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The European Union's automotive sector needs a plan, not undue protection

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Executive summary

THE EUROPEAN AUTOMOTIVE INDUSTRY faces significant challenges: electrification, Chinese competition and stagnating consumer demand. The European Union's response has been to propose deregulatory and trade-defence measures, EU-level funding and the potential introduction of 'Made in EU' requirements. These initiatives attempt to satisfy three objectives simultaneously:

1. Maintaining modified targets for the phase out of internal combustion engine vehicles for both climate-transition and energy-security reasons;
2. Shielding domestic supply chains from import competition with a particular focus on China; and
3. Keeping vehicles affordable for European consumers.

HOWEVER, THESE OBJECTIVES ARE in tension: tariffs and EU-origin requirements to shield producers raise consumer prices, while the electric-vehicle transformation is reshaping domestic supply chains. Rather than focusing mainly on protections for the automotive industry, the EU should pursue a balanced strategy to support transformation at a critical phase of the climate transition. The costs to consumers and taxpayers should be kept proportionate to the benefits of preserving industrial capacity and jobs, while maintaining an ambitious pace of decarbonisation. Any support should be temporary and linked to industry efforts to improve competitiveness in the manufacture of affordable electric vehicles.

DOMESTICALLY, THE EU'S AUTOMOTIVE POLICY ARCHITECTURE should be simplified. Economic-security concerns should be tackled through resilience criteria rather than local-content requirements, and by prioritising structural competitiveness enablers. Incoming investment must be treated as a catch-up opportunity. Any protective measures should take the form of either temporary safeguards or negotiated agreements with China covering both electric vehicles and hybrids.

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1 Introduction

The European automotive sector is transforming, driven by electrification, rising Chinese competition and falling domestic demand. Because of the importance of the sector to Europe – whole communities exist because of automotive production in the twentieth century and the sector remains an enormous employer – fears about the disruptive impact of this change, and how it could mean the *"prosperity of Europe is at stake"* (de Meo, 2024), rightly deserve political attention.

However, such fears have created a political discussion centred around protecting the incumbent industry, rather than helping it to adapt. The European Commission has, for example, proposed to delay the transition to electric vehicles while introducing compulsory local content requirements for EV subsidies. The European Union has also imposed tariffs on Chinese EVs.

Rather than offering protection, policy must help carmakers to adjust to a new competitive environment

This approach is misguided. Rather than offering protection, policy must help carmakers to adjust to a new competitive environment. Because of climate and costs, the future is electric. Discussions on slowing the transition to EVs are an unhelpful distraction. Rather than introducing local-content requirements, leaders should ensure competitive access to the global market on fair terms for European automotive producers. The future of the sector depends on EV competition with China.

Growing competition from China within Europe should be welcomed up to a point. The EU should pursue a negotiated agreement with China to set export quotas for a maximum volume of electric vehicles. In September 2026, the EU made a first approach to China to discuss voluntarily limiting Chinese hybrid electric car exports to Europe[1]. If negotiations fail, temporary safeguards can be introduced. The goal should not be to prevent competition with the Chinese, but to provide European producers time to catch up.

We outline the state of the European automotive industry in section 2, covering employment, output, investment and technology trends. Section 3 details trade flows. The remainder of the Policy Brief examines the current European policy response (section 4), historical precedents of sudden growth in cheap car or other good imports (section 5) and the trade-offs implicit in today's policy response. We conclude in section 7 with policy recommendations.

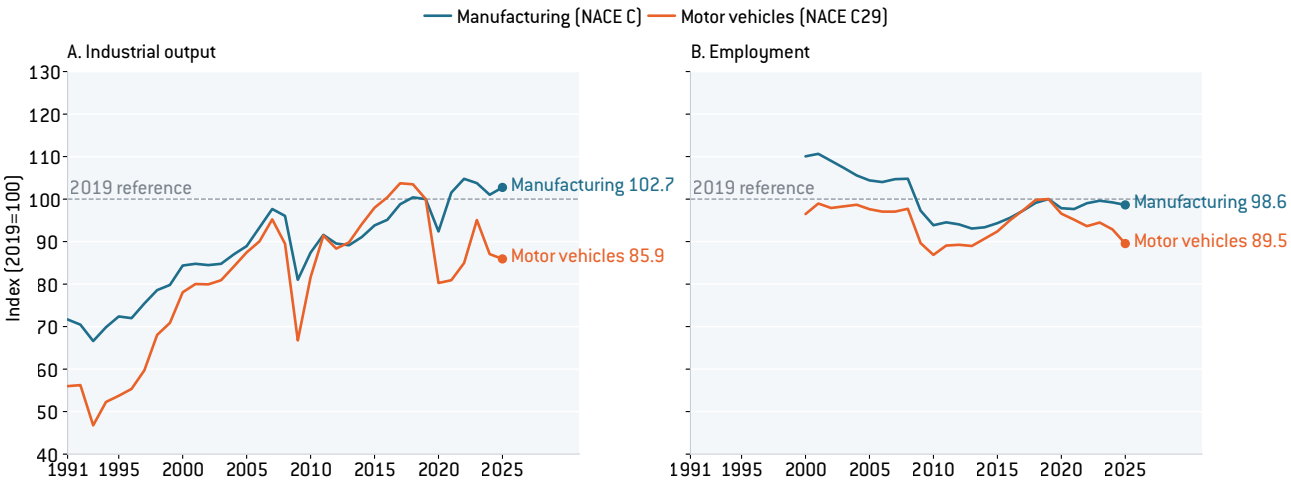
1 Andy Bounds and Joe Leahy, 'EU asks China to voluntarily limit hybrid car exports', *Financial Times,* 16 September 2026, https://www.ft.com/content/0b45cb01-7f62-41c5-8c48-10c47f2e1ae6.

2 The state of the European automotive industry

The number of cars produced by the European Union automotive sector has been declining since 2019. Output dropped sharply in 2020 because of COVID-19 restrictions and production lines were interrupted throughout 2021 and 2022 by semiconductor shortages (Ziegler and Heidling, 2023). EU passenger car production has fallen by around 2.6 million units since 2019, a 19 percent drop (ACEA, 2021; ACEA, 2026).

A major part of the reason for declining output is that demand has dropped. Europeans bought 2.2 million fewer new cars (from anywhere, not just from Europe) in 2025 than in 2019. It is unclear whether this drop is temporary or structural. Greater use of public transport in cities and less importance attached to cars among young people might contribute to structural decline (ITF, 2024). Declining new car sales go alongside the ageing of the fleet and growth in the used-vehicle market (Zacharof *et al*, 2025). If European demand remains depressed, in the absence of growing exports, European automotive production will remain down on 2019 levels. Meanwhile, EU manufacturing as a whole has remained stable, suggesting that productive activities are being reshuffled to other manufacturing sectors, compensating for the automotive fall (Figure 1).

Figure 1: Industrial output and employment in the EU automotive sector



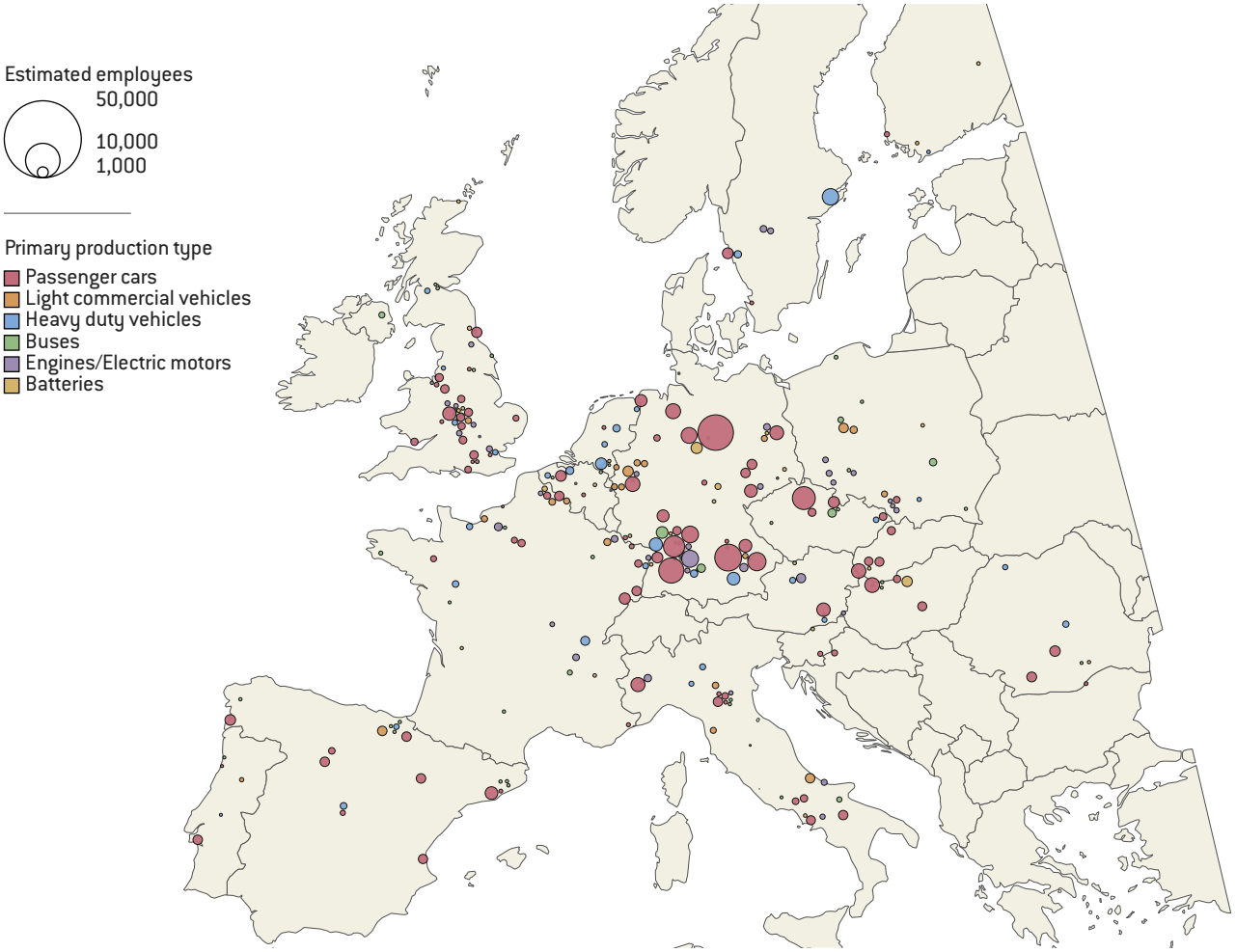
Source: Bruegel based on Eurostat. Note: both panels show variables indexed to 100 for the year 2019.

