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**The impact of China's electric vehicle exports on the European  
automobile market and EU environmental policy**

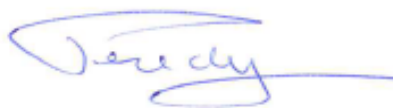
**A kínai elektromos járműexport hatása az európai autópiacra és az  
EU környezetvédelmi politikájára**

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**Abstract:**

With the global automotive market transitioning towards Electric Vehicles (EVs), China has emerged as a major player in this domain. Chinese electric vehicles are entering the European market and having a significant impact on Europe's automotive industry and environmental policies. This article aims to analyze the influence of China's EV exports on the European automotive market and how it is driving changes in the EU's environmental policies.

## **Introduction**

Think of the world with all sound of combustion engines silenced and only the whispering noise of the EVs. It is not an abstract phenomenon but is manifesting in bits and pieces. Everywhere people are getting into environmental awareness, thus EVs' novelty is turning into their imperative.

China has managed to move from behind the scenes to being a key player in the exciting transition. A country with many busy cities and rapid development. China has become the front runner in the electromobility race. It has used its manufacturing expertise and supportive governments of the last decade to position itself as an electric vehicle manufacturer. The first generation of electric vehicles produced by Chinese brands such as BYD, NIO and XPeng, are now becoming a serious alternative to expensive conventional cars.

Indeed, there is a transformation in Europe as well which is on another part of the world. There is an increasing environmental consciousness of its citizens and stricter EU norms for emissions, which has spurred the shift towards green and clean transport. Therefore, the European Market has been warmly receptive to Chinese EVs that have affected both automotive industry and the regional environment policies.

Then, how does the Chinese electric buzz relate with environmentally friendly European roads? The purpose of this research is to explore the way the relationship between Chinese EV's, and Europe is impacting upon EU's environmental policy.

## **1. China's Electric Vehicle Industry:**

The last ten years have been very dynamic for the Chinese EV industry stimulated by the mixed set-up of the government, heavy financial inputs, as well as fast technology development.

### *Government Support*

Indeed, the government of the People Republic of China has greatly contributed towards the growth of the electric vehicle market. The market has been made conducive by policies such as subsidies, tax exemptions, and preferential license.

### *Investments and Infrastructure*

The rapid adoption of this technology has been made easier by the heavy investments in infrastructure and numerous charging points. Additionally, china's supremacy over the international battery market which is one of the important components of EVs has also ensured it's success

### *Market Growth and Manufacturers*

Some of the big players in electric vehicles are BYD, NIO and Xpeng which reside in China. Besides these companies, other international players have also made it possible for China to be among the biggest EV markets.

### *Challenges and Future Prospects*

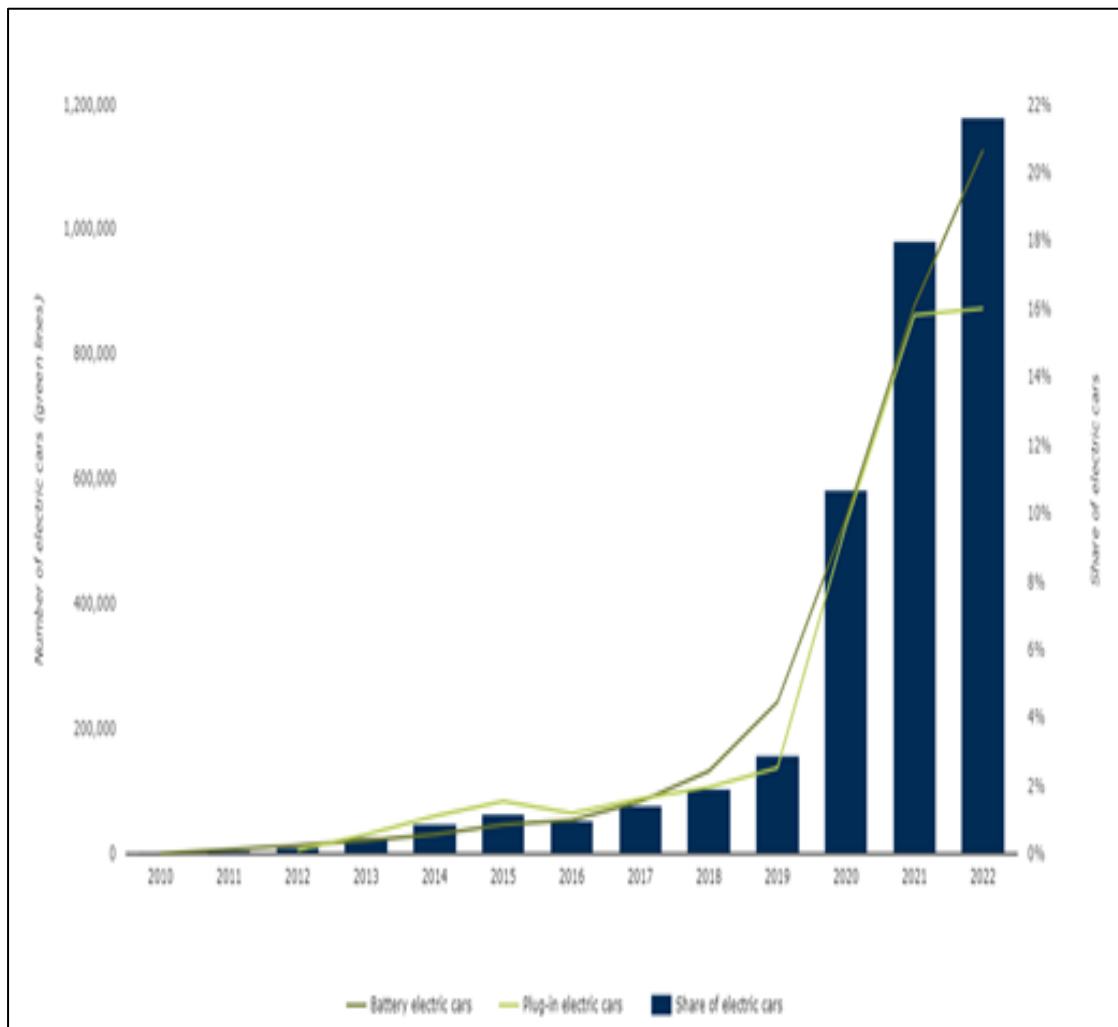
Notwithstanding this phenomenal rate of expansion, there are several issues such as cutbacks in the subsidies and over-heating of the market. However, continued investments in technology and a move towards green transport imply a bright prospect for.

