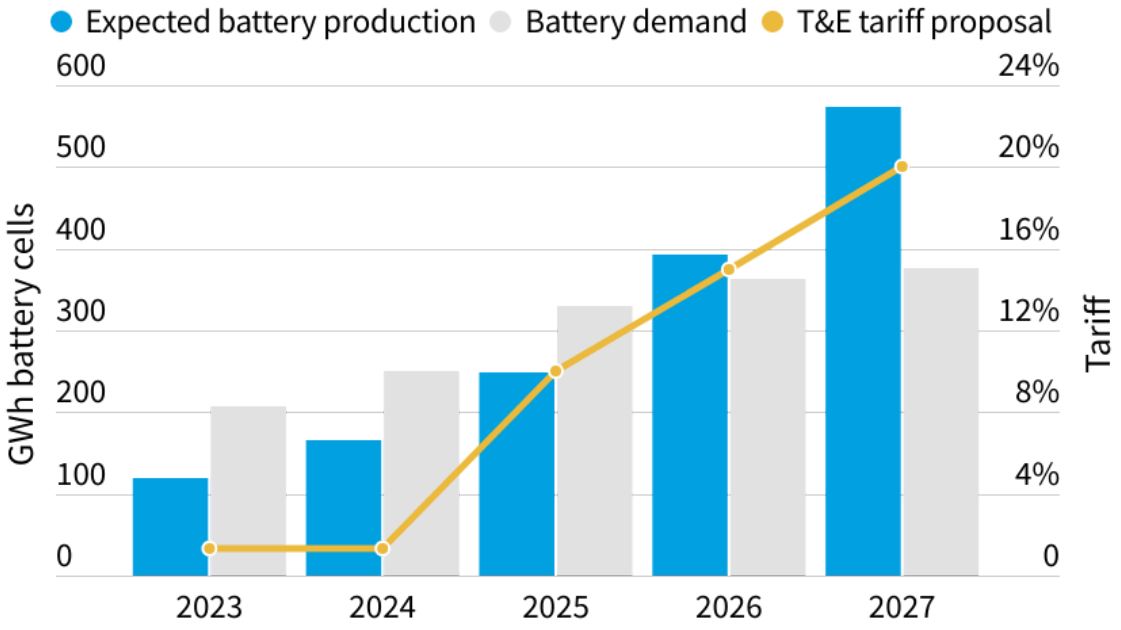
[15] EC, 2023, https://single-market-economy.ec.europa.eu/system/files/2023-03/SWD_2023_68_F1_STAFF_WORKING_PAPER_EN_V4_P1_2629849.PDF



Source: BloombergNEF's 2023 Lithium-Ion Battery Price Survey

Figure 11: Battery pack prices

Accordingly, the EU should match at least this level by the time its own capacity is ready to supply the demand, e.g. raising the tariff to at least 10% in 2025, 15% in 2026 and 20% from 2027. However, it is rumoured that Chinese battery makers already sell battery cells to Chinese OEMs at much lower levels than that, closer to ESD 50-60 per kWh, so the Commission should investigate this as part of its anti-subsidy probe and act accordingly.



Note: Demand in Regulatory Scenario follows the EU regulations on CO2 emission standards for light and heavy duty vehicles. Expected production was calculated based on varying capacity utilisation and scrap rates, depending on the maturity of each plant.
Source: T&E analysis of publicly announced battery cell projects