Furthermore, falling EU car production has not meant falling profitability. In 2023, European carmakers recorded the highest profit margins among major car-producing regions in part because of a post-pandemic strategy of selling fewer vehicles at higher prices (De Santis *et al,* 2024).

The decline in automotive output concerns policymakers primarily because the sector is a large employer and an important political constituency. Across the full value

chain, including sales, maintenance and transport, the automotive sector in 2025 employed 14 million Europeans, or 6 percent of total employment. Seven percent of EU GDP and 8 percent of manufacturing value added derives from the automotive sector (Draghi 2024; ACEA 2024). Employment is geographically concentrated, particularly in Germany (Lower Saxony, Bavaria and Baden-Württemberg), France (Hauts-de-France and Grand Est), northern Italy (Piedmont and Emilia-Romagna), and central Europe (Central Bohemia, western Slovakia, north-western Hungary and Silesia) (Figure 2).

Figure 2: Employment in European automotive manufacturing facilities (estimated)



Source: Bruegel based on ACEA.

EU automotive output is declining while the sector undergoes a major transition, pushed by two global technology trends:

The transition from internal-combustion-engine vehicles (ICE) to hybrid or fully electric vehicles (EVs)[2], accelerated by the EU's target of ending new ICE vehicle sales by 2035 (Regulation (EU) 2023/851). EVs accounted for 28 percent of new car sales

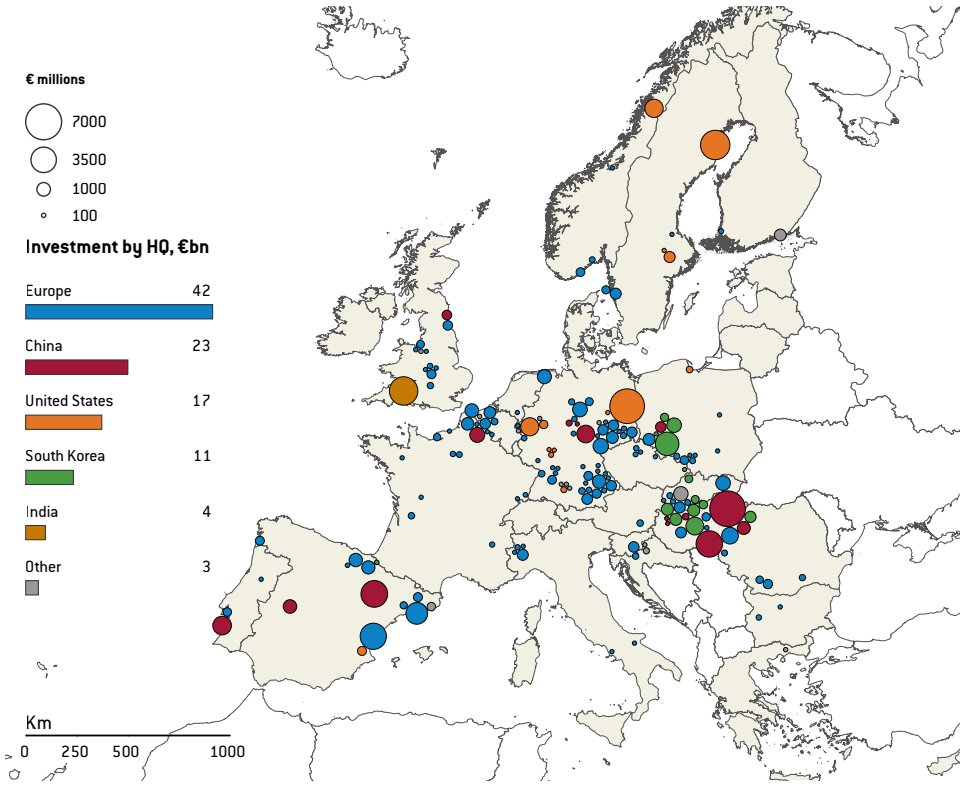
2 EVs refers to both battery electric vehicles (BEVs), which are fully electric, and plug-in hybrid electric vehicles (PHEVs), which combine battery power with an internal combustion engine (ICE).

in the EU in 2025, up from 3 percent in 2019[3]. The uptake of EVs in Europe is slightly above the global average of 25 percent. In China, that share is 55 percent; in the US, it is just under 10 percent (IEA, 2026). In focusing on higher margins for their vehicles, EU automotive investment has neglected the growing but less-profitable market for affordable EVs, where competition from China is most intense.

The rise of connected and autonomous vehicles. On this and on EVs, Chinese manufacturers are becoming more competitive and have moved faster than EU carmakers, supported by two decades of heavy industrial policy intervention and public investment (Xiong *et al*, 2022)[4].

The European automotive sector is seeking to invest and innovate to meet these simultaneous challenges. Since 2017, more than €76 billion has been invested into battery and EV manufacturing facilities in Europe. Investment has been concentrated in Germany, Hungary, Spain, France and Poland (Figure 3). About €3 billion per quarter continues to go into the construction of new production facilities (Bruegel Dataset, 2025). In 2025, European factories had the capacity to produce about 4.6 million EVs per year, surpassing domestic demand (4.1 million). European facilities also have the capacity to produce more battery cells and packs annually than domestic demand. Capacity does not imply production and European companies rely on significant battery imports.

Figure 3: EV and battery manufacturing investment since 2016



Source: Bruegel Dataset (2025).

3 See European Environment Agency article of 6 November 2025, 'New registrations of electric cars in Europe', https://www.eea.europa.eu/en/analysis/indicators/new-registrations-of-electric-vehicles.

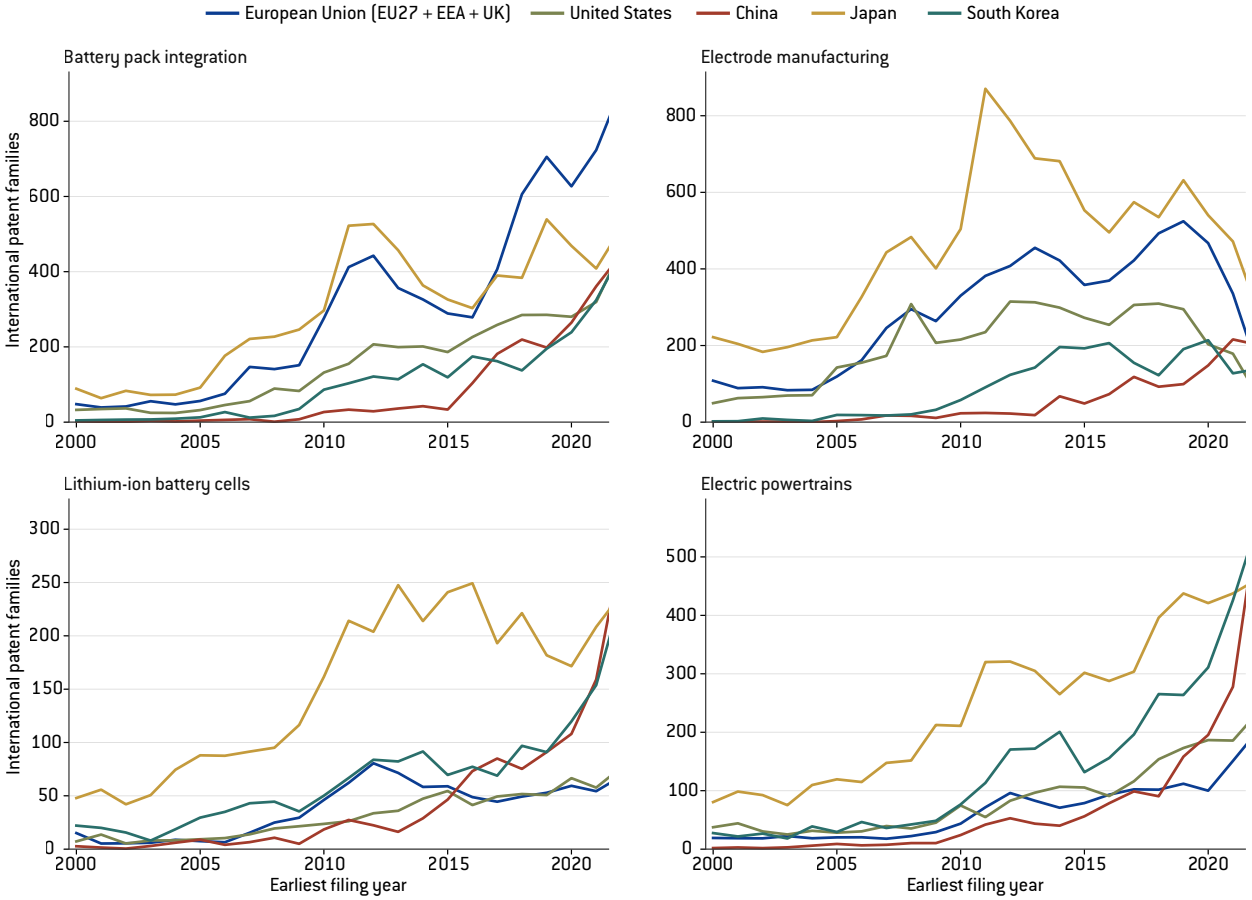
4 At the time of writing, autonomous taxis from Waymo were operating in a dozen US cities; see Waymo, 'Latest updates', https://waymo.com/updates/.