## 2. European Automobile Market and Environmental Policy

### *Current Status of the European Automotive Market*

The transformation age in the EU automobile market. During this period, there has emerged a strong impetus towards using electric vehicles, especially due to negative outcomes brought about by the COVID-19 pandemic. In 2022, two million electric vehicle was sold in Europe which is larger than 4% the entire cars sold. Increased demand is due to consumer interest in green commodities and new EV brands launched by car manufacturers.

Figure 1. New registration of electric cars (EU-27)



Source: European Automobile Manufacturers Association (2022).

### *EU Environmental and Energy Policies*

To realize these goals, the EU should support wider climate and related energy policy objectives. European Green Deal seeks to change the EU to a carbon-neutral in 2050. Automakers also have stringent rules of reduction of car emission in relation to the green deal that seeks a drop of cars by 37.5% between 2021 and 2025. Additionally, the Clean Vehicle Directive enhances purchases of clean vehicles at the state level, while it also stimulates reinforcement of recharging and refueling stations within Europe.

### *Acceptance and Promotion of EVs in Europe*

The policy motivation leads to acceptance while market orientation promotes EU's Electric Vehicles. Several European states have opted for diverse subsidies from various government sectors in support of usage of EV cars. The costs of such incentive reduce the overall cost of the EV which is more favorable than other products in the market. Studies find out that more EVs are available in the market and more charging network encourages public acceptability of the vehicles. The other benefits of driving an electric vehicle are lower costs of operation and fewer emissions. Consequently, people understand that they can save money and emit less on EVs.



### **3. Impact of China's Electric Vehicle Exports on the European Automobile Market**

#### *Market Share and Sales*

Significant shares of the EV market of Europe have been acquired by the Chinese EVs. Some brands like BYD and NIO have really performed selling affordable electric vehicles with superior technologies. They have been successful in competing due to their competitive pricing strategies that have made them gain access into the Europe automotive market. In China, the average retail price of an available electric car is lower than fifty percent of that in both Europe and the US. By June 2023, an electric car would have cost €31,165 (\$33,000) in China, €66,864 (\$70,700) in Europe, and \$68,023 in the US.

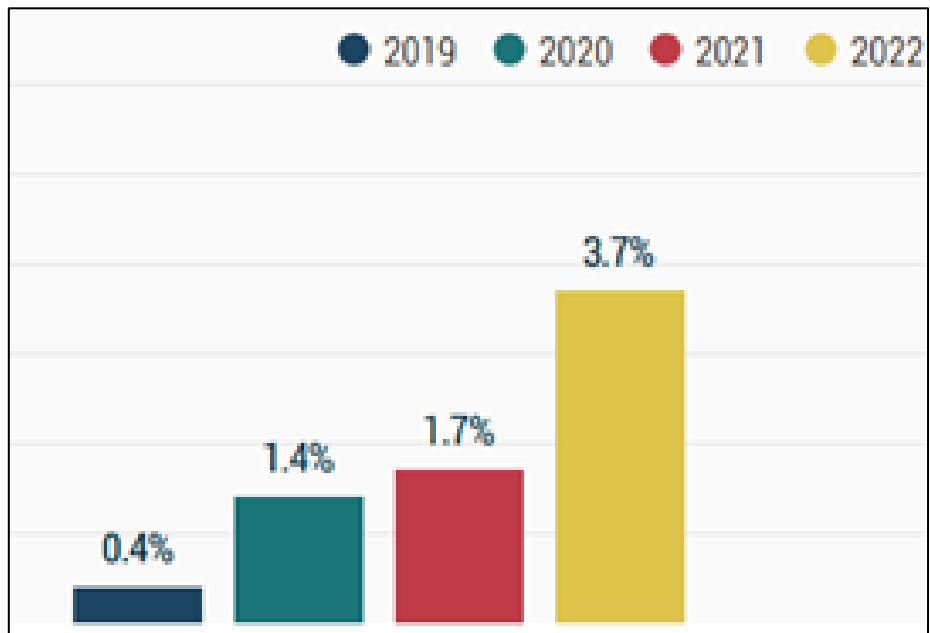
#### *Response of European Automobile Manufacturers*

Consequently, European automobile manufacturers have been reviewing their strategies. Due to the increasing rate of Chinese EV imports into Europe, these strategies need a time upgrade. They have put huge investments in research and development into innovating their products aimed at improving vehicle performance and lowering cost to compete against Chinese counterparts. This response signals the changing dynamics of competitive forces in European automobile market.