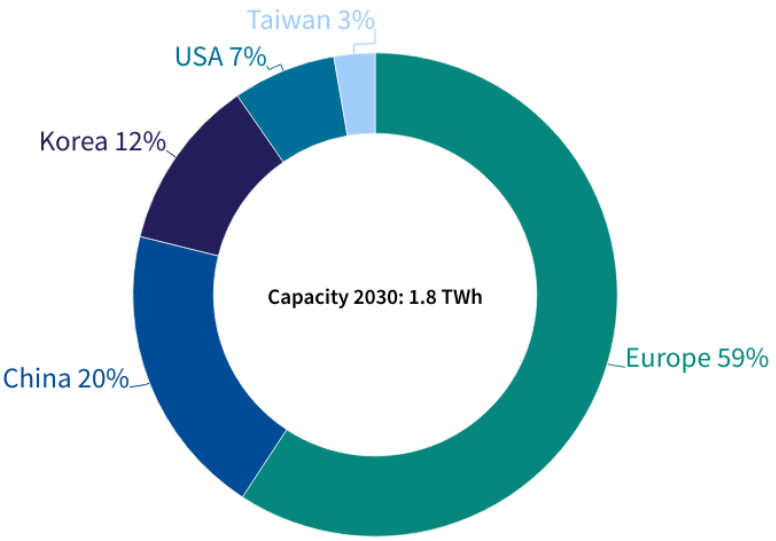
Figure 12: T&E tariff proposal

Ultimately, Chinese companies have enough leeway to reduce costs lower than any EU tariff, so to be effective, any tariff should be accompanied by strong "Made in EU" provisions to create a business case to scale manufacturing in Europe. This includes public tenders and contracting (as "sustainability & resilience" provisions), EV subsidies and all manner of national and EU grants and loans.

Given their technological knowhow and expertise, the result of such an increase in tariffs is unlikely to stop Asian battery manufacturers from entering the EU market. But instead of importing battery cells, it will incentivise onshoring the production and enable the EU to gain knowhow provided conditions (e.g. to state aid) are put in place to ensure local workforce inclusion. This will also give the certainty needed for the many gigafactory plans across Europe that there is a market for their product: the automotive industry will be committed to local sourcing, as it will be clear to the entire ecosystem that cheap imports from abroad will not be acceptable. Ultimately, this will help avoid the higher tariffs between the EU and the UK as part of the Trade and Cooperation Agreement as sufficient volumes of local battery manufacturing will be available.

Concerns that the European battery market will be completely dominated by Chinese companies do not match the current project pipeline. The analysis of the current battery plans shows that only around a fifth are by Chinese companies, while the predominant share, 59%, is by European companies and start-ups. Europe's first company to produce lithium-ion battery cells commercially

in Sweden, Northvolt, has already started its deliveries and is expected to add a second gigafactory in Germany in the coming years. However, it is true that Chinese players have more experience and knowhow to scale those factories faster, while European companies are likely to move slower and encounter more risks. But provided the EU creates a stronger case for manufacturing in Europe, our market will most likely not be dominated by Chinese companies.



Source: T&E analysis of publicly announced battery cell projects

Figure 13: Origin of battery companies with production in Europe in 2030

4.2 How to deal with possible retaliation?

On the other hand, legitimate concerns have been raised about the potential retaliation, e.g. choking off materials, machinery or equipment imports into Europe that are critical to scale the planned battery cell factories. But Europe should remember that both Europe and China in many ways need each other in this complex EV value chain. While Europe lacks expertise and manufacturing in parts of the value chain, the overcapacity of EV and battery supply in China and the increasing local restrictions in the US, India and elsewhere make the EU and the UK markets critical to China as well.

Given a higher risk of retaliation undermining the very supply chain the EU wants to build, more of a mutually beneficial agreement can be found. Chinese battery cell imports can be taxed at the current lower rates up to 10-15% of Europe's demand, with the remainder taxed higher so as to enable local manufacturing to scale successfully.

Such flexible, or progressive, tariffs can be designed based on the concept of a tariff-rate quota, whereby a certain volume of imports can be subject to no/lower tariff, while the imports above the agreed threshold pay higher tariff. This can allow some market to Chinese battery importers to keep the relations amicable, while creating manufacturing in Europe become viable and is realised.

Tariff-rate quotas are a common practice in other sectors, e.g.:

- The EU has imposed Tariff Rate Quotas on steel as a safeguarding measure from several countries, such as the US, India and China. As part of this, imports of cold-rolled stainless steel sheets and strips over 30 376.69 tonnes from India and over 24 714.52 tonnes from the US and imports of non-alloy wire over 77 963.72 tonnes from China have an additional duty rate of 25% (which is decreased each year).
- The EU-Mercosur free trade agreement foresees tariff-rate quotas for agricultural products, e.g. the duty raises after the first 180 000 tonnes of poultry and 99 000 tonnes of beef imported.