European-headquartered companies own most (78 percent) EV manufacturing capacity in Europe, partly because much of this relates to transforming existing production facilities[5]. However, foreign companies lead battery manufacturing investment in Europe. South Korean companies own 65 percent of operational European battery cell capacity. Chinese companies own 55 percent of currently under-construction battery cell capacity.

The innovation landscape is more mixed (Figure 4). Europe is strong in patents in research fields in which it retains a strong manufacturing presence, but less strong in research fields in which it has less of a production base, showing that patent leadership tends to follow industrial capacity (Audretsch and Feldman, 1996).

European inventors lead in integrating battery cells and packs into vehicles and in battery housing, cooling, crash protection and vehicle interfaces, though Asian countries have caught up somewhat since 2018 (Figure 4). For electrodes, the EU (particularly Germany) patents more than Korea and China combined, and trails only Japan.

Figure 4: EV battery and powertrain value chain patenting, by origin of inventor, 2000–2024



Source: Bruegel based on EPO PATSTAT. Note: Categories follow the EPO/IEA value-chain taxonomy. Counts are international patent families, each representing a single invention filed in two or more jurisdictions.

5 Notable exceptions include a €6 billion investment by Tesla in 2021 in Berlin, Germany and an ongoing €4 billion investment from BYD in Szeged, Hungary.

European innovation appears relatively less strong for battery cells and powertrains. In lithium-ion battery cells, Asian countries lead. Japan led through the 2010s, followed by South Korea. Patenting in Europe and the US stayed close to flat over the two decades. Electric powertrains, including motor control, inverters and power electronics, follow the same order. Japan led into the late 2010s, driven by suppliers Denso and Mitsubishi. Korea and China overtook in 2020, while Europe and the US saw much slower growth. Japan's long lead in cells and powertrains lines up with its historic manufacturing strength in these areas. China's fast climb since the mid-2010s follows its own capacity buildout.

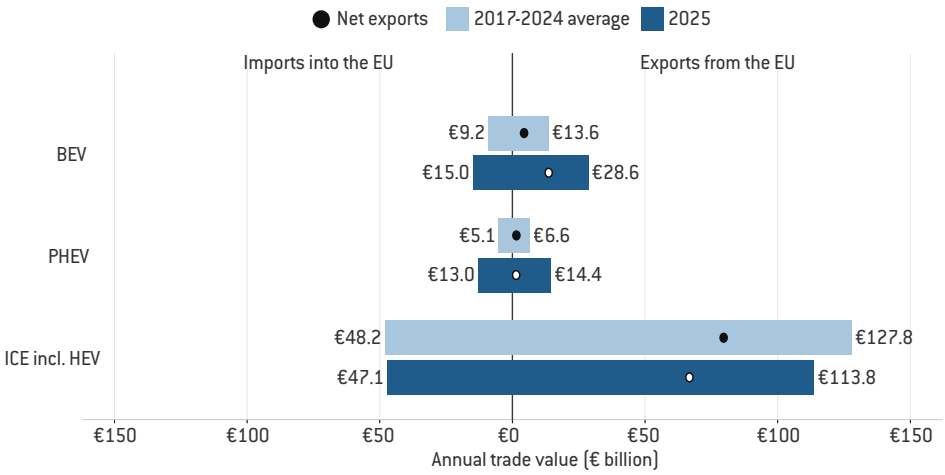
3 Automotive trade trends

3.1 Total automobile trade

The EU remains a net exporter of vehicles. Exports in 2025 amounted to €157 billion and imports to €75 billion, thus net exports of €82 billion. These proportions are broadly unchanged from the previous eight years. However, exports fell in 2024 and 2025 after peaking at €168 billion in 2023. The drop is largely due to the decline of ICE vehicle exports – the EU's traditional strength – in line with the global demand shift towards EVs (see the appendix).

ICE exports to China fell from an annual average value of €18 billion in 2017-2024 to €8 billion in 2025. Total EU automobile exports to the US were €31.2 billion in 2025, close to the previous eight-year average of €31.9 billion, but €10.4 billion below 2023 and €8.4 billion below 2024. The 2025 decline coincided with the introduction of US tariffs on European cars and the elimination of US EV subsidies. Growth in EV exports from the EU made up the shortfall somewhat (Figure 5).

Figure 5: EU trade in vehicles, 2025 vs 2017



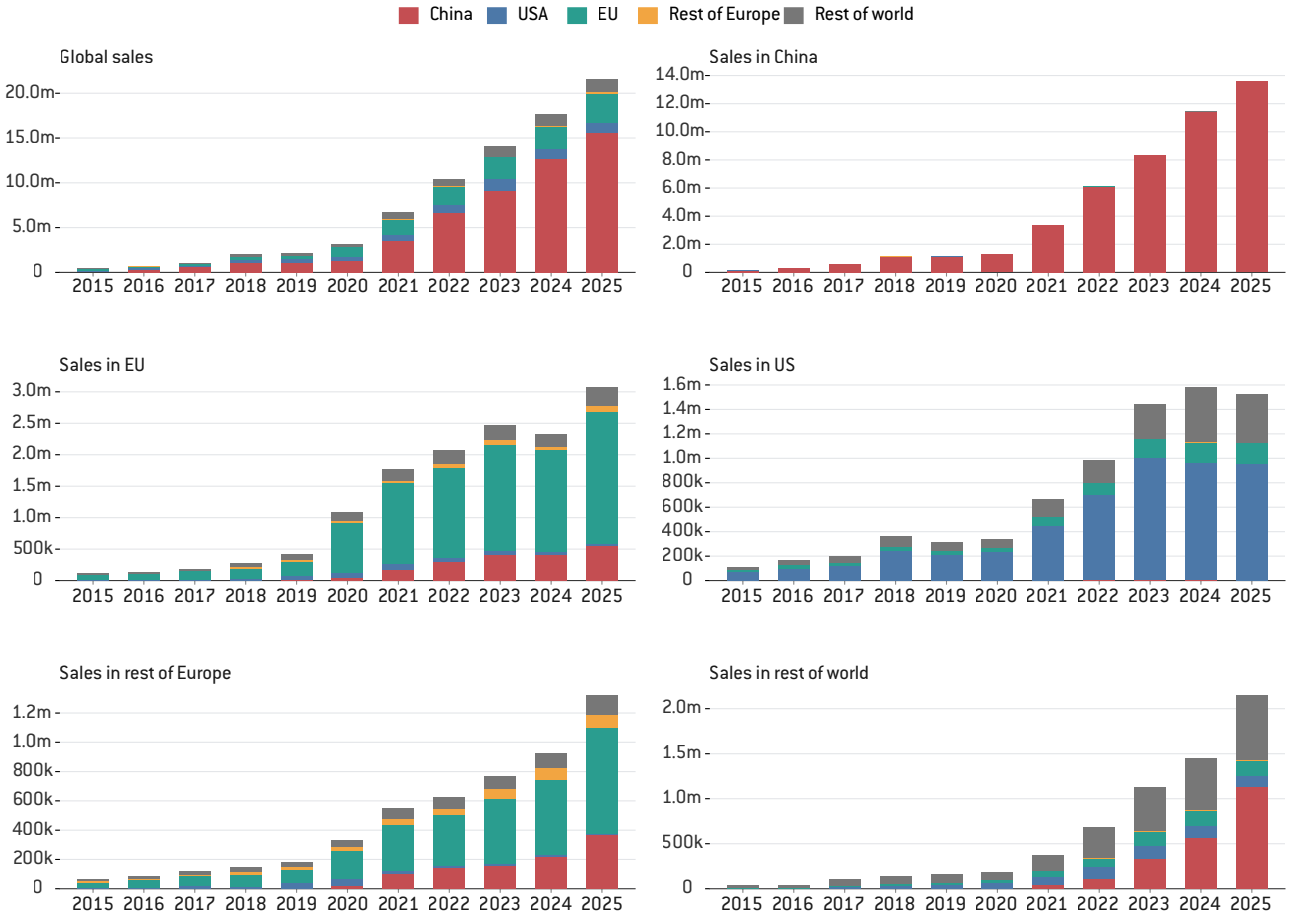
Source: Eurostat. Note: BEV = battery electric vehicles; PHEV = plug-in hybrid electric vehicles; ICE = internal combustion engine vehicles; HEV = non-plug-in hybrid electric vehicles.

