In France, in 2024, the change in the ecological bonus and the introduction of customs barriers by the European Union led to a collapse in imports of Chinese electric vehicles, to the benefit of Germany

Since 2022, Chinese electric vehicle exports have risen sharply. The world's major economies are adapting their strategies in response to this dynamic trend. In the United States, due to the government's efforts to boost domestic production through a combination of subsidies and tariff protection, Chinese imports of electric vehicles are very low. In the UK, on the other hand, the prioritisation of growing environmental commitments has promoted greater openness to Chinese vehicle imports. In the European Union, Chinese vehicle imports soared in 2023, prompting the tightening of tariffs in European regulations from mid-2024 onwards in order to protect the European automotive industry. Imports from China fell sharply in the summer following this measure, as anticipated in the literature, before bouncing back slightly in the autumn.

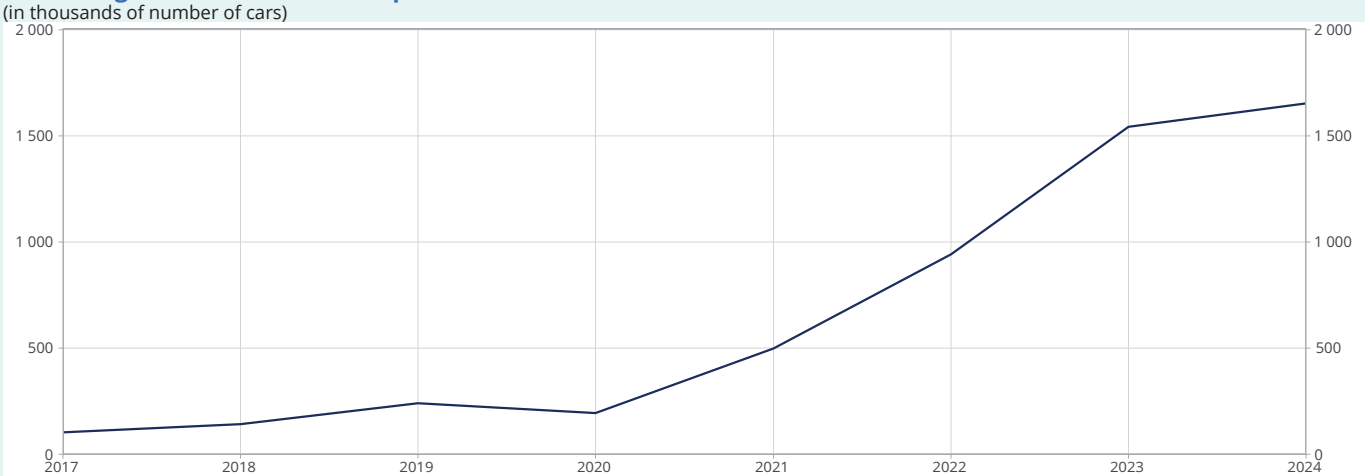
In France, electric vehicle imports have also been affected by legislative changes concerning subsidies for electric vehicle purchases. Since October 2023, the environmental bonus has been dependent on an environmental score that takes account of the place of assembly, effectively excluding vehicles from China. After increasing significantly in 2023, Chinese vehicle imports fell back very sharply in 2024. However, this downturn did not benefit the domestic industry, whose output dropped slightly over the year and, so far, the decline in imports of vehicles assembled in China has been mainly reflected in a sharp rise in imports from Germany.

Raphaële Adjerad, Mathilde Niay

From 2021 to 2024, Chinese electric vehicle exports increased significantly

The electric vehicle market is growing rapidly: according to the ►**International energy agency** (IEA, 2024), 14 million electric vehicles were sold worldwide in 2023, almost six times more than in 2018. Almost one in five vehicles sold was electric, compared with just 2% in 2018. This rapid growth is primarily due to the Chinese market: 60% of electric vehicles sold worldwide are purchased in China, and electric vehicles will account for almost half of the Chinese car market by 2024, according to the Chinese Manufacturers' Federation. As well as the leading market, China has rapidly become the leading producer of electric vehicles, and its exports of electric vehicles have risen sharply from 240,000 in 2019 to almost 1.5 million in 2023 (►**Figure 1**). However, these exports slowed in 2024 (+7% in 2024, compared with +103% on average in 2021, 2022 and 2023). This success is partly due to a proactive industrial policy that favoured electric vehicles from an early stage, and partly to an aggressive sales policy, with export prices falling back sharply in China from October 2022.

