



# Europe's BEV market defies odds but more affordable models needed

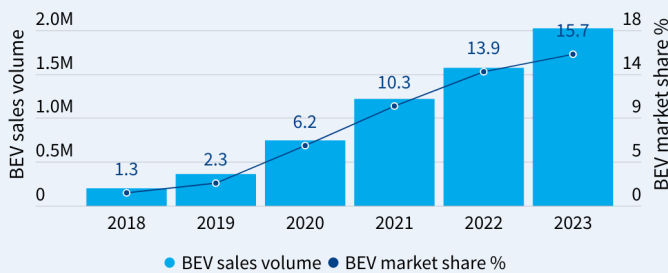
February 2024

## Summary

Carmakers have been citing low consumer demand for Battery Electric Vehicles (BEVs) as the reason behind backpedalling on BEV production plans, placing Europe's climate targets at risk. But what has been happening in the European BEV market in 2023? And how successful are Europe carmakers at capturing the BEV mass market?



### European BEV sales continue to grow



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

2023 car sales show that, despite economic headwinds, European BEV sales have increased by 28%, and by more than a third in the EU alone. EU BEV sales are now at 1.5 million and BEV market share increased to 14.6% in 2023 vs. 12.1% in 2022. Yet growth has been slower than the rapid BEV uptake driven by the introduction of more stringent car CO2 standards in 2020 and 2021.

When broken down per carmaker, share of BEV sales for some carmakers stagnated (Stellantis, VW) or even decreased (Renault, Ford, JLR). Globally, Europe is falling behind China where BEVs sales and growth are higher; BEVs were 24.7% of China's car sales in 2023, growing from 21.3% in 2022.

As some western carmakers take their foot off the accelerator when it comes to BEV production, there are serious concerns whether they will deliver the affordable compact models that Europeans want to buy quickly enough to drive forward the mass market uptake of electric cars in 2024.

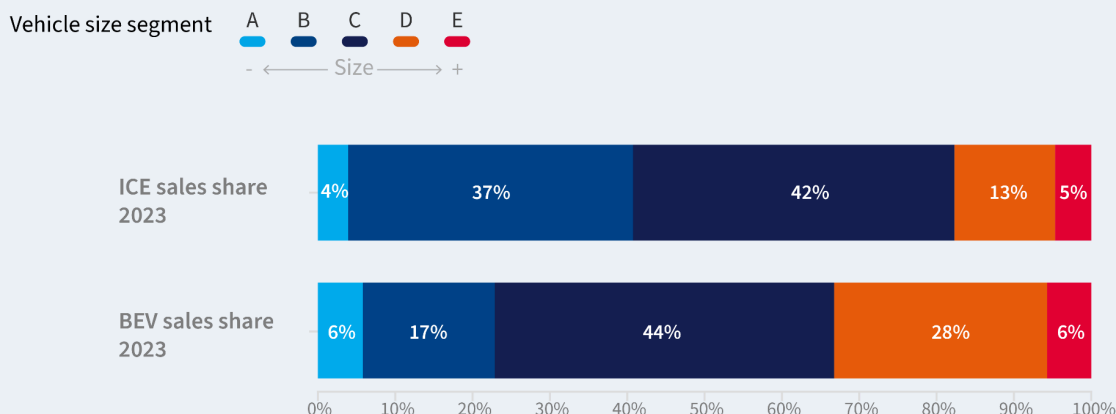
### Carmakers are failing to deliver entry level models at volume

Stagnating car CO2 targets until 2025 have allowed carmakers to prioritise the limited supply of BEVs required by the CO2 regulation on the premium and large segments while failing to deliver affordable, entry level models to the EU market at volume. Since 2018 carmakers have launched just 40 small A and B BEVs compared to 66 of the largest D and E BEVs. Today the impact is particularly evident in the market share divergence of compact B and large D segment cars between the BEV and



ICE markets. The compact B segment is responsible for 37% of sales in 2023. Yet for BEVs, it holds less than half of that market share (17%). Instead carmakers have focused on selling larger, more premium D segment BEVs which have more than double the market share (28%) compared to D segment ICE's (13%). By prioritising new BEV models in the more premium D and E sizes, carmakers are slowing down the BEV mass market to maximise their short-term profits.