3.2 Electric vehicle trade

For battery electric vehicles (BEVs), the EU ran a €14 billion trade surplus in 2025. For plug-in hybrid electric vehicles (PHEVs) the surplus was €1.4 billion. The three largest importers of EU BEVs were the United Kingdom (€10 billion), the US (€4 billion) and Norway (€4 billion) – 63 percent of EU BEV exports in total.

Global EV sales are accelerating rapidly (Figure 6). China accounts for 63 percent of global EV sales, dominated by local production[6]. European-produced EVs have a less than 0.1 percent share of China's market, while in the US, the EU EV share is 11 percent and in the rest of the world 8 percent. In 2025, EU EVs they accounted for 69 percent of the EU market and 55 percent for the rest of Europe.

Figure 6: Global EV sales by vehicle production origin, 2015-2025



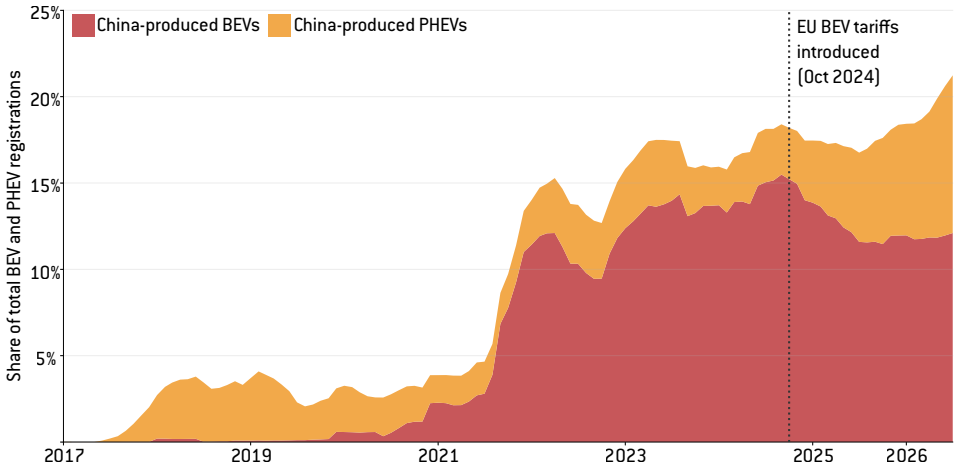
Source: Bruegel based on EV Volumes.

Chinese-built EVs are gaining market share in the EU, passing 20 percent of total EV sales in 2026, equivalent to over 5 percent of total vehicle sales. More than half of these EVs were western-branded automobiles made in China. In October 2024, the EU introduced duties ranging from 7.8 percent to 35.3 percent on Chinese-produced

6 The share of the Chinese market (ICE vehicles and EVs) taken by foreign automakers fell from 64 percent in 2020 to roughly 32 percent in 2025. Suranjana Tewari, 'The world's carmakers are struggling to compete with China', *BBC*, 28 May 2026, https://www.bbc.com/news/articles/c4g8vg72z43o

automobiles following an anti-subsidy investigation[7]. These duties cover BEV but not PHEV imports. BEV imports have since flattened, while PHEV imports have grown substantially (Figure 7), thus undermining the value of these duties as a shield for European production. Incentivising PHEV over BEV imports is damaging for European climate targets, as they are more polluting vehicles (European Commission, 2024).

Figure 7: Chinese share of EU EV registrations, six-month rolling average



Source: Bruegel based on EV Volumes.

The EU has moved to conclude free trade agreement (FTA) negotiations with economies that apply high tariffs to car imports, notably Mercosur, India and Indonesia. Negotiations are at time of writing ongoing with other ASEAN countries[8]. FTAs with emerging markets, where competition from China is fierce, create opportunities to increase exports to otherwise highly protected markets. In many markets, Europe-based producers now face significantly lower tariffs than their Chinese counterparts (Table 1).

However, these new opportunities are unlikely to substitute for the loss of market share in the US following the imposition of tariffs, because emerging markets tend to demand fewer premium vehicles than the US.

7 See European Commission press release of 29 October 2024, 'EU imposes duties on unfairly subsidised electric vehicles from China while discussions on price undertakings continue', https://ec.europa.eu/commission/presscorner/detail/en/ip_24_5589.

8 See European Commission, 'Association of South East Asian Nations (ASEAN)', https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/association-south-east-asian-nations-asean_en.

Table 1: EU EV exports and applicable import tariffs, by destination (export values 2024)

Destination	EU EV exports (€ billions)	Tariff paid by EU	Tariff paid by China
United Kingdom	11.78	0%	10%
United States	9.72	15%	100%
Norway	2.99	0%	0%
Switzerland	2.26	0%	0%
Turkey	1.98	0%	50%
South Korea	0.95	0%	8%
Canada[a]	0.94	0%	6.1%/100%
Japan	0.89	0%	0%
Australia	0.74	0%	0%
China	0.65	15%	–
Mexico	0.45	0%	50%
UAE	0.42	5%	5%
Ukraine	0.33	0%	0%
Brazil[b]	0.32	25%	25%
India[c]	0.10	110%	110%
Indonesia[d]	0.06	50%	50%

Source: Bruegel Dataset (2025); tariff rates from national portals. Notes: [a] Canada's EV quota sets an annual limit of 49,000 Chinese-built EVs that can be imported at a reduced 6.1 percent tariff, rather than the prohibitive 100 percent surtax. This quota is set to increase by 6.5 percent annually. Above this quota the 100 percent surtax applies. [b] Brazil's MFN on EVs is 25 percent, rising to 35 percent on 1 July 2026 (the China-origin rate); the EU-origin rate is fixed at 25 percent under the EU-Mercosur FTA (provisional since May 2026), falling gradually to 0 percent 18 years after implementation. Rates vary across Mercosur: Argentina admits EVs costing under €16,000 at 0 percent, up to a quota of 50,000 vehicles. [c] Under the EU-India FTA, tariffs on vehicles will be gradually reduced to 10 percent with a quota of 250,000 vehicles per year; complete tariff elimination for car parts will follow after 5-10 years. Chinese-origin stays at the ~110 percent MFN rate. [d] Under the still-to-be-ratified EU-Indonesia Comprehensive Economic Partnership, the EU rate will drop to 0 percent over five years; China-origin entered at 0 percent via the ASEAN-China FTA, but in 2026 the Indonesian government removed the tariff exemptions and introduced local content requirements.

Global overcapacity compounds the impact of Chinese competition. Chinese state-led industrial policy in clean-tech sectors has produced 'involution': intense competition between EV manufacturers, each ramping up production, resulting in price wars, declining margins and under-performing firms staying in the market rather than exiting, propped up by generous state subsidies (García-Herrero and Xu, 2026). Although the Chinese authorities are adjusting industrial policy to reduce this overcapacity (Davidson and Qian, 2026), the Chinese domestic market remains overcrowded.

For Chinese companies to offload this overcapacity and make a profit, they must turn to export markets. The EU is China's main EV export market, accounting for around 25 percent of Chinese EV exports[9], especially since EV and battery exports from China to the US face the combination of tariffs and regulatory and sourcing requirements, including 'foreign entity of concern restrictions'[10]. Trade-defence measures, such as

9 Joseph Webster and Tony Jing, 'Chinese electric vehicle exports rise amid the oil crisis, posing a dilemma for importing countries', Atlantic Council, 4 May 2026, https://www.atlanticcouncil.org/blogs/energysource/chinese-electric-vehicle-exports-rise-amid-the-oil-crisis-posing-a-dilemma-for-importing-countries/.

10 EVs imported from China are subject to a 100 percent tariff; see Liu *et al* (2026).

EU duties on Chinese BEVs imposed in December 2024 (Regulation (EU) 2024/2754), slow this dynamic but do not erase it. In particular, such measures don't apply in third countries where EU producers also compete with Chinese producers.

4 European automotive policy

4.1 EU industrial policy for EVs: a patchwork of overlapping initiatives

The automotive sector has significant political influence Europe and numerous EU initiatives have addressed the sector since 1970. In March 2025, the European Commission published an 'Industrial Action Plan for the European automotive sector' (European Commission, 2025a) in an attempt to pull together all the different strands of EU policy affecting the car industry, especially EVs, into a single strategy. Its main elements were:

- A 'Battery Booster' package, or set of EU grants to support the manufacturing of electric-vehicle batteries in Europe.
- A review of the carbon emissions targets car manufacturers must meet for their new-vehicle fleets since 2025 and changes to the 2035 target by when sales of new ICE cars should stop; these changes give manufacturers greater leeway on how strictly the near-term targets are enforced.
- An allocation to battery manufacturing of money from the EU Innovation Fund[11].
- A push on EV charging infrastructure, asking EU countries to implement consistently the Alternative Fuels Infrastructure Regulation (Regulation (EU) 2023/1804; the EU law that sets minimum requirements for public EV charging stations, such as spacing along highways and price transparency), backed by additional EU funding for charging points.
- Start of work on connected and autonomous vehicles, preparing EU-wide rules, test zones and industry cooperation for self-driving and internet-connected cars, so Europe is not left dependent on foreign software and driving-automation platforms.
- Start of a review the EU's trade-defence instruments to check whether they're sufficiently robust to protect European carmakers from foreign competition.
- A skills initiative aimed at combustion-engine workers whose jobs are being displaced by the shift to electric and software-defined vehicles.