►1. Change in electric vehicle exports from China
(in thousands of number of cars)



Last point: 2024.
Note: the vehicles considered are those designed primarily for passenger transport, equipped with an electric propulsion motor.
How to read it: in 2024, 1,653,000 Chinese electric vehicles were exported.
Source: General Administration of Customs of the People's Republic of China, INSEE calculations.

The United States continues to pursue an industrial protection strategy

In the United States, the share of electric vehicles remained low in 2023 (around 10% of vehicles sold according to the IEA) but increased rapidly. Since 2018, trade tensions with China have contributed to reshaping the electric vehicle market in the United States. Under the first Trump administration (2016-2020), tariffs were raised in order to significantly curb the growth of Chinese exports in several sectors. This policy promoted a decoupling phenomenon, i.e. a reduction in the interdependence between the two economies through the diversification of sources of supply (►**IMF, 2023**), particularly in the automotive sector. This led to a drop in imports of electric vehicles and the components essential to their production (rare metals, batteries), directly from China.

Starting in 2021, the new Biden administration retained these measures before stepping up the decoupling process from 2022 onwards via the Inflation Reduction Act (IRA). This scheme set out to encourage domestic production and restrict imports by making the granting of subsidies and tax credits dependent on the origin of the materials used (purchase and assembly in the United States).

Over the years, these trade tensions have led to a reorientation of import flows, with China gradually being replaced by other trading partners, including Mexico. Finally, imports of Chinese electric vehicles into the United States are low. Despite soaring demand, US imports of Chinese electric vehicles fell by 8% between the 2020-2022 and 2023-2024 averages, while total imports of these products almost quadrupled (►**Figure 2**). The share of Chinese vehicles in all imported electric vehicles has been marginal since the end of 2020: in 2023, it fluctuated between 0% and 4% depending on the month, and dropped to less than 1% in 2024. At the same time, 45% of electric vehicle imports into the United States originated from Mexico in 2024, compared with 2% in 2019, and Germany's market share also increased over the period, rising from 22% of imports in 2019 to 31% in 2024.

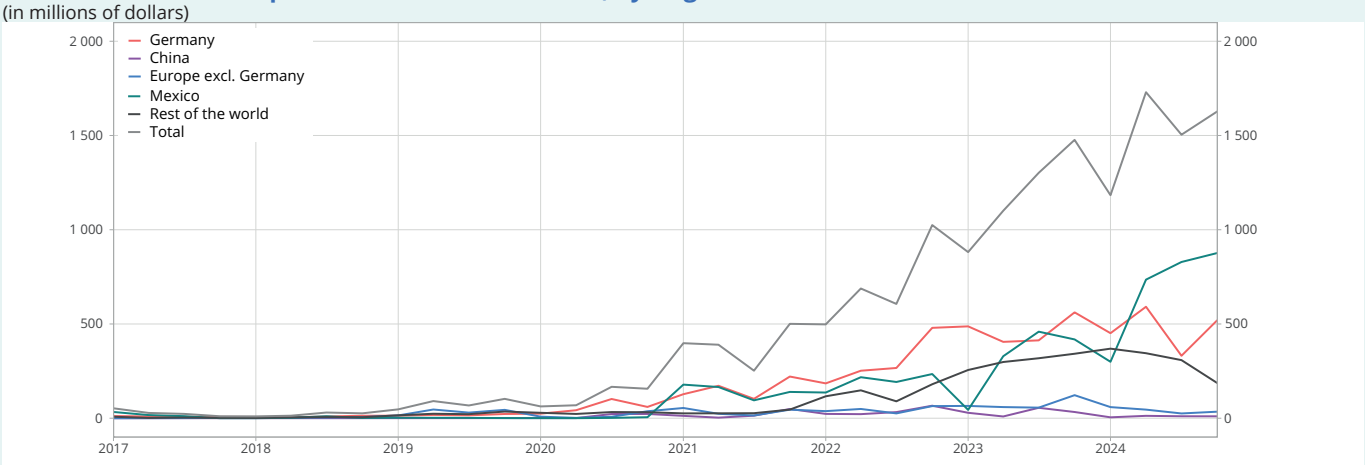
The Biden administration implemented new measures against Chinese vehicles in September 2024, increasing customs duties from 25% to 100%, although this seemed a symbolic measure given that imports from China accounted for such a small proportion overall. The players most likely to be affected by these measures could ultimately be US producers who depend on Chinese batteries: a disruption to Chinese battery exports would be likely to have major impacts on the entire supply chain (►**Cheng L. and al., 2024**).