#### *Changes in Consumer Preferences:*

Consumer preferences are also dictated on by the entry of Chinese EV's to Europe. Due to the availability of less expensive models produced by Chinese manufacturers, the European customers are forced to make wider choices. Such shift reflects that consumer tastes are flexible, and price and technology dictates customers' purchases.

Figure 2. Shares of Chinese brands in total EU electric car sales



Source: ACEA Fact Sheet EU-China Vehicle trade

## 4. Case Studies

This part is about comparative analysis between Chinese brands, include BYD, NIO, Geely groups, they are all leading Chinese electric vehicle manufacturers, and Volkswagen, a major European automotive company.

### 4.1. BYD: Pioneering Electric Mobility

Based in Shenzhen, China; the BYD Company Ltd was started in 1995 as a Chinese Multinational Conglomerate. BYD was initially a manufacturer of rechargeable battery but transformed to one of the main players in electric vehicles (EVs) market.

*Electric Vehicle (EV) Production:* BYD has grown into a leading producer of electric vehicles, with extensive range of EVs like buses, trucks and passenger cars.

*Production Capacity:* As of 2021, BYD had an annual production capacity for electric vehicles of about 60,000 units in the case of buses and roughly 700,000 units for passenger cars.

*Innovation:* The Chinese car manufacturer, BYD developed Blade Battery in electric vehicles.

*Market Position and EV Sales:* Global Market Position: It is often referred to that BYD is a leading world's manufacturer of electric cars. In these terms, it has always been one of the leading producers of EV in the world.

*EV Sales:* BYD sold around 427,000 vehicles in the year 2020 of which about, 189,000 units were new EVs including pure electric and plug-in hybrid cars.

*Domestic Market:* In China's electric vehicle market, BYD has led the market. The plug-in electric vehicle sales of BYD hit about 80,000 units in September ending this year reflecting a YoY increase by 270%.

*EU Expansion:* BYD's market in Europe is mainly divided into electric buses and electric vehicles. From 2021, BYD has successfully sold their electric buses in most European countries, including the Netherlands, the United Kingdom, Spain, the

Netherlands, etc. BYD has come a long way in the quest of being one of the key players in the European electric bus market. It has been providing electric buses to different European cities as part of its active role in sustainable public transportation.

Table 1. European E-bus Market Leaders (2022)



The image displays data related to the European electric bus (E-bus) market leaders in 2022. The information is elaborated on by Chatrou CME Solutions, based on data from EU27 + UK + ICE + NO + CH.

BYD achieved 19% market share

$$7.8\% \text{ (BYD)} + 11.2\% \text{ (BYD-ADL)} = 19\%$$

*Examples:*

**1. Netherlands:** One of the largest electric bus orders in Europe was placed with BYD in 2019 where they had a contract to deliver 259 electric buses for Netherlands. The buses are the 8.7-meter and 12-meter models and they use a battery known as the Blade Battery from BYD, found in places like Amsterdam, Rotterdam and The Hague.

**2. United Kingdom:** The UK’s electric bus sector has also not been left behind by BYD. For example, as at 2021, BYD has partnered with ADL (Alexander Dennis Limited) and provided London with over 400 electric buses. They have led to an annual reduction of 30,000 tons of CO2.

**3. Spain:** That year, 2020, BYD announced its first-ever fleet of electric buses in Spain

and delivered to Badajoz the 8 units with a range of 12-meter pure electric bus.

**4. Sweden and Norway:** In 2019, BYD entered the Nordic market, handing 11 electric buses to Norway and winning an order of another 18 buses for delivery into Sweden.

**5. Portugal:** The year 2020 saw BYD venture into the Portuguese electric bus market with a pilot project of 8 buses in Coimbra

**6. Hungary:** In 2023, BYD has deployed eleven electric buses in Zalaegerszeg, Hungary, replacing conventional buses and supporting the city's sustainability efforts and BYD's commitment to green public transportation.

These cases underscore the commitment of BYD in widening its presence in the European electric bus market and contribute to Europe Union's goal of cutting down on greenhouse gas emissions and supporting sustainable urban mobility.

In terms of electric vehicles, BYD will enter the EU market in 2023 and launch a number of models. Such as BYD Seal, Dolphin, Atto3, Tang and Han. These models have already been successful in China, with total sales in China surpassing Tesla's in 2023.

#### *Conclusion:*

The expansion of BYD in Europe is a major strategic move towards green transportation options, particularly the field of electric buses. They have penetrated into most of the EU countries this fast ranging from Netherland to Hungary, which highlights their ability to adapt and also wide acceptability for their electric bus technology. By bringing 259 electric buses to the Netherlands, and well over 400 for London, this is a milestone showing how BYD plays an important role in changing urban transportation and reducing CO2 emission across key Europe cities. Blade Battery is one of their novelty technologies that elevate the company to a dependable EV manufacturer. A look at BYD, Thing 013: with successful models from China BYD will soon take on Europe in electric – but this suggests a move into the private vehicle market as well by. BYD's competitive sales numbers in China, ahead of even industry behemoth Tesla provide an indicator for a solid future FOR BYD IN EUROPE. Together, the undertakings show that BYD is not only committed to technology but also

compatible with European Union's conformity to sustainability.