The plan was followed-up, in late 2025, by an 'Automotive Package' that firmed up some of the action plan measures[12], including by proposing weakening of CO_2

11 Funded from revenues from emissions trading; see European Commission, 'Innovation Fund', https://climate.ec.europa.eu/areas-action/eu-funding-climate-action/innovation-fund_en.

12 See European Commission press release of 16 December 2025, 'Commission takes action for clean and competitive automotive sector', https://ec.europa.eu/commission/presscorner/detail/en/ip_25_3051.

emission standards for cars and vans (Box 1), providing details of a €1.8 billion Battery Booster fund to provide interest-free loans to the industry, proposing simplification measures to weaken some sectoral requirements and introducing a separate category of small affordable cars to which simplified rules apply. However, the package did not significantly simplify the legal framework overall. The Commission also published a legislative proposal on corporate fleets, which are responsible for about 60 percent of new car registrations (with those vehicles later resold second-hand), setting out specific shares – differing by country – of new corporate car and van registrations by large companies that must be zero- or low-emission (European Commission, 2025b).

Another proposed law, the Industrial Accelerator Act (IAA; European Commission, 2026), published in March 2026, would steer the EU in a more interventionist direction by introducing EU-origin content requirements for public support schemes that target EVs, batteries and net-zero components in public support schemes. It would introduce mandatory low-carbon requirements for steel and aluminium, and would impose conditions on Chinese investment in EU EV and battery production, above a €100 million threshold[13, 14]. Foreign investment that targets EU companies or assets would have to comply with criteria including minority ownership, majority European personnel, one percent R&D spending and IP licensing. Accessing state aid would require adhering to two additional criteria: using EU-origin components and excluding high-risk suppliers, with derogations only if compliance costs exceed 25 percent. This would create a significant extra hurdle for Chinese FDI. Restricting clean-tech FDI risks slowing the EU's energy transition and value chain development, given that location matters more than ownership for economic security (García Bercero *et al,* 2026).

Box 1: The 2035 vehicle CO2 emission standards, amended

Passenger cars and light commercial vehicles (vans) are respectively responsible for 16 percent and three percent of the EU's total CO2 emissions . Current CO2 emission standards define a trajectory by which a 100 percent reduction in exhaust emissions must be achieved by 2035, meaning no new polluting car or van could be sold thereafter. In the December 2025 Automotive Package, the Commission proposed to amend CO2 emission standards for cars and vans so that, after 2035, carmakers would need to comply with a 90 percent exhaust-emissions reduction target, with the remaining 10 percent offset via low-carbon steel or e-fuels/biofuels. Hybrid and ICE

13 The proposal specifically targets FDI from countries that control more than 40 percent of the global market for a specific component, which is the case for China in EVs and batteries.

14 The extent to which the EU's free trade partners will be able to qualify for IAA incentives remains uncertain. Volkswagen Group, Renault Group and Stellantis have proposed that if 70 percent of a manufacturer's fleet qualifies as 'Made in Europe' under the IAA, the entire fleet should automatically be designated 'Made in Europe'. See the joint statement from Volkswagen Group, Renault Group and Stellantis, 'For an effective, realistic, workable "MADE-IN-EUROPE"', undated, https://www.volkswagen-group.com/en/for-an-effective-realistic-workable-made-in-europe-20478. See also ACEA, 'The automotive industry's position on the Industrial Accelerator Act', undated, https://www.acea.auto/files/ACEA-position-on-Industrial-Accelerator-Act-IAA.pdf.

vehicles would thus still operate beyond 2035. Up to 2035, car manufacturers would be able to benefit from 'super credits' for small, affordable electric cars made in the EU (counting as 1.3 cars). In short, weakening the target lowers near-term compliance costs for carmakers, but could slow the build-out of charging infrastructure and the scale economies that drive reductions in the cost of batteries.

4.2 Demand- and production-side subsidies

Public subsidies for EVs operate at EU level through channels such as the Innovation Fund and the European Investment Bank. National governments, meanwhile, deploy a variety of state-aid instruments for companies active in EU value chains, and consumer-facing schemes to stimulate EV demand. National schemes vary considerably in design, budget and criteria.

Only France and Spain currently apply 'Made in Europe' criteria in consumer-facing schemes (Table 2). The IAA would harmonise national schemes around an EU-content requirement, on top of existing sustainability and resilience (dependence from a single third country supplier) criteria[15]. However, most EU countries still do not apply these criteria and, therefore, there is very limited experience of their implementation.

The cost of local-content requirements depends on the stringency of the content threshold and the speed at which local capacity can scale up to meet them. The extent to which 'Union-origin' requirements will apply to free-trade partners remains unclear (García Bercero *et al*, 2026). At time of writing, there seem to be two views at the European Commission: use the concept of 'trusted partner' flexibly, mainly to exclude China and a few other economies without an FTA with the EU, or a protectionist view that only a few countries should be allowed to qualify. García Bercero *et al* (2026) advocated for doing away with 'Made in EU' requirements and instead relying on the consistent application throughout the EU of sustainability and resilience criteria.

15 Set out in the EU Net-Zero Industry Act (Regulation (EU) 2024/1735).

Table 2: National consumer-subsidy schemes for EVs in selected EU countries (2026)

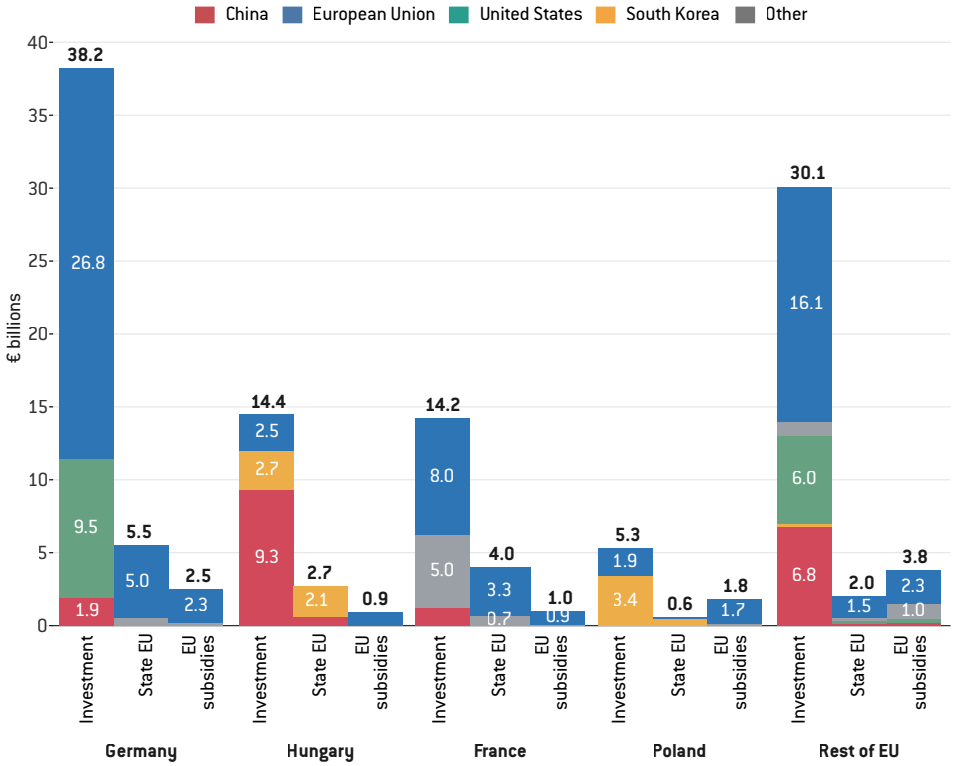
Country	Scheme	Timeline	Budget 2026	Per-vehicle	Sustainability criteria*	Made in EU (IAA)
Germany	new EV bonus	2026-2029	€550 M	€1.5k-6k	Probably not	No
France	Prime coup de pouce	to 2026	€8 bn total	€3.5k-5.7k	Life-cycle CO_2	EEA-assembled vehicle
Spain	Plan Auto+	from 2026	€400 M	€1.1k-4.5k	No	EU-assembled
Italy	Incentivi Auto	to 2026	€600 M	€9k-11k	No	No
Sweden	Social Climate Fund	2026-2032	€533 M	up to €4.3k	No	No
Poland	NaszEauto	2025-2026	€380 M	€4.3k-9.3k	No	No
Hungary	Hungary company BEV	2024-2026	€79 M	€7.3k-10.4k	No	No

Source: Bruegel. Note: * as per the EU Net-Zero Industry Act (Regulation (EU) 2024/1735).

France's scheme, which makes subsidies for consumers conditional on sustainability and resilience requirements, and which in practice has excluded Chinese automakers, has had two consequences: EV models excluded from subsidies saw a 60 percent decline in sales relative to eligible EVs, and the reform may have reduced total EV penetration by 0.9 percent, implying slower fleet decarbonisation (Malgouyres, 2025). This supports the notion that there is a trade-off between resilience and decarbonisation. Extending 'Made in EU' requirements across all of the EU is likely to further slow EV penetration.