In the United Kingdom, the prioritisation of environmental commitments is reflected in increasing openness to Chinese imports

In the UK, electric vehicles accounted for around 20% of registrations in 2023, but the country has adopted a radically different strategy to the United States and the European Union as far as imports are concerned, keeping customs duties unchanged, particularly in relation to China. This decision is justified by the priority focus on its ambitious environmental policy. The *Zero Emission Vehicle Mandate*, which came into force at the beginning of 2024, requires car manufacturers to gradually increase the proportion of electric vehicles in new car registrations (increasing to 80% by 2030 and 100% by 2035). As a result, the share of Chinese electric vehicle imports in total UK electric vehicle imports has risen from an average of 1% in 2020 to around 40% between 2021 and 2023 (►**Figure 3**). Germany has also benefited significantly from the rise in electric vehicle sales, and now accounts for a larger share of electric vehicle imports than China (50% by 2024), with other countries occupying only a marginal share of the UK market.

►2. Electric vehicle imports into the United States, by origin

(in millions of dollars)



Last point: Q4 2024.
Note: the change in electric vehicle imports is shown as a quarterly average from 2017 to 2024.
How to read it: in Q4 2024, imports of German electric vehicles into the United States averaged $520 million.
Source: UN Comtrade.

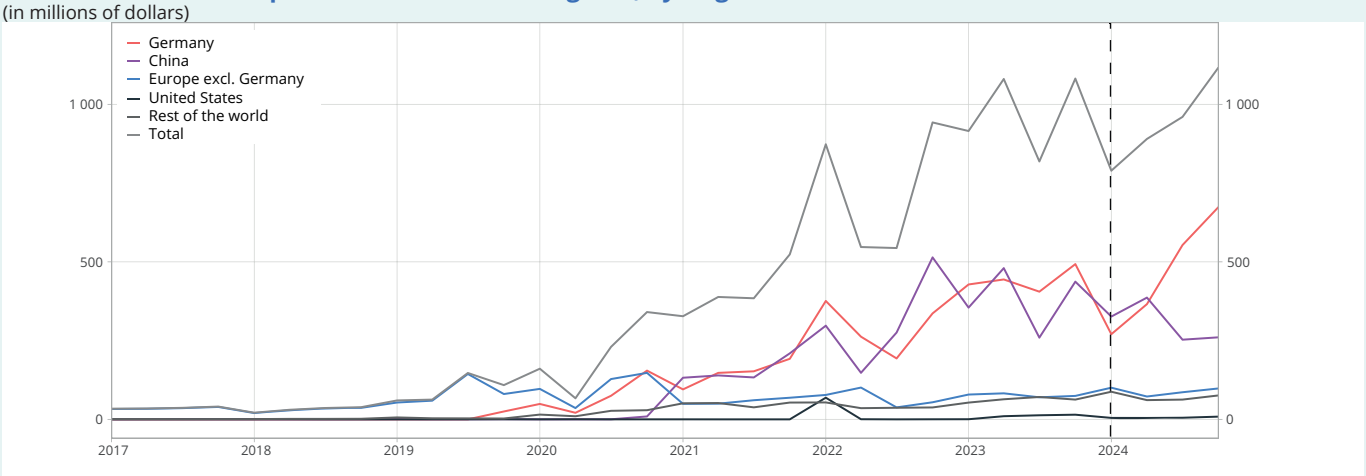
The European Union has stepped up its efforts to curb Chinese imports of electric vehicles in favour of domestic production

In the European Union, the market share of rechargeable battery-powered vehicles was around 20% in 2023, as in 2024. In March 2023, as part of the "zero-emissions" strategy, the European Parliament adopted a ban on the sale of new internal-combustion-engine powered vehicles by 2035, boosting demand in the sector. Sales of Chinese electric vehicles have benefited from this growing demand: imports from China accounted for an average of 68% of EU imports of electric vehicles between 2022 and 2024, compared with 2% in 2019 (►Figure 4). In one year, the share of imports of Chinese electric vehicles even rose from 60% in mid-2023 to 74% in mid-2024.

In July 2024, the European Union introduced a temporary increase in customs duties on Chinese electric vehicles. This decision came as part of the investigation into unfair competition in this sector, launched in October 2023 by the European Commission, which found that the value chain for electric vehicles in China benefited from unfair subsidies. The provisional measure consisted of customs duties varying between 17% and 38%, depending on the degree of cooperation from manufacturers. These customs duties were in addition to the existing 10%. Following the introduction of these provisional tariffs in July, Chinese imports tumbled year-on-year (-11% year on year in H2 2024). The European investigation concluded that subsidies did exist, and definitive countervailing duties on vehicles imported from China (up to 35%) were subsequently introduced in October 2024.