### BEV and ICE market share per segment in 2023



ICE and BEV sales don't sum to 100% due to rounding.  
Source: Dataforce registrations 2023. Scope EU+UK

The disproportionate focus of carmakers towards larger, more premium models has resulted in high prices for BEVs in Europe. While the average BEV price has fallen in China by over 50% since 2015 thanks to, in part, a greater focus on affordable mass market EVs and supply chain integration, the average European BEV price has increased by €18,000<sup>1</sup>, illustrating how different OEM strategies can lead to very different outcomes for consumers. In China there are 75 BEV models available for less than €20,000, but only one in Europe<sup>2</sup>. The average price in Europe remains high even in the compact segments: €34,000 (A), €37,200 (B) and €48,200 (C). These high prices mean BEVs are not cost competitive for cost conscious European consumers since there are many ICE models available for below €20,000 such as the Citroen C3 or the Seat Fabia.

The focus of European carmakers on SUVs (54% of BEV models launched since 2018), has also impacted affordability since these higher profit vehicles carry a significant price premium compared to non-SUV models in the compact B (+€6,100) and C (+€12,100) segments.

While there have been some announcements by European carmakers that cheaper compact models will be coming in 2024-2027 such as the Renault 5 and VW ID.2. Less than 50,000 cars of the announced cheap models are expected to be produced for Europe in 2024 which is unlikely to satisfy demand. This leaves the European compact, mass market wide open to Chinese competition.

<sup>1</sup> JATO. (2023) EV price gap a divide in the global automotive industry.

<sup>2</sup> JATO. (2023) EV price gap a divide in the global automotive industry. Dacia Spring cost <€20,000 in France in February 2024.



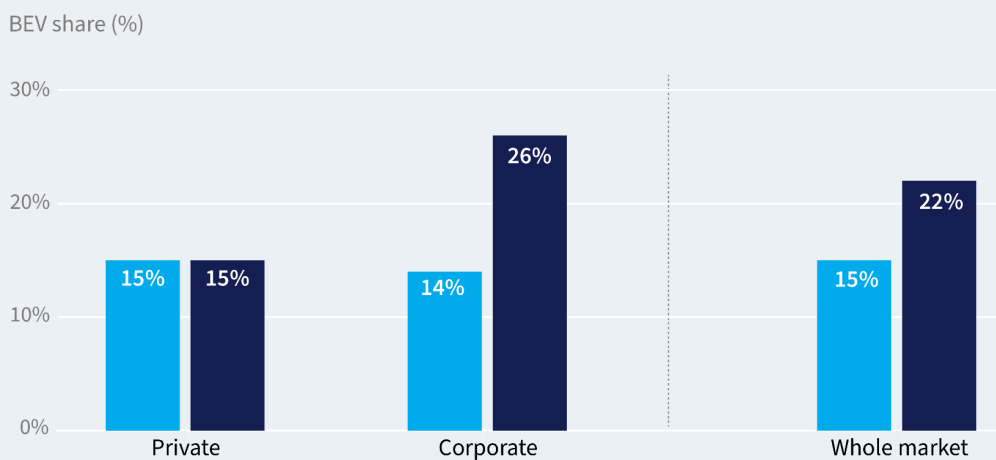
### Corporate fleets are failing to lead on BEV sales

Beyond the lack of affordable, compact BEV models, the low BEV uptake in the corporate car segment is also holding back the European BEV market. Corporate cars account for 60% of EU sales and are the perfect candidate for accelerated electrification since corporate cars are already subsidised through tax cuts, companies have the financial muscle to invest in BEVs and generally drive longer distances which means larger CO2 savings when electrified.

However, notwithstanding their privileged position, corporate EU BEV sales are falling behind at 14% vs. 15% in the private segment. This is due to poor national company car taxation policies in many Member States and lack of EU policies that would drive corporate fleet electrification. Only 9 EU countries have company car taxation policies in place which results in a significantly (50%) higher corporate than private BEV share. Yet, if lagging countries reform corporate car taxes, they can accelerate EU BEV sales. If all EU countries had 50% higher corporate BEV sales (than private), the share of BEVs in the corporate segment would have almost doubled (see image below). In short, if the corporate car segment was leading in BEV sales -as it should be because of favourable economics-, then the overall EU BEV market share would have reached 22% in 2023 instead of 15%.