## **4.2. NIO: A Deep Dive**

*Electric Vehicle (EV) Production:* NIO is one of the major producers of electric vehicles in China that was established in 2014 with head offices located at Shanghai. For instance, it has unveiled the ES8, a 7-seater top performance electric SUV and a 5-seater electric SUV.

*Production Capacity:* NIO has a manufacturing centre in Hefei, China as it teams up with JAC Motors. By end of 2021, NIO was targeting a single-shift annual production capacity of 150,000 units which it might double with two shifts.

*Innovation:* Its other major innovation is the patented "Battery as a Service" (BaaS) arrangement that enables customers to lease the battery separately from the vehicle, which lowers electric vehicles' entry price. They also came up with battery swap station that can change a battery of EV in less than 5 minutes. They also offer avant-garde self-driving and an exclusive car Artificial Intelligence (AI) that goes by the name of NOMI.

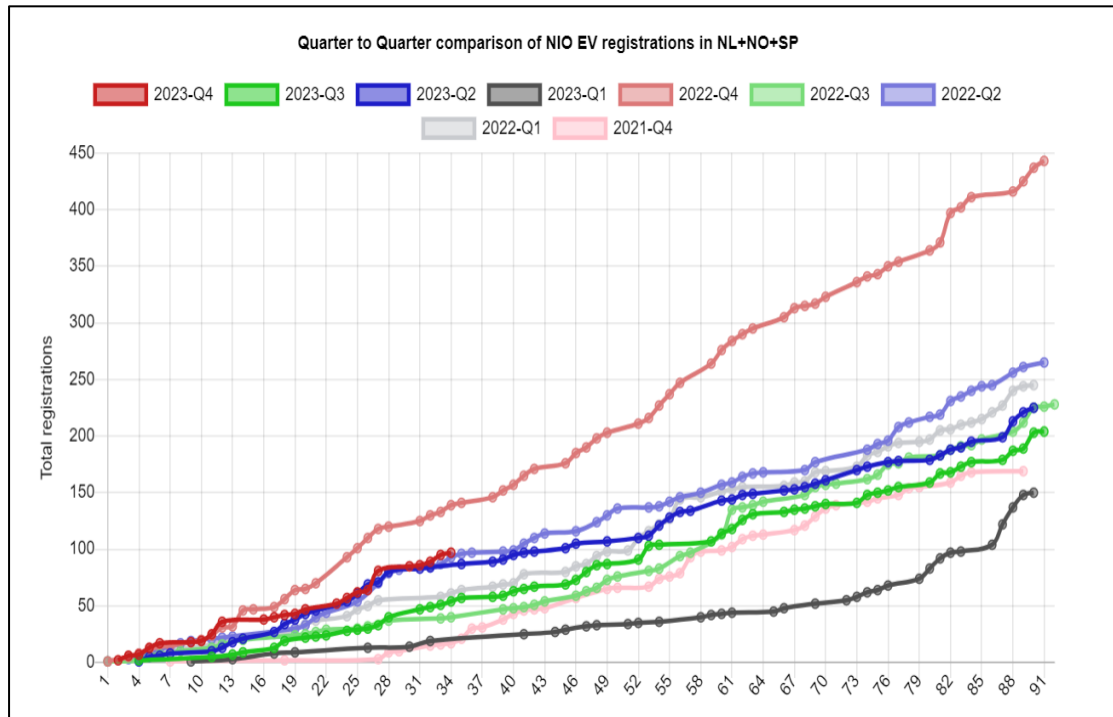
*Market Position:* In 2021, NIO ranked among the largest Electric Vehicle companies in China. By various media outlets, this differentiated its offering from other domestic EV makers helping the company make a premium brand positioning

*EV Sales:* For 2023, NIO recorded the delivery around 3300 vehicles, up by a significant Figure of This year the success trend persisted via more supplies delivered monthly.

*EU Expansion:* In 2021 NIO made its way to the European market by entering Norway. They were hoping to create a full front of their ecosystem that also contained NIO Houses and battery swap stations. In 2022 announced its entry into Germany, the Netherlands, Denmark and Sweden, and introduced the ET7, EL7 and ET5 to European

customers.

Figure 3. Comparison EV registrations



Source: <https://eu-evs.com/CLASSIC/index.html>

NIO EV registrations in the regions NL+NO+SP have witnessed consistent and compounding growth over the observed periods, with 2023-Q4 showcasing a particularly pronounced increase in registrations.

#### 4.3. Geely Group - Entering the European market through joint ventures

Zhejiang Geely Holding Group Co., Ltd referred to as the Geely Group is one of the key players in global automotive industry and with a major focus in electric vehicle (EV). Below is an introduction covering the requested aspects:

*Electric Vehicle (EV) Production:* With its sub-brands, Geely has been active in the expansion of EV market. It introduced its own EV brand, Geometry in 2019 and it also has a stake in Volvo Cars giving it more presence into electric vehicle market. By 2030, Volvo Cars Aspires to Be Fully Electric Car Company, in Line with Geely.”

*Production Capacity:* Geely enjoys economies of scale in view of its robust production

capacity based on many brands. However, to provide specific figures on weather coats's production capacity one would need to refer from the company turn-ups or industry analysis of recent, since this can change within seasons.