►3. Electric vehicle imports into the United Kingdom, by origin

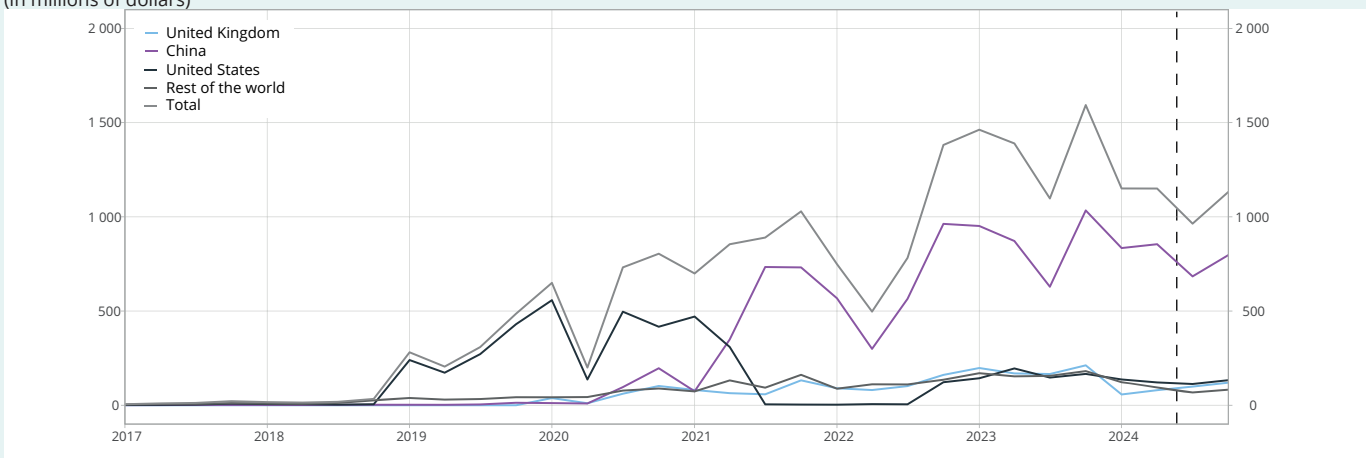
(in millions of dollars)



Last point: Q4 2024.
Note: quarterly average from 2017 to 2024. The vertical bar corresponds to the date of implementation of the *Zero Emission Vehicle mandate* (January 2024).
How to read it: in Q3 2024, imports of German electric vehicles into the UK averaged $553 million.
Source: UN Comtrade.

►4. Electric vehicle imports into the European Union, by origin

(in millions of dollars)



Last point: Q4 2024 (ovgh end November).
Note: quarterly average based on monthly data from 2017 to 2024. The vertical bar corresponds to the date of imposition of provisional countervailing duties on China (July 2024). Intra-EU flows are not included in the data.
How to read it: in Q3 2024, Chinese electric vehicle imports into the European Union averaged $684 million.
Source: UN Comtrade.

The literature predicts a drop in electric vehicle imports from China to Europe following the introduction of tariffs...

According to simulations by the Kiel Institute for the World Economy (►**Hinz J. and al., 2024**), a 20% increase in European tariffs on Chinese electric vehicles would eventually lead to a 25% drop in imports from China, corresponding to around 125,000 vehicles (2024). Part of this decline would probably be offset by an increase in European production, but also by the redirection of European exports of electric vehicles to serve domestic European demand. This would result in higher prices for consumers, since European production costs are higher than those in China. More indirectly, European exports to China would also be likely to edge down as a result of reduced Chinese demand for European inputs used specifically in the production of electric vehicles in the European Union.

The US International Trade Commission (2024) has also simulated the *ex ante* impact of customs duties based on scenarios in which all the regions considered in their study (United States, European Union, Japan, South Korea and the rest of the world) increased customs duties on Chinese electric vehicles by 20%. According to this scenario, Chinese exports of electric vehicles to the European Union would be expected to fall by 53%, with intra-European flows likely to increase by 20%.

In this regard, ►**Mayer and al. (2024)** point out that despite the recent emergence of new Chinese makes as major players in the automotive industry in Europe, the "historic" non-Chinese companies continue to account for a large proportion of European imports. Local sales also remain significant: in Europe, over 80% of sales concern vehicles produced on the continent.