#### Accelerating corporate car electrification can boost BEV marketshare

— Current BEV uptake (2023) — BEV uptake under corporate leading scenario



Source: Dateforce 2023 registrations and T&E modelling. T&E analysed a scenario where the corporate fleets market leads on electrification by selling at least 50% more BEVs than in the private market. This has already been achieved in 9 countries: Austria, Belgium, Czech Republic, Hungary, Greece, Luxembourg, Poland, Slovakia and Slovenia.

### Roll out, not back

Seeing a gap in the European market, many Chinese brands are or plan to sell electric models across the continent, often at more affordable prices<sup>3</sup>. Chinese carmakers may potentially even sell some models at a loss to gain brand recognition and market share. Even if regulations stagnate, incentives are rolled back and the economic climate is not ideal, European carmakers are mistaken if they believe slowing down now will help their competitiveness or survival. Rather than roll back, the fierce

<sup>3</sup> Reuters. (2023, 09, 13) [EU to investigate 'flood' of Chinese electric cars, weigh tariffs.](#)



competition for the BEV mass market buyer in Europe means it's time to accelerate, improve technology and keep investing.

Smart EU and national policies are needed to accelerate the affordable mass market. Such policies could deliver 18 million compact and affordable, made in Europe, electric cars by 2030<sup>4</sup>. Specifically the EU should:

- Maintain the 2035 100% zero emission sales target and do not reopen the car CO2 standards in 2026.
- Propose an EU regulation to electrify all new sales of corporate fleet cars by 2030 at the very latest and set earlier targets for big fleets.
- Secure small, affordable EVs for the EU market by supporting social leasing via the EU's Social Climate Fund and introduce a new EV environmental standard.
- Use EU funds and broader industrial policy tools to support the automotive transition on the condition of providing additional and affordable BEV supply above what is required by the CO2 standards.
- Integrate "Made in EU" and environmental requirements into EV subsidy and other public procurement schemes.

## 1. Introduction

In recent months some media<sup>5</sup> and carmakers<sup>6</sup> have been citing low consumer demand for battery electric vehicles (BEVs) as the cause of slower growth in BEV sales. Some carmakers are already using this narrative to backpedal on ambitious EV plans. The most notable announcements have happened in the U.S. where General Motors has been cutting back on plans to build 400,000 new BEVs by mid-2024<sup>7</sup> and scrapped plans with Honda to develop cheaper BEVs to come on the market in 2027<sup>8</sup>. Ford also postponed \$12 billion in BEV manufacturing investments<sup>9</sup>, causing a slow down in the ramp up of BEV manufacturing. In Europe, Volkswagen (VW) has made such announcements based on the justification of falling demand, declaring that it has cut production of its BEVs in Europe<sup>10</sup> and JLR is delaying the production of two new BEV models<sup>11</sup>. Yet we could see other carmakers make similar announcements. The CEO of Stellantis has already stated that Stellantis may have to change its strategy 'if political and public opinion tend towards fewer EVs'.<sup>12</sup>

<sup>4</sup> T&E (2023) [EU elections 2024: Full Speed or full stop?](#)

<sup>5</sup> Reuters (2023, 10, 25) [More alarm bells sound on slowing demand for electric vehicles.](#)

<sup>6</sup> Electrek. (2023, 11, 16) [Volkswagen's EV woes worsen with another shift cut over slowing demand.](#)

<sup>7</sup> Automotive Dive. (2023, 10, 24) [GM abandons plan to build 400,000 EVs by mid-2024.](#)

<sup>8</sup> Bloomberg. (2023, 10, 25) [Honda CEO says halting plans with GM to develop smaller EVs.](#)

<sup>9</sup> CNBC. (2023, 10, 27) [Ford will postpone about \\$ 12 billion in EV investment as buyers become more cautious.](#)

<sup>10</sup> Electrek. (2023, 11, 16) [Volkswagen's EV woes worsen with another shift cut over slowing demand.](#)

<sup>11</sup> Automotive News Europe. (2024, 02, 08) [Jaguar Land Rover slows EV rollout as electric demand cools.](#)

<sup>12</sup> Automotive News Europe (2023, 11, 27) [Stellantis CEO Tavares says EU, U.S. elections may slow EV sales.](#)