*Innovation:* The Chinese firm has been at the forefront of innovation, especially in electric mobility and autonomous driving systems. They have created an international research and development network for new energy technologies, which emphasizes sustainable and intelligent mobility solutions.

*Market Position:* Based on the latest available data, Geely is one of China's best-selling automakers. Other than the strategic partnerships and acquisitions internationally including Volvo Cars and Daimler AG, which increases Geely's presence in international markets.

*EV Sales:* The sales of Geely in the electric vehicle segment have been on a rise especially in China where the government supports EV adoption. These Geely's EVs sales figures can be located in the annual reports or industry sales data.

*EU Expansion:* Inroads are being made by Geely in the European market through its sub-brands, which include the Lynk & Co brand that was launched in Europe in 2020. Besides, the team has already ventured into EV in Europe via its ownership of Volvo Cars and London EV Company (LEVC).

*Lynk & Co:* This brand, a sub-division of Geely Auto Group announced 180127 global sales for the year 2022. In Europe, the firm grew its innovative subscription business model by 145 % to over 18000 members of Lynk & Co in 2022. The brand also pioneered into the Gulf and Asia-Pacific new markets in Kuwait.

*ZEEKR:* ZEEKR, the electric mobility brand of Geely, plans to enter European markets in 2023. ZEEKR achieved a premium Zeekr 001 sales volume of 71,941 units against the target of selling over 70,000 in FY2022

*Volvo Cars:* Geely's Volvo saw its unit sales in 2022 rise to 615,121 vehicles the is to a share of fully electric vehicles that reached up nearly three times to settle at 10.9%.



*Polestar:* In 2022, Polestar, the Swedish electric performance car brand sold a total of 50,000 vehicles globally.

*Geometry:* In addition, in 2022 Geometry decided to penetrate the markets in Eastern Europe as well as South America.

*Smart:* The smart #1 is the first all-electric SUV of the company in a joint venture with Mercedes and began deliveries in China before entering new markets in Europe by 2023.

#### **4.4.Volkswagen Group: A Comprehensive Overview**

*Introduction:* Volkswagen AG is a German automobile manufacturer which was founded in 1937 and its headquarters are located at Wolfsburg, Germany. It is a leading global automobile manufacturer with a variety of vehicles ranging from luxury to budget models.

*Electric Vehicle (EV) Production:* The company has been nimble to transform its cars' electric. The "Accelerate" plan will also focus on having electric vehicles representing over 70% of the European sales by 2030. The ID. suites to include, the ID.3 and ID.4 and others. This is in relation to the buzz about Volkswagen's commitment toward e-mobility.

*Market Position and EV Sales:* Global Market Position: In 2020, Volkswagen was the largest carmaker in the world with approximately 9.3 million vehicles sold globally.

EV Sales: For example, in 2020 Volkswagen managed to sell approximately 106,000 units of the ID. models globally. ID.3 BATTERY PACK, after the first year of sales, was purchased by customers in a complete amount about 56,500 copies.

*EU Expansion:* Volkswagen Group has been an active player in the electric vehicle (EV) market of Europe. Here are some specific data points regarding their EV sales in the region:

##### 1. EV Sales in Europe:

Volkswagen was the European market leader in both B-EVs and PHEVs sold, as of

October 2022.

Volkswagen hopes to reach 10,000 units in December after the registration of 6,158 Volkswagen ID.4 deliveries in October 2022. In 2023, the company expects to sell globally between 200,000 and 300,000 units.

Volkswagen ID.3, on its part, posted 5,507 registrations in October 2022 to have its form return after the recent lowly performance figures.

## 2. Market Position:

About 117,100 new registrations separated Volkswagen Group from Tesla, the automaker for two of Europe's top-selling BEV models.

## 3. European Market Overview:

About 832,700 electric vehicles were sold in Germany and BEVs and PHEVs comprised about 88.6% of new vehicle sales in Norway.

The European plug-in electric vehicle (PEV) market expanded by 15% y/y between 2021 and 2022. As of October 2022, the overall European car market has a plugin vehicle share standing at 23.2% (13.6% for full electrics/BEVs), which kept the year-to-date plugin vehicle (PEV) shares at 21 %//12 percent for BEVs alone).

### *Conclusion:*

Volkswagen AG has adopted a leading position in the international automotive industry with keen interest in electric mobility. Volkswagen's "Accelerate" plan targets in excess of 70% EVs share of their European sales by 2030, with the likes of ID.3 and ID.4 leading the way. Volkswagen is the biggest automaker in the world, and it has recorded massive sales on EVs especially in that European market of theirs says 2020. This is further affirmed by the increasing growth of the European plug-in electric vehicle market. In total, Volkswagen strategies and achievements point out solid proof of its fidelity to developing electric mobility