... which could lead Chinese manufacturers to establish a local presence

In addition, avoidance strategies can be used to overcome this type of barrier. ►**Mayer and al. (2024)** cite the historical example of the expansion of Japanese and Korean makes in the 2000s, which invested heavily in local factories following the introduction of protectionist policies in the United States. Chinese enterprises could therefore develop this type of strategy. For example, to enable it to carry out local production, the Chinese car manufacturer BYD has invested in its first European factory in Szgeded, Hungary, which is scheduled to open in Q2 2025. At the same time, BYD has announced a major new investment in Turkey, which benefits from a free-trade agreement with the European Union, concerning a plant which is due to open before the end of 2026. In addition, a growing number of collaboration projects between Chinese and European manufacturers are being undertaken: Stellantis acquired around 20% of the Chinese manufacturer Leapmotor in September 2024 and sells its models (some assembled in Poland) through its own network, while the Chinese manufacturer Geely has acquired a significant stake in the Swedish manufacturer Polestar.

Alongside these strategies, Chinese exporters have diversified their markets into non-EU countries, notably the UK, Eastern Europe and emerging economies, in order to offset the decline in exports to the European Union. In particular, sales of Chinese electric cars in Russia increased by 500% in 2023.

In France, Chinese imports of electric vehicles have fallen back sharply as a result of changes to the environmental bonus scheme, in favour of those from Germany

In France, imports of Chinese electric vehicles started falling sharply at the end of 2023 – well before the introduction of the increased European customs duties. This decline seems largely attributable to changes to the environmental bonus scheme (financial aid to encourage the purchasing or leasing of electric vehicles). In October 2023, an environmental score was introduced to assess the environmental benefits over a vehicle's entire life cycle, including the production of its batteries and the types of energy used. A limited list of eligible vehicles has been published, which effectively excludes vehicles assembled in China from the scheme.

As a result, since December 2023, imports from China have fallen as a proportion of total French imports of electric vehicles (►**Figure 5**). The share of Chinese electric vehicles in total electric vehicle imports, which fluctuated between 40% and 50% in 2023, dropped to 20% in Q2 and Q3 of 2024. Between Q1 2023 and Q2 2024, total imports from China declined by 60%. Over the same period, imports from Germany rose by 80%, reflecting a shift towards vehicles assembled in Germany.

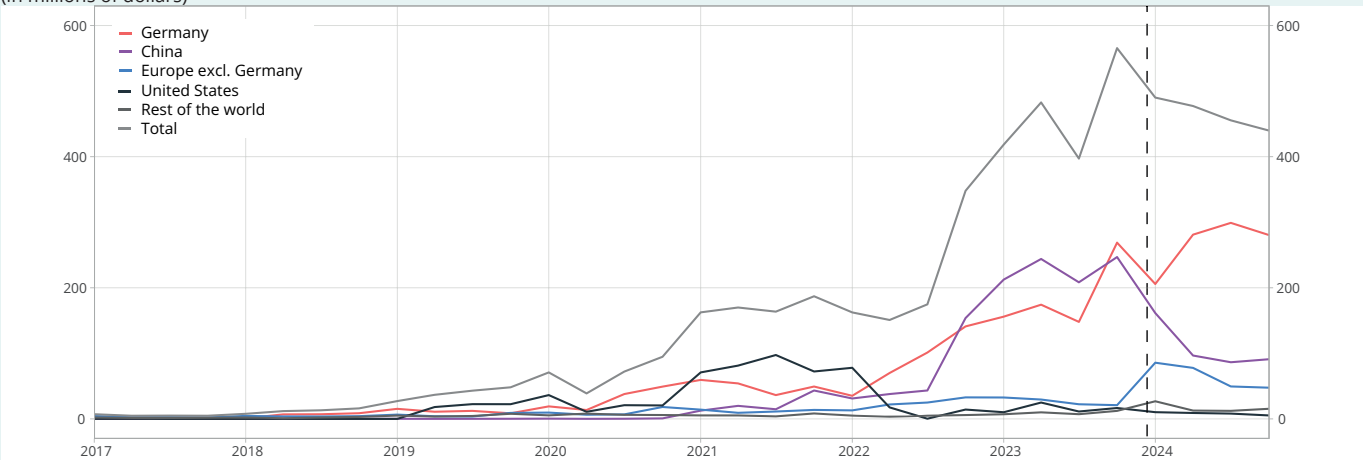
The preceding analysis focuses on the countries in which vehicles are assembled and not on the nationality of the makes. However, assembling in China does not exclusively concern Chinese makes. For example, the Dacia Spring, marketed by the Renault group and assembled in China, has suffered greatly from the loss of the bonus: its sales dropped almost sixfold between 2023 and 2024 (from nearly 30,000 to just over 5,000). Vehicles sold by Tesla (14% of electric vehicles sold in France in 2024) are assembled either in the United States, China or Germany, but only the latter are eligible for the environmental bonus: Tesla has therefore focused on channelling the vehicles assembled in Berlin into the French market. However, the Chinese makes that were already present on the French market have suffered greatly from the changes to the bonus: sales of MG (SAIC Motor) have dropped by around