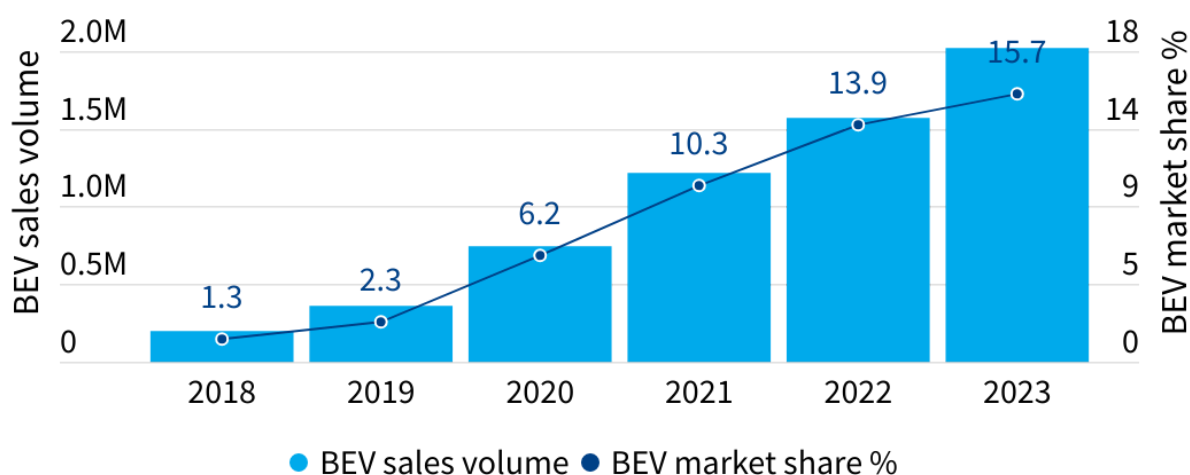


But carmakers' claims that consumers, and their lack of demand for EVs, are the problem is not the whole story. Ahead of the 2024 Geneva Auto Show, a key date in the automotive calendar for carmakers looking to show off their future car models, T&E is publishing this briefing to show how European BEV sales are still growing despite economic headwinds. Yet, growth could be faster if carmakers sold, at volume, affordable, compact BEVs in Europe instead of expensive large, premium cars and SUVs. Secondly, sales could be further accelerated by faster uptake in the corporate fleet market which trails behind the private segment when it comes to BEV sales.

## 2. 2023 BEV sales growth grow

### 2.1 BEV sales growth slows

European car sales numbers which include the EU, UK, Iceland, Norway and Switzerland show that 2023 was a year of growth for BEV sales. The total number of BEVs registered in Europe grew to 2.0 million from 1.6 million in 2022 (+28%). The share of BEVs has grown from 13.9% in 2022 to 15.7% in 2023 (as shown in figure 1). This follows years of rapid European BEV growth driven by the introduction of more stringent EU car CO2 standards in 2020 and 2021. The EU standards caused the share of BEV sales to increase in Europe sevenfold from a meagre 2.3% in 2019 to 15.7% today. In the EU specifically, BEV sales have increased by 37% from 1.1 million to 1.5 million, growing from 12.1% market share in 2022 to 14.6% in 2023.