On the manufacturing side, national subsidies for automotive investment are uneven across EU countries (Figure 8). A significant share of these has been given to Chinese and South Korean firms producing in Europe (Table 3). This illustrates a broader gap in EU industrial policy: there is no coherent, EU-wide approach on treatment of foreign investment in the automotive sector. The EU state aid framework permits EU countries to grant investment support for the EV value chain (and other strategic net-zero technologies) but does not set common EU-level rules on foreign investors' access to that support.

Figure 8: Notified subsidies to automotive investment in the EU, by country and by origin of recipient company



Source: Bruegel. Note: Inv. = investment; EU Subs. = subsidies from EU-level instruments.

Table 3: Selected investments by Chinese and South Korean companies in the EU automotive value chain.

Company	Origin	Location	Project	Investment (€ millions)
CATL	China	Hungary	Battery cell	7,300
BYD	China	Hungary	EV assembly	4,000
LG Energy	South Korea	Poland	Battery cell	3,200
Samsung SDI	South Korea	Hungary	Battery cell	1,751
CALB	China	Portugal	Battery cell	2,000
SK On	South Korea	Hungary	Battery cell	1,623

Source: Bruegel. Note: one investment is reported per company.

5 Lessons in dealing with cheap car (and other) imports

The shift to electric and autonomous vehicles and the emergence of China as a competitive production hub are disruptive factors with substantial ramifications for European production, both through competition in the European market and competition in third (and Chinese) markets. To some extent, parallels can be drawn with the 1990s when Japanese automotive started to challenge incumbent Europeans, and with Canada's contemporary approach to Chinese automotive imports.

Two others examples can be cited in connection with fear of sectoral collapse: the Swiss 'quartz crisis', in which an entire national industry was made technologically obsolete and survived by transforming, and 'China shock 1.0' in the United States, in which the absence of any adjustment strategy turned a manageable aggregate shock into lasting local scarring and a political backlash (Zettelmeyer and Weder di Mauro, 2026).

5.1 Car imports from Japan in the 1990s

Trade tensions with Japan in the car sector in the 1980s were managed through voluntary export restraints. Such 'grey area measures' were prohibited under the 1995 World Trade Organization Safeguards Agreement and were phased out by the end of the century. The automotive industry in Europe largely adapted to the challenge of Japanese competition, and Japanese car producers increasingly supplied the European market through local investments.

For Europe, the 1991 European Community-Japan 'Elements of Consensus' agreement capped Japanese exports until the end of 1999. The arrangement gave European producers breathing space but also raised consumer prices and gave quota rents to Japanese exporters. The restrictions also encouraged Japanese 'tariff-jumping' through FDI into Europe, particularly in the UK, Spain and France, helping to modernise local supply chains, bring new techniques to produce more reliable cars and integrate European suppliers into Japanese production networks. The trade protection measures and anti-dumping actions significantly increased the scale and location of Japanese investment in Europe (Barrell and Pain, 1999; Belderbos, 1997).

Two lessons stand out: temporary and predictable trade restrictions can buy time for local industry to adjust, if combined with credible policy signals; and proportionate import restrictions may accelerate inward FDI and technology diffusion when linked to local supplier integration.

5.2 Canada's 2026 export-quota approach to Chinese EVs

Since early 2026, Canada has implemented a new trade approach to Chinese-made EVs, moving away from the 100 percent surtax imposed in 2024 to a 'tariff-rate quota' system. This policy, announced by Prime Minister Mark Carney following a

January 2026 trip to Beijing, allows for a limited volume of Chinese EVs to enter the market at significantly reduced tariffs, with the aim of boosting affordability while managing the impact on domestic auto manufacturing[16]. China had challenged the Canadian discriminatory tariff at the WTO but was ready to accept the maintenance of that tariff as part of an overall settlement of the dispute.

Canada permits an initial annual quota of 49,000 Chinese-made EVs, roughly 3 percent of the Canadian market. EVs within this quota are now subject to the most-favoured-nation (MFN) tariff rate of 6.1 percent. The quota is set to rise to 70,000 vehicles annually by 2030, with the condition that 50 percent of them are priced at 35,000 Canadian dollars (€22,000) or less. Permits for the quota are issued on a first-come, first-served basis.

As the measure only came into effect on 1 March 2026, it is too early to assess its efficiency; however, it signals openness from the Chinese side to negotiate, limiting the negative impact of its overcapacity on its trade partners in exchange for some market access.

The fundamental problem faced by the EU industry is the need to adjust to a new competitive environment, with Chinese producers assuming a growing share of global automotive sales. This calls for a remedy in the form of a time-limited safeguard linked to the efforts made by the industry to adjust. One option for the EU would be to rely on the use of autonomous instruments, which could combine the countervailing duties currently applied to EVs and a safeguard measure in view of the rapid increase of imports of hybrid vehicles, mostly originating from China. A second option would be the negotiation of an export-restraint agreement with China, though this would have to be done carefully to align with WTO rules[17]. Whichever option is chosen, clear time limits for any protective measures must be established.

5.3 The quartz crisis and the China shock 1.0

In the late 1960s, Swiss firms dominated global watchmaking. The commercialisation of quartz clocks and watches by Japanese and American producers from 1969 onwards rendered the Swiss advantage, based on clockwork mechanisms in watches, obsolete within a decade. Employment in watchmaking in Switzerland fell from roughly 90,000 in 1970 to under 30,000 by the mid-1980s (about 2 percent of Swiss jobs were destroyed).

Switzerland imposed no tariffs or import restrictions. Adjustment came instead through consolidation and repositioning, notably the 1983 merger of the two insolvent conglomerates ASUAG and SSIH into what became the Swatch Group, adoption of the quartz technology at the low end of the market and the reinvention of mechanical watchmaking as a luxury export industry. The industry that emerged employed fewer

16 *CBC*, 'Canada reaches tariff-quota deal with China on EVs, canola', 15 January 2026, https://www.cbc.ca/news/politics/carney-meeting-xi-china-9.7047880.

17 The 1995 WTO Agreement on Safeguards includes a very broad prohibition on voluntary export restraints, orderly marketing arrangements or any similar export or import measures (Article 11b). However, not all export-restraint agreements are prohibited under WTO law. Specifically, Article 18 of the Subsidies Agreement says an alternative to the application of a countervailing duty can take the form not only of a price undertaking but also of an undertaking by which *"the government of the exporting member agrees to eliminate or limit the subsidy or take other measures concerning its effects"*.

people but was more profitable than what it replaced. Aggregate Swiss employment was not seriously set back (Weder di Mauro and Zettelmeyer, 2026).

In contrast, the surge in Chinese manufacturing imports into the United States after China's 2001 accession to the WTO reduced US manufacturing employment as a share of the working-age population by about 1.6 percentage points between 2001 and 2019 (Autor *et al*, 2021). Aggregate gains from cheaper imports were positive but small, while the losses were concentrated in import-competing local labour markets. These still had not recovered by 2019: The political consequences have included polarisation and a durable protectionist turn in US trade policy (Autor *et al*, 2021; Weder di Mauro and Zettelmeyer, 2026).

These examples show that laissez-faire is not costless: unmanaged, spatially concentrated decline produces persistent scarring and a backlash that ultimately delivers worse, more protectionist policy. But restructuring and trade-shock management can restore competitiveness.

6 An implicit pact financed by consumers and taxpayers

The shift in EU automotive policy set out in the 2025 automotive package (section 4) amounts to an implicit pact: the EU will shield European producers from the most acute external pressures, and in exchange, producers will Europeanise their value chains through local-content requirements, lead-market provisions and conditions on foreign investment. Consumers and taxpayers will bear the costs of this pact through higher vehicle prices (Box 2), demand subsidies, production subsidies and revenue foregone because of reduced competitive pressure on incumbents (Zettelmeyer *et al*, 2023). Since the focus is on protecting the domestic market, the impact on external competitiveness (through increased production costs for EU manufacturers because of the more stringent requirements) is not taken into account.

The pact includes two fundamental trade-offs – one short-term, one long-term – that must be confronted in policy design.

Protection and local-content requirements raise the cost of electric vehicles.

The short-term trade-off is between the speed of a clean transition versus economic security. Protection and local-content requirements raise the cost of EVs. Each 'Made in EU' requirement for batteries, green steel and other components adds a per-vehicle cost premium that falls disproportionately on entry-level segments and on less-wealthy consumers. The EU will struggle to accelerate the transition to zero-emission vehicles while simultaneously requiring every component to be sourced from higher-cost European suppliers. The cheapest and fastest path to vehicle electrification runs through competitive global supply chains, while the most resilient path runs through domestic ones. The automotive package attempts to do both at once, with the costs largely hidden from view.

More generally, it is uncertain how much weight should be given to resilience as an

argument for supporting the EU automotive industry. One view is that the underlying concern about relying on Chinese EV imports may be less about resilience than about the political economy of the transition: the industry's lobbying weight and the risk that displaced workers turn against the green transition. An alternative view sees this as understating the argument, pointing instead to cybersecurity risks – including the possibility that connected vehicles could be remotely disabled – as a distinct economic security and public safety concern.

The long-term trade-off is between competitiveness and innovation versus resilience. When competitive threats from abroad are blunted and regulatory pressure is reduced, producers have less reason to accelerate electrification, invest in autonomous-driving software or close the cost gap with Chinese rivals. Local-content requirements and FDI restrictions could increase the EU industry's focus on the protected domestic market at the expense of the global market – historically the engine of its profitability – and new, developing markets where demand is expected to increase.