25%, more than 60% of which concerns electric vehicles alone, with the overall decline being limited by the sharp rise in sales of hybrid vehicles.

Other factors may also have affected electric vehicle imports in 2024, notably the "social leasing" scheme, introduced on 1st January 2024, which gives low-income households access to an electric vehicle for an outlay of €100 per month. This scheme has strongly boosted demand for electric vehicles and may have sustained vehicle imports in spring 2024.

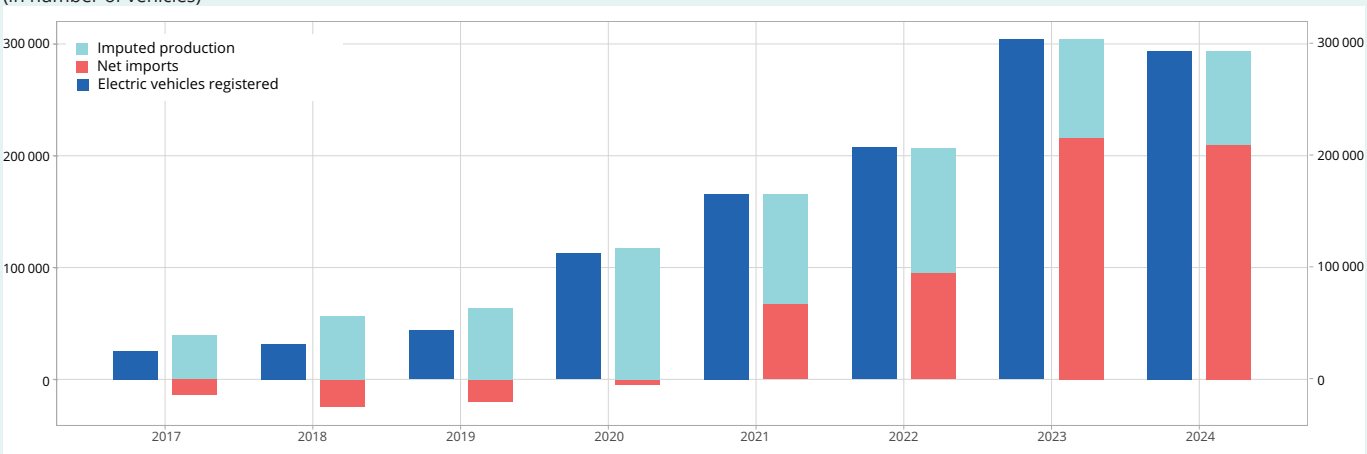
All in all, electric car registrations fell slightly in France in 2024 (-3.4%, ►**Figure 6**). Over the year, domestic production would appear to have fallen by 5%, while net imports fell only slightly (-3%), despite the very sharp decline in purchases of vehicles imported from China. The redefinition of public subsidies for electric vehicle purchases therefore appears to have been to the detriment of vehicles assembled in China, but to the benefit of those assembled in Germany, with no marked effect on production in France at this stage. ●

►5. Electric vehicle imports into France, by origin
(in millions of dollars)



Last point: Q4 2024.
Note: quarterly average based on monthly data from 2017 to 2024. The vertical bar corresponds to the date of introduction of the list of cars eligible for the environmental bonus (December 2023).
How to read it: in Q3 2024, Chinese electric vehicle imports into France averaged €86 million.
Source: DGDDI, monthly customs base.

►6. Change in registrations, production and net imports of electric vehicles
(in number of vehicles)



Last point: 2024.
Note: the imputed production is the difference between registrations and net imports. To enable comparisons with registrations, only the 87038010 product code for new electric vehicles is considered here.
How to read it: en 2024, 293,600 electric vehicles were registered and net imports accounted for around 210,200 vehicles.
Source: DGDDI / DSCECE.

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