#### 4.5.Comparative analysis of the sales data for BYD AUTO, GEELY GROUP, NIO, and VW

Table 2. Different EV manufacturer’s Sales trends

<b>BYD AUTO</b>	<b>2,685</b>	<b>186</b>	<b>7,077</b>	<b>1,356</b>
<b>Model</b>	<b>Aug 23</b>	<b>Aug 22</b>	<b>YTD 23</b>	<b>YTD 22</b>
<b>BYD</b>	<b>2,685</b>	<b>186</b>	<b>7,077</b>	<b>1,356</b>
Atto 3	2,559	3	6,230	3
Tang	58	183	377	1,353
Han	50	0	437	0
Seal	17	0	17	0
Dolphin	1	0	1	0
e6	0	0	15	0
<b>GEELY GROUP</b>	<b>18,387</b>	<b>12,792</b>	<b>213,745</b>	<b>164,000</b>
<b>GEELY</b>	<b>4</b>	<b>0</b>	<b>66</b>	<b>0</b>
other	4	0	66	0
<b>LOTUS</b>	<b>121</b>	<b>0</b>	<b>1,309</b>	<b>294</b>
Emira	80	0	1,225	0
Eletre	40	0	78	0
Exige	1	0	1	132
Elise	0	0	0	146
Evora	0	0	0	8
other	0	0	5	8
<b>LYNK &amp; CO</b>	<b>883</b>	<b>2,114</b>	<b>19,655</b>	<b>13,136</b>
01	883	2,114	19,651	13,132
other	0	0	4	4
<b>POLESTAR</b>	<b>3,149</b>	<b>901</b>	<b>23,391</b>	<b>14,248</b>
Polestar 2	3,149	891	23,389	14,180
Polestar 1	0	10	1	68
Polestar other	0	0	1	0
<b>VOLVO</b>	<b>14,230</b>	<b>9,777</b>	<b>169,324</b>	<b>136,322</b>
XC40	6,173	3,946	70,924	52,293
XC60	3,612	2,933	46,387	39,465
XC90	1,342	1,106	17,889	16,692
S60 / V60	1,191	757	14,667	14,675
C40	1,156	457	12,389	4,524
S90 / V90	699	573	6,861	7,957
other	57	5	205	712
S40	0	0	0	1
V40	0	0	1	2
V50	0	0	0	1
V70	0	0	1	0
<b>NIO</b>	<b>511</b>	<b>135</b>	<b>1,438</b>	<b>707</b>
ET7	289	39	555	39
<b>Model</b>	<b>Aug 23</b>	<b>Aug 22</b>	<b>YTD 23</b>	<b>YTD 22</b>
ET5	161	0	452	0
EL7	42	0	249	0
ES8	19	96	182	668

VW	95,651	85,434	865,149	719,873
T-Roc	14,593	15,270	138,302	114,597
Golf	13,339	11,902	114,787	113,037
Tiguan	11,487	10,603	113,150	84,719
ID.4	8,779	4,901	54,479	29,811
Polo	8,005	8,706	79,956	69,983
ID.3	6,634	3,466	44,001	23,188
T-Cross	6,214	5,458	68,021	68,222
Passat	5,427	4,263	47,183	43,819
Taigo	4,465	5,018	54,120	40,110
Up	3,484	2,596	22,613	27,606
Transporter	3,251	4,342	34,885	40,168
Caddy	2,141	2,013	21,270	19,386
Touran	2,030	1,917	18,857	12,353
ID.5	1,958	1,726	15,669	5,833
ID. Buzz	1,533	144	8,439	278
Arteon	1,085	1,679	13,981	14,485
Touareg	692	588	9,861	6,173
Crafter	394	323	4,501	2,775
other	84	32	492	139
ID.7	28	0	86	0
Viloran	8	0	14	0
Atlas	4	7	48	63
Golf Sportsvan	4	1	5	2
Talagon	4	0	7	0
ID.6	2	0	21	17
Jetta	2	1	20	28
Taos	2	2	38	37
Lavida	1	4	7	11
Sharan	1	470	314	3,005
Amarok	0	0	11	13
Beetle	0	1	1	5
Eos	0	0	1	0
Lupo	0	0	1	0
Passat CC	0	1	0	1
Tayron	0	0	0	3
Teramont X	0	0	1	2
Virtus	0	0	7	4

Source: Auto News Europe by Data Force

1.BYD AUTO:

August 2023 Sales: 2,685

YTD 2023 Sales: 7,077

YTD 2022 Sales: 1,356

2.GEELY GROUP:

August 2023 Sales: 18,387

YTD 2023 Sales: 213,745

YTD 2022 Sales: 164,000

3.NIO:

August 2023 Sales: 511

YTD 2023 Sales: 1,435

YTD 2022 Sales: 707

4. VW GROUP:

August 2023 Sales: 228,830

YTD 2023 Sales: 1,694,083

YTD 2022 Sales: 1,362,045

## Analysis

### *Growth Analysis:*

YTD sales to September 2023 growth for BYD AUTO.

This indicates a serious penetration and recognition of the European market.

The European market also exhibits growth in GEELY GROUP performance, with a significant increase in YTD sales.

NIO's sales YTD in 2023 are twice as much as those of 2022, but its figures remain relatively low when compared to other brands.

VW GROUP still remains the dominant player in terms of sales volumes; however, its growth rate is not as high as for Chinese brands.

### *Market Share:*

Over the years, VW GROUP has consistently enjoyed high sales and holds a substantial share of European market.

The Chinese brands are dominated by GEELY GROUP, followed by BYD AUTO and NIO.

### *Trends and Implications:*

Growth of Chinese automakers in European market is evident.