The weakening of the 2035 vehicle CO_2 target (Box 1), the shift to 'Made in EU' for consumer subsidy schemes and the accelerating accumulation of new policy instruments are eroding the long-term policy stability that investors need to commit to multi-billion-euro battery and EV plants. Regulatory unpredictability is itself a competitiveness cost.

There are also distributional effects. The benefits of the implicit pact between the EU and its car industry are concentrated among established carmakers and their first-tier suppliers. The costs are spread across consumers and taxpayers. The subsidy race favours countries with the greatest fiscal space, notably Germany and France, at the expense of smaller and less wealthy countries. The collapse in 2024 of Swedish battery maker Northvolt (Tagliapietra and Trasi, 2024) shows the limit: even very large subsidies cannot substitute for a viable business case (Zettelmeyer *et al*, 2023).

Box 2: Estimated cost impact on EVs

The combined effect of the December 2025 Automotive Package on costs can be illustrated at the level of an individual EV. A low-carbon steel requirement of the kind discussed in the review of the 2035 CO2 emission standards (see Box 1) would add around €200 per vehicle (Negri and Bieker, 2026). A binding EU-origin requirement on battery cells would raise battery costs from €50/kWh to €85/kWh (BloombergNEF, 2024). Considering an average battery size of 60 kWh for new BEVs , this represents a total price increase of around €2,100 per EV (a cost increase of €35/kWh x 60 kWh).

The Commission estimates that simplified type approval, proposed as part of the automotive package, would cut costs for manufacturers by over €700 million annually. With 11.4 million vehicles produced annually in the EU, this would result in cost savings of €61 per vehicle.

It should be noted that these costs do not arise individually but cumulatively, and fall disproportionately on entry-level segments, where price elasticity is greatest.

7 Industrial and trade policy recommendations for the EU automotive sector

The risk for EU carmakers is not collapse but erosion of export markets, technological leadership and supplier networks

European automotive as output is down 19 percent since 2019, Chinese competitors are winning share at home and in third markets, and the US market is closing. But the sector remains a large net exporter, records historically high profit margins and continues to invest around €3 billion per quarter in new battery and EV production capacity. The sectoral risk is not collapse but erosion of export markets, technological leadership and supplier networks. For this, the EU needs an adjustment strategy rather than a shield against change.

The December 2025 Automotive Package will not resolve the two trade-offs identified in section 6 – between the speed of the clean transition and resilience, and between competitiveness and resilience. Repeated revisions to the 2035 CO_2 target and the retroactive redesign of subsidy schemes compound the problem by undermining the regulatory predictability that long-term investment requires. A more effective EU automotive industrial policy must confront these trade-offs.

A cost-efficient European architecture for the EV transition should be targeted at well-identified market failures, calibrated to documented distortions, be temporary and should follow the economic principles of preserving competitive pressure on incumbents, welcoming FDI that brings technology and avoiding the fragmentation of the single market through uncoordinated national subsidy races (Rodrik, 2024).

In the face of Chinese competition, the introduction of countervailing duties against Chinese exports raises the question whether a negotiated approach, under which China would limit its exports, might be beneficial. A negotiated solution could reduce trade tensions with China. It should be strictly temporary and conditional on the industry making an adjustment effort. However, the legality under WTO rules of a quantitative export restraint would be questionable and would increase the profitability of Chinese exporters able to benefit from quota rents. It should be noted however that there is scope for a flexible interpretation of WTO rules under which an export restraint agreement can be an alternative to the application of countervailing duties (see section 5.2).

In the short run, the rapid increase in EU imports of Chinese PHEVs relative to BEVs (Figure 7) is problematic because it undercuts the effectiveness of tariffs for fair competition and promotes sales of more polluting vehicles. Trade protection should be equalised between PHEV and BEV models. In practice, this could be done either through a negotiated agreement with China or by launching a safeguard investigation.

Domestically, EU policymakers should:

Simplify and consolidate the EU automotive policy architecture. The complexity and extent of EU law that impacts the automotive sector (see Table A1 in the appendix)

imposes compliance costs on manufacturers, creates inconsistencies between instruments and makes it harder for consumers and investors to navigate the policy landscape. Most recently, the Commission has sought to apply targeted exemptions and, on vehicle carbon emissions, deregulate rather than simplify (section 4.1). The Commission should publish a consolidated automotive regulatory map.

Avoid local-content requirements. They lack a transparent cost-benefit analysis and risk being used as a shield rather than a targeted remedy complemented by a competitiveness-enhancing strategy. The IAA introduces capacity and EU-origin content requirements without a clear view of the per-vehicle cost they imply, both for domestic sales and for exports (section 4.1). Implementing sustainability and resilience criteria already in place would be a better and easier solution. Each protective measure should be designed based on a clear cost-benefit assessment and contain a sunset clause tied to industry adjustment to external competition.

Subsidies and protection from Chinese competition are insufficient to make the EU automotive value chain competitive

Focus on improving the structural conditions that will boost EU competitiveness. Subsidies and protection from Chinese competition are insufficient to make the EU automotive value chain competitive. Labour-cost competitiveness, energy costs, skills, deployment of charging infrastructure, battery recycling and a clear regulatory framework for autonomous driving are the best ways to deliver economy-wide benefits that improve the long-run competitiveness of the EU automotive industry.

Externally, trade policy should be the focus:

Inward FDI should be seen as an opportunity to catch-up. Foreign-source greenfield investment in batteries and components can transfer technology and shorten the time needed for European industry to catch up. Joint-venture and technology-transfer conditions attached to such investment should be evaluated case by case, balancing genuine dependency risks against technology-transfer benefits. The IAA should provide sufficient flexibility for such a case-by-case assessment, while retaining incentives for investments that bring sufficient value added to the European economy. Inward FDI should complement EU capacity, not substitute for it.

Complement autonomous trade instruments with a negotiated sectoral arrangement with China. The EU must choose how it manages competition from China. It could rely exclusively on its autonomous instruments achieving economic security: trade-defence duties including possible new safeguards investigation, the Foreign Subsidies Regulation (FSR; Regulation (EU) 2022/2560) and the local-content and FDI criteria in the IAA. This route has the advantage of being fully under the control of EU authorities, but can result in increased trade tensions and Chinese investment in Europe being deterred.

On the other hand, a negotiated route would seek a time-limited sectoral agreement with China. Such an agreement could combine: Chinese export quotas covering both BEVs and plug-in hybrids, equipped with a snapback mechanism if breached; commonly agreed principles on inward FDI, including access to domestic incentives conditional on a sufficient value-added threshold; a Chinese commitment not to apply export restrictions on critical EV-value-chain inputs; and a standstill on new EU trade-defence and FSR investigations in the car sector while the agreement is in force. The EU pushed

to start such discussions in September 2026 with a reported request to China to limit exports of hybrid EVs to the bloc[18].

A sectoral agreement would buy the European industry a predictable adjustment window while using cheap Chinese EV imports and FDI to speed up the European transition and gain know-how. A sectoral agreement could complement the IAA, avoiding elements that are not in line with the EU's international obligations. Such an agreement should only be considered if it is strictly temporary and thus maintains the incentive for EU producers to invest to close the competitiveness gap. Thus, any such arrangement should progressively increase the size of the quota and be limited to a maximum duration agreed by both sides. This could correspond to the five-year expiry review of countervailing duties and be subject to a mid-term review on progress made by the industry to gain competitiveness in the production of affordable EVs. Consumption subsidies should also be time limited.

New EU-China Trade and Investment Consultations, through which Brussels and Beijing intend to address exactly this kind of friction over market-access and localisation measures could be a natural institutional vehicle for pursuing the negotiated route. A first consultation took place in June 2026[19]. However, if no agreement can be reached with China, the EU should be ready to consider additional WTO-consistent instruments in response to the rapid increase of imports of PHEVs. Safeguards are a fully legitimate under WTO rules and any coercive threat from China should meet a firm response.