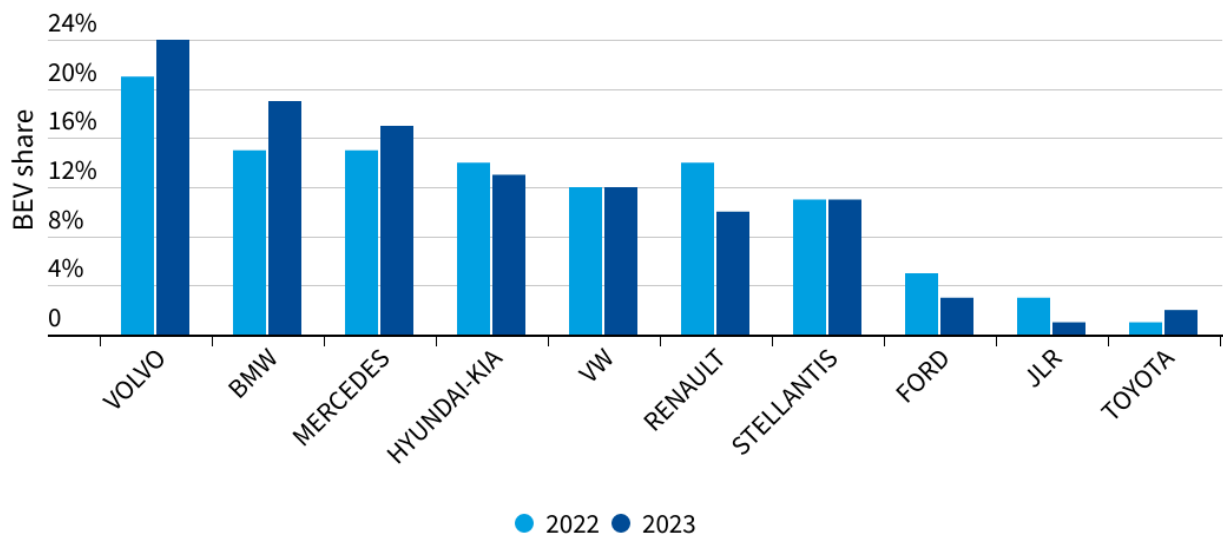


Scope: EU+EFTA+UK  
Source: ACEA registration data

Fig. 1 BEV sales in Europe between 2018 and 2023.



When broken down per carmaker, BEV sales have stagnated or even decreased for many carmakers. Figure 2 shows the share of BEVs sold by incumbent carmakers<sup>13</sup> in Europe in 2023<sup>14</sup>. Only BMW, Mercedes, Toyota and Volvo cars increased the share of BEVs sold between 2022 and 2023. Volvo cars remains the main incumbent BEV leader with BEV sales growing from 21% to 24% between 2022 and 2023. BMW had four percentage point growth while Mercedes had 2. Toyota, despite also witnessing growth in BEV sales, remains one of the worst performing in the European market, only increasing BEV share from 1 to 2%. Renault follows closely behind, selling just 10% BEVs vs. 14% last year. VW's and Stellantis' BEV market share remains stagnant.



Scope: EU  
 Source: 2022 EEA registrations, 2023 Dataforce

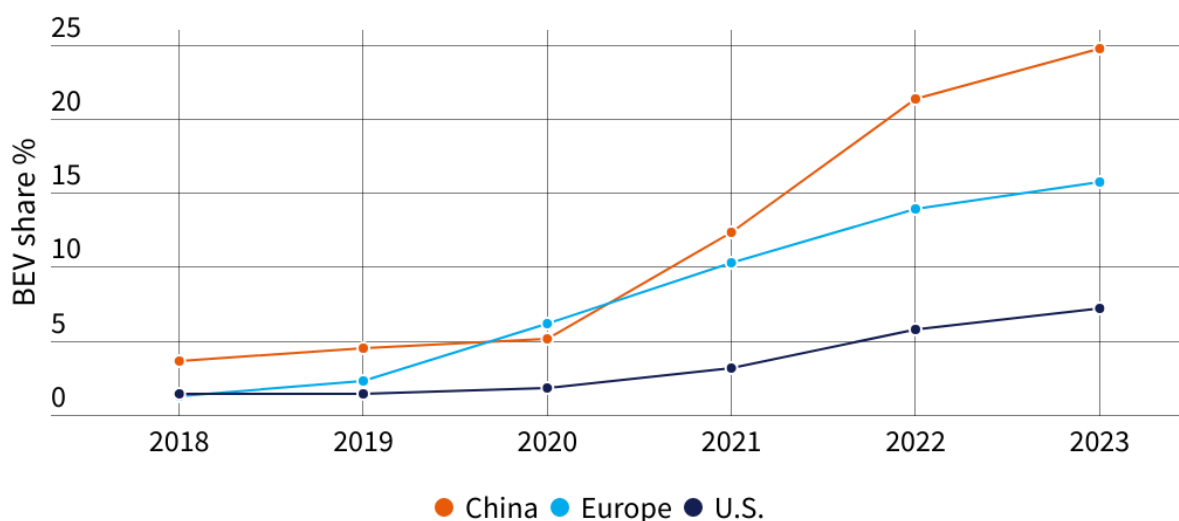
**Fig. 2 Share of BEV sales in the EU per incumbent carmaker in 2023**

Globally, Europe is in second place in terms of BEV sales in the major automotive markets (see figure 3). China is in the lead in terms of BEV sales with a market share of 24.7% in 2023 up from 21.3% in 2022. The U.S. is trailing behind Europe with BEV share of less than half of Europe's, and where the increase in market share is also slower. BEVs share of U.S. sales grew to 7.2% in 2023 compared to 5.5% in 2022.