The more famous example of an amicable solution is the China-EU solar panel settlement following the 2013 anti-dumping case, or the so-called price undertaking. This allowed Chinese companies to export up to 7 gigawatts of solar products annually tariff-free provided their price is not lower than 56 cents per watt. This measure expired in 2018. The key difference with battery cells is that Europe acted on solar panels too late, while we still have viable battery cell production plans that can become competitive. Acting preemptively and quickly is key, i.e. acting on battery cells now, before the market is flooded with imports and before any anti-dumping starts to happen, as a precautionary measure is what Europe needs to do.

Such price undertaking, similar to the concept of tariff-rate quotas, is an amicable solution in trade defence proceedings allowed under the EU and WTO rules. A tariff duty is replaced by a volume allowance based on a minimum import price (to avoid undercutting local producers). Companies participating in the price undertaking agreement are exempt from tariffs, while those not cooperating are subject to high duty rates. A similar price undertaking can be agreed for Chinese battery cell imports into the EU.

5. Policy recommendations

As the European Commission is deliberating its actions following the anti-subsidy investigation into Chinese EVs, T&E hopes this turns into a strategic revamp of the Union's trade policy and leads to trade defence mechanisms becoming a core part of the industrial strategy on EV supply chains.

In particular, T&E recommends the following:

1. The EU should **raise the EV import tariff** to at least 25% once the investigation concludes distortive subsidies have been found (making this WTO-compatible). This should apply to any manufacturer importing EVs into the EU market. The UK government should match this in order not to become a dumping ground for Chinese EV imports. The goal is to encourage localisation of manufacturing in Europe.

2. **Import tariffs on battery cells** should also be increased progressively by 2027, when the EU production is expected to meet the demand. The tariffs should be gradually increased to the minimum level 20% to close the average cost gap with Chinese battery cells today. The Commission should evaluate this as part of the investigation and set the tariff to match the cost difference between Chinese battery cell prices and the European equivalent. To avoid retaliation that could slow down Europe's value chain build-out, the Commission should consider using amicable trade tools, such as a price undertaking, to allow a pre-agreed volume (e.g.10-15%) and a minimum price of Chinese battery cell imports into the EU benefiting from lower tariffs.

3. Ultimately, stronger "**Made in EU**" requirements are needed to avoid China dumping prices in response to tariffs. These include provisions in national and EU-level grants, public tenders and other subsidies. The new **EU Battery Fund** should also help to localise manufacturing, and be operationalised no later than Q3 2024 to support the short-term scale-up of battery cell and component manufacturing in Europe. Mid-term, this should be turned into an EU Green Industry Fund. The **carbon footprint methodology** of the Battery Regulation should reward direct connection to new renewable supply and set strict CO2 thresholds as soon as possible.

4. The **EU and the UK** should set up a strategic Battery Alliance that ensures a joint materials and battery production ecosystem with electric vehicles traded tariff-free.

5. Higher tariffs should be accompanied by a **regulatory push for faster BEV** mass market. This includes locking-in the 2035 EU cars & vans decision, agreeing ambitious corporate fleet electrification targets and rolling out a European strategy for compact made in Europe BEV. At national level, smart taxation to incentivise BEV take up is also important.

There is a real risk that automotive jobs and know-how will leave the continent as European legacy carmakers have been slow to transition to electric. The aim of Europe's trade policy going forward should be to secure local manufacturing, ie "made in Europe" but not only by European companies. It is also important that this does not lead to outright protectionism and a shrinking offer of affordable BEVs for European consumers. On the contrary, as higher tariffs will not stop Chinese brands from coming into Europe (they will build factories here), it should be accompanied by an accelerated production of EVs, battery cells and components (e.g. cathodes) by European companies. Going faster, not slowing down, is the only way to fend off foreign imports into Europe.

Further information

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