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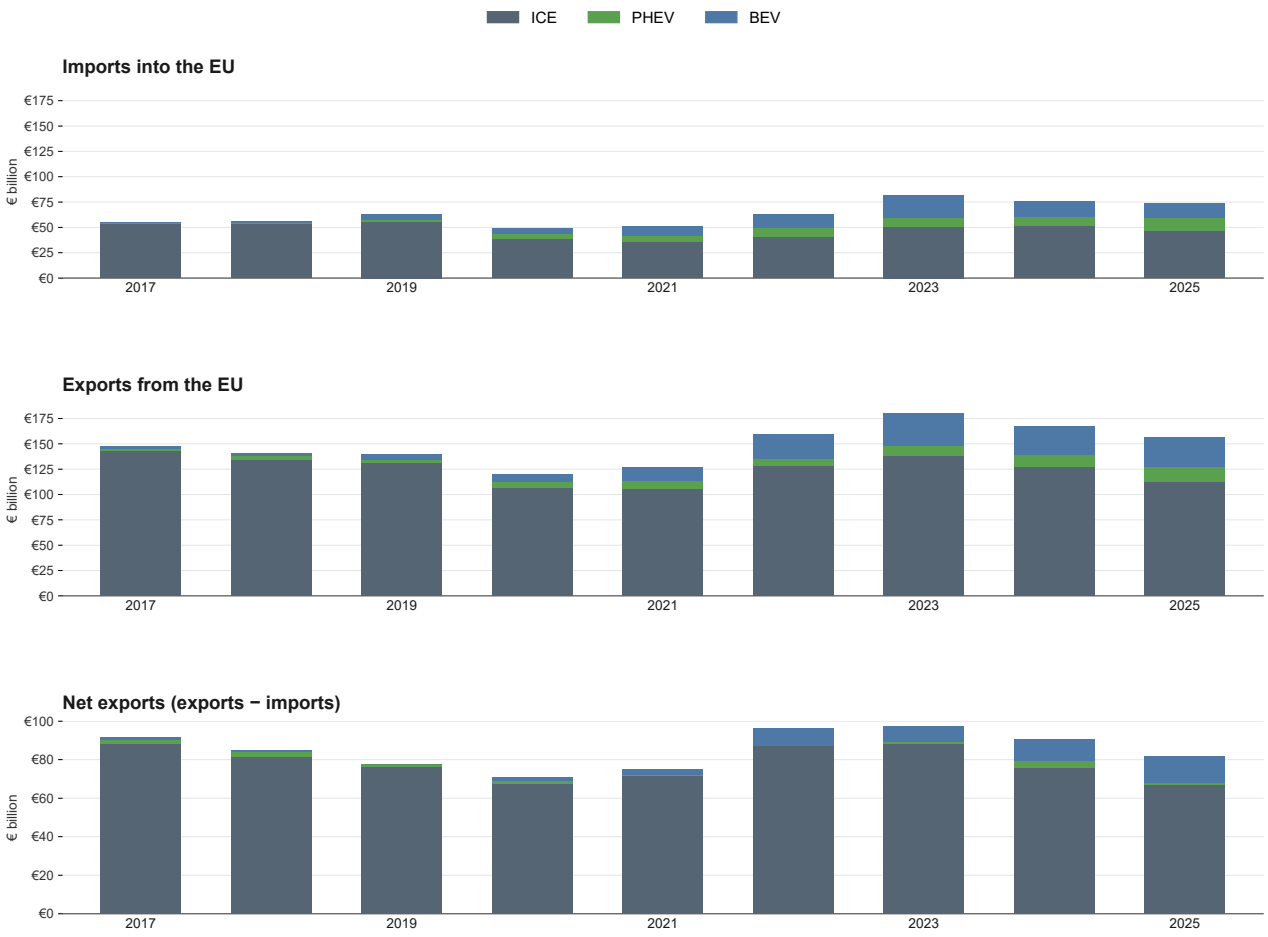
Appendix

Figure A1: Extra EU automobile trade by powertrain

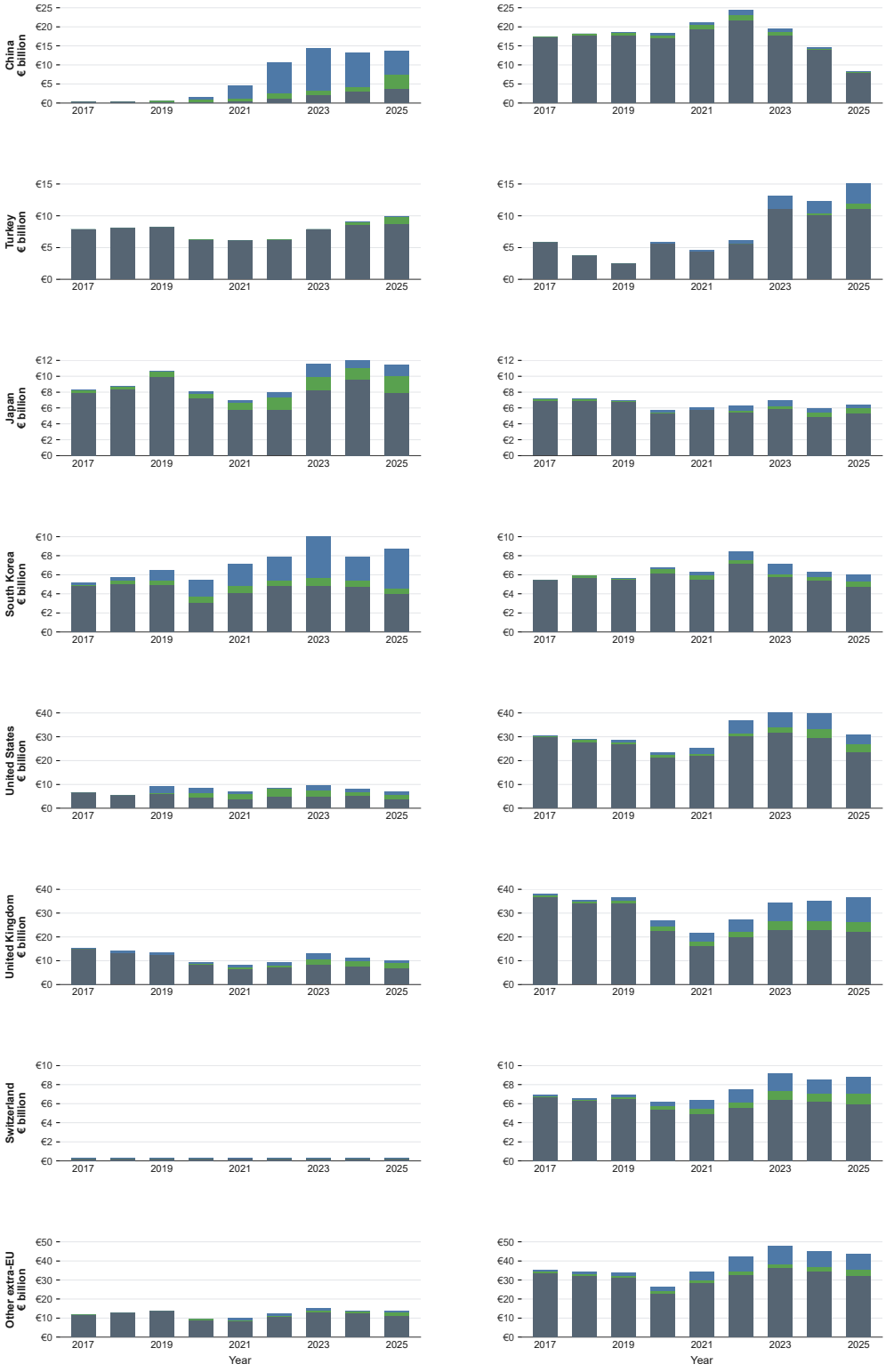


Source: Eurostat.

Figure A2: Extra EU automobile trade by powertrain and partner

Source: Eurostat.

Figure A3: Extra EU trade by partner and powertrain



Source: Eurostat.

Table A1: Main European Commission automotive-policy-related initiatives, 2019-2026

Domain	Instrument	Type	Year	Status*	Key automotive relevance
Strategic	Competitiveness Compass	Communication	2025	**In force**	Frames industrial policy around resilience and open strategic autonomy
	Clean Industrial Deal	Communication	2025	**In force**	Parent framework; mandates sectoral follow-up including automotive
	Automotive Action Plan	Communication	2025	**In force**	Central roadmap; triggers Battery Booster, CO_2 review, trade review
Green Legislation	CO2 2035 Review	Legislative proposal	2025	**Proposed**	Softens 2035 phase-out to 90 percent; introduces 'Made in EU' super credits for EVs
	Automotive Omnibus	Legislative proposal	2026	**Proposed**	Simplifies type-approval; creates Small Affordable Car category
	AFIR	Regulation	2023	**In force**	Mandatory EV charging infrastructure targets along TEN-T corridors
	ELV Regulation	Regulation	2024	**In force**	End-of-life vehicle rules; recycled content mandates for new vehicles
Industrial	Industrial Accelerator Act	Legislative proposal	2026	**Proposed**	EU-origin content rules; FDI conditionalities; low-carbon procurement
	Net-Zero Industry Act (NZIA)	Regulation	2024	**In force**	Sustainability/resilience criteria (Art. 28) for public support schemes
	Critical Raw Materials Act	Regulation	2024	**In force**	Strategic material benchmarks; battery supply chain resilience
	Battery Booster Package	Policy package	2025	**In force**	Dedicated Innovation Fund window; demand aggregation for batteries
	Batteries Regulation	Regulation	2023	**In force**	Due diligence, carbon footprint and recycled content rules for EV batteries
Trade	Anti-subsidy Duties (CVD)	Trade defence measure	2024	**In force**	17 percent to 35 percent duties on Chinese-built EVs (BYD, Geely, SAIC)
	Foreign Subsidies Reg. (FSR)	Regulation	2023	**In force**	Screens foreign-subsidised bids in public procurement and mergers and acquisitions
	Carbon border adjustment mechanism (CBAM)	Regulation	2023	**Planned**	Carbon border adjustment; extension to vehicles planned for 2028
Funding	InvestEU/EIB	Funding instrument	2021	**In force**	Debt and equity financing for EV and battery manufacturing investment
	Innovation Fund	Funding instrument	2020	**In force**	Grants for low-carbon manufacturing; dedicated automotive window 2025
	CISAF	State aid framework	2024	**In force**	Harmonised state aid rules for clean industrial investment

Source: Bruegel based on EUR-Lex. Note: Current as of May 2026. * at time of writing.

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