<sup>13</sup> Carmakers which have traditionally sold ICE cars. Excludes carmakers such as Tesla which have 100% BEV sales and Chinese carmakers.

<sup>14</sup> EU



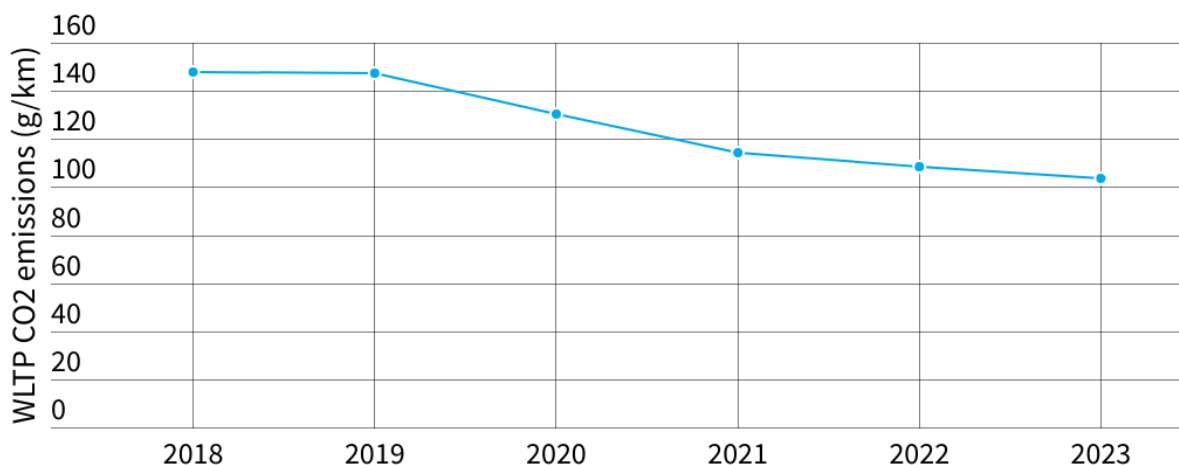


Source: Europe ACEA registrations, China and U.S. EV-Volumes

**Fig. 3 Share of BEV sales in the 3 main global automotive markets<sup>15</sup>.**

## 2.2 CO2 emissions are decreasing

The increase in BEV sales is the main driver of CO2 reductions from new car sales. The increase in EU BEV sales in 2023 is expected to deliver further reductions in fleet average CO2 emissions (figure 4) of 5g year-on-year. This would increase the reduction in EU car CO2 from 147g/km 2019 to 104g/km. Overall that is a fall of 29% over four years.



Scope: EU+NO+IS

Source: 2018-2022 EEA registrations, 2023 ACEA registrations

**Fig. 4 EU fleet average CO2 emissions 2019-2023**

<sup>15</sup> Europe and China is passenger cars sales data, U.S. is all light-duty vehicles as no specific data for passenger car registrations is available.



### 3. Carmakers are failing to deliver compact models at volume

Despite economic headwinds 2023 European BEV sales have grown, yet not as quickly as they could have. There are signals that BEV demand has outstripped supply of BEVs in Europe in recent years. This has been evidenced by long lead times for BEVs<sup>16</sup> and whole year model production selling out in the first few months of the year<sup>17</sup>. While the limited supply of BEVs has benefitted carmakers in the short term as larger cars and SUVs have higher profit margins (which is reflected in the record profits that carmakers have made in recent years<sup>18</sup>), the downside of this strategy is that it has left the EU market short of smaller (and often cheaper) compact BEV models which dominate the ICE mass market. This is reflected both in the EU's BEV model availability and carmakers pricing strategy. The shortage of entry level BEV models negatively impacts consumer affordability dampening demand for BEVs and resulting in slower BEV growth.