This could be explained by their sophistication on EV technology, pricing competitively

and aggressive at the market. These rapidly growing Chinese brands will increase competition to VW GROUP that is an established brand. In Europe, the automotive sector is fast transforming with indigenous and modern automakers embarking on market battle. Finally, the quick growth of Chinese brands points to a changing paradigm in spite of VW continuing to be a powerful player within the European market. It is a good sign for the future of BYD AUTO, GEELY GROUP and NIO in Europe that it has accepted them now. This will probably intensify the competitive landscape, particularly as the industry moves towards electric and sustainable mobility constructs.

Figure 4. Reducing carbon emissions: EU targets and policies

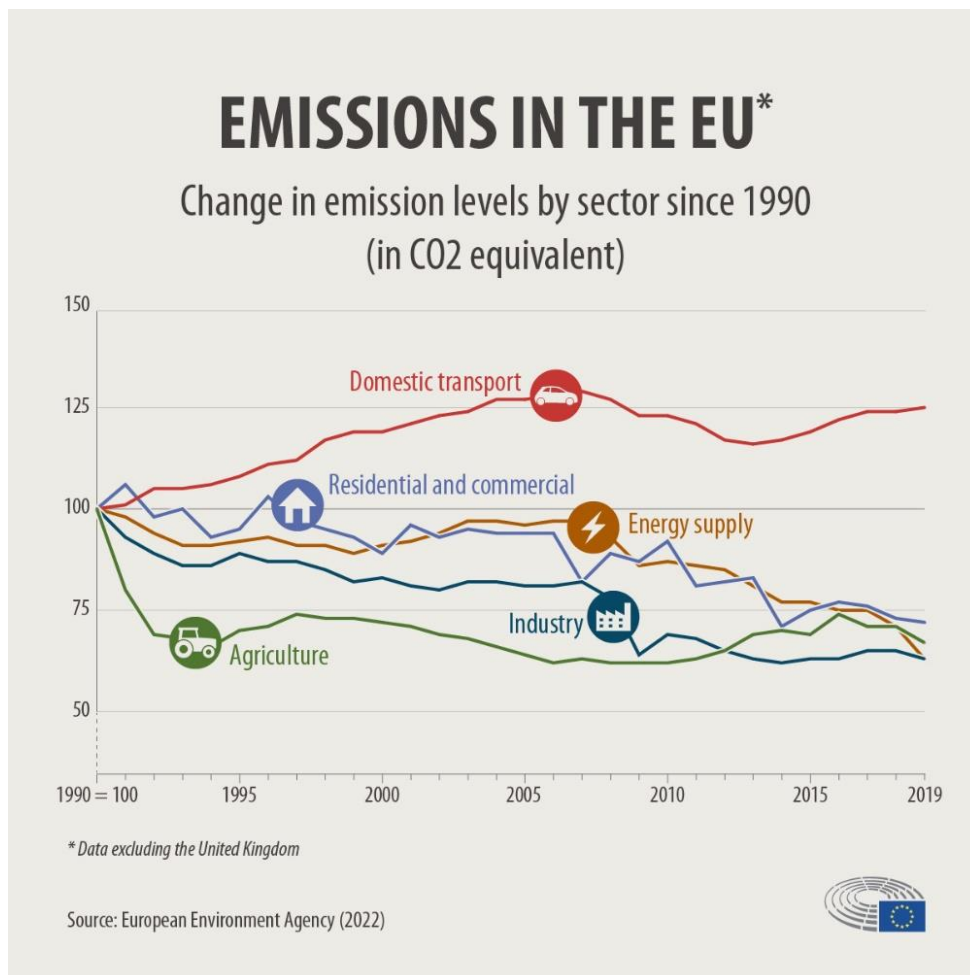


Figure 5.

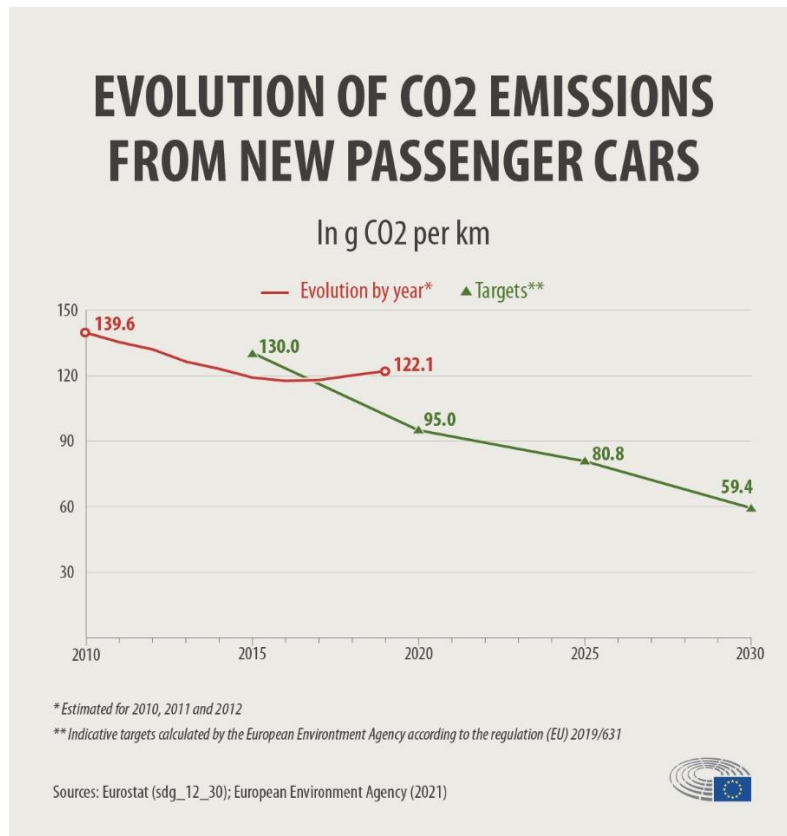
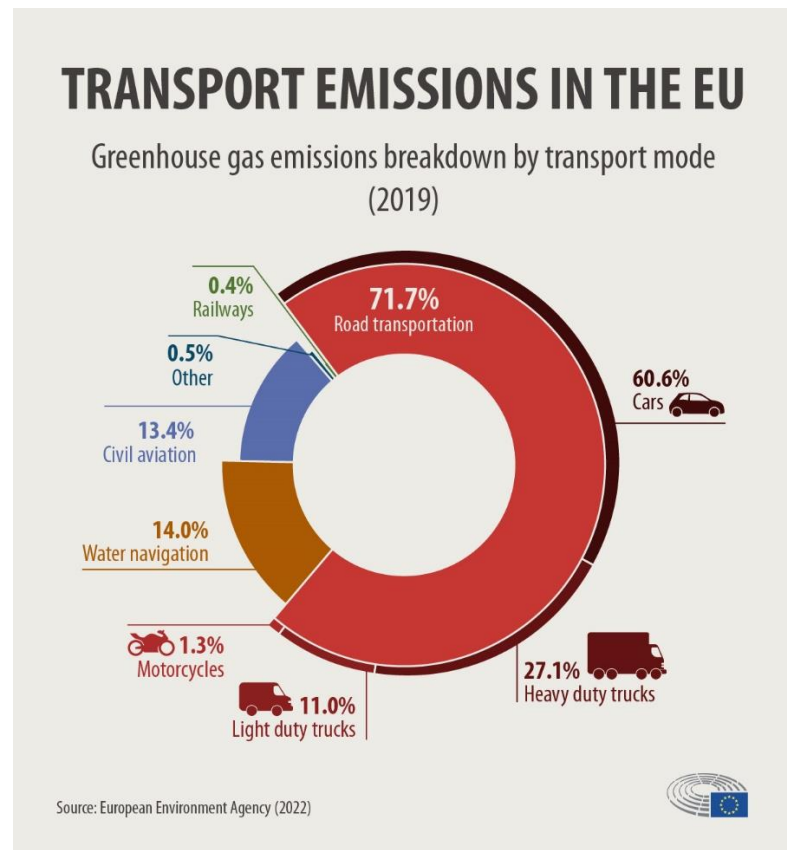


Figure 6.



**Transport's Contribution to CO2 Emissions:** In 2019, transport was responsible for about a quarter of the EU's total CO2 emissions, with 71.7% coming from road transportation.

**Increase in Transport Emissions:** Transport is the only sector where greenhouse gas emissions have risen by 33.5% between 1990 and 2019.

**EU's Reduction Goals:** The EU aims for a 90% reduction in greenhouse gas emissions from transport by 2050, as part of the European Green Deal roadmap.

**Cars as Major Polluters:** Passenger cars account for 61% of total CO2 emissions from EU road transport.

**Electric Cars:** Electric cars represented 17.8% of all new registered passenger vehicles in 2021, up from 10.7% in 2020. Electric vans accounted for 3.1% of the market share for new registered vans in 2021.

**CO2 Emission Targets:** The EU is introducing new CO2 emission targets aiming to achieve zero CO2 emissions for new passenger cars and light commercial vehicles by 2035. Intermediate targets for 2030 are set at 55% reduction for cars and 50% for vans.

**Other Measures:** The EU plans to introduce an emissions trading system (ETS) for road transport and buildings, increase the share of renewable transport fuels, remove tax advantages for fossil fuels, and revise alternative fuels infrastructure legislation.

This highlights the problem of dealing with increased CO2 emission from EU transit sectors. However, despite rising electric vehicle penetration and the toughening emissions standards, transport still constitutes a major source of overall emissions. The EU has set ambitious targets that seek to reduce transport emissions by 90% by 2050 but this requires continuous and cooperative efforts.



## Summary and Conclusions

The sales of Chinese EVs in Europe have increased showing how brands such as BYD AUTO, GEELY GROUP and NIO are growing and that goes hand in hand with the high target set by EU motors to reduce CO2 emissions. The EU is targeting a 90% reduction of greenhouse gas emissions in transport by 2050, and the use of electric cars is one way to bring down this objective. This indicates that European are now embracing Chinese EVs as part of the regional response to global climate change.

Volkswagen, a conventional market leader in the automobile industry still commands a sizable portion. Yet, it points at a changed landscape by this indication of Chinese EVs rapid growth and costs. These Chinese manufacturers are not only helping the EU achieve its sustainability targets but are also threatening renowned European brands such as Volkswagen.

Another possibly is the emergence of Chinese brands that are transforming the competitive landscape by way of innovations such as NIO's "Battery as a Service" and BYD's Blade Battery technology that could shape consumer preferences. The dominance of Volkswagen notwithstanding, the emergence of Chinese EVs shows a market that is becoming more varied and competitive.

All in all, the rising sales of Chinese EVs in Europe are helping towards the EU's CO2 emissions cuts and increasing rivalry for traditional automakers such as Volkswagen. Such an interplay is likely to foster innovation, lower costs and drive the transition towards sustainable mobility solutions in the region.

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