#### 3.1 Mismatch between BEV demand and availability

Sales data from 2023 shows that there is a significant difference between the type of new BEV and ICE cars sold in Europe. When it comes to BEVs, carmakers are much more focused towards larger, typically more expensive cars (see section 3.2) rather than the smaller typically more affordable models which dominate the ICE market. This is particularly evident in the market share of compact B and large D segment cars. For ICE cars the compact B segment was responsible for 37% of sales in 2023. Yet for BEVs, the B segment holds less than half of that market share at 17%. Instead carmakers have focused on selling larger, more premium D segment BEV models. The BEV D segment has more than double the market share (28%) compared to D segment ICE's (13%). Such a large divergence between BEV and ICE cars suggests that carmakers are failing to satisfy demand for small B segment BEVs, which is the second most popular European size segment.

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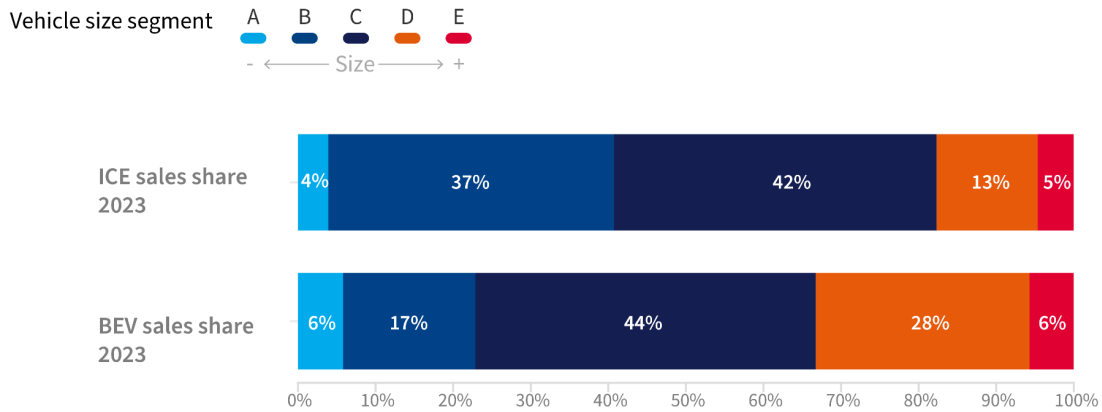
<sup>16</sup> T&E. (2021) [From boom to brake](#).

<sup>17</sup> Euronews. (2022, 05, 05) [VW says its electric cars have 'sold out' for 2022 as demand for EVs in Europe doubles](#).

<sup>18</sup> T&E. (2023) [Small and profitable](#).



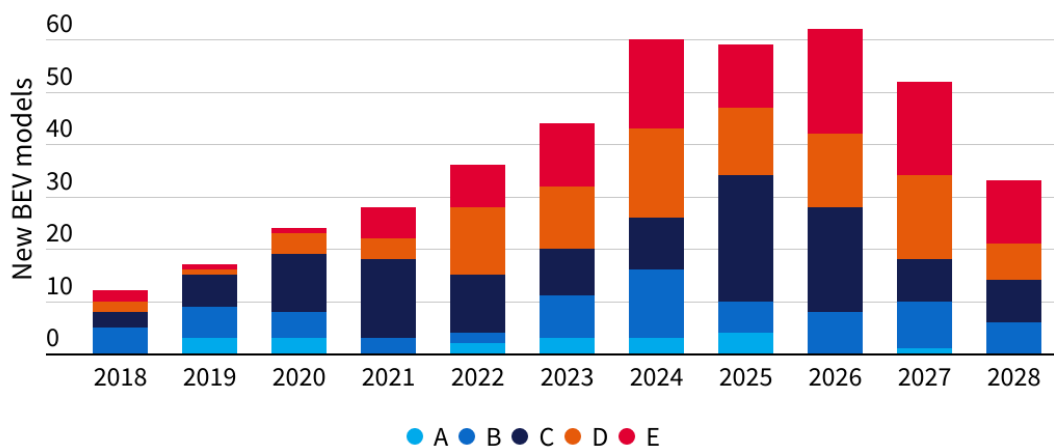




ICE and BEV sales don't sum to 100% due to rounding.  
 Source: Dataforce registrations 2023. Scope EU+UK

**Fig. 5 BEV and ICE market share per segment in 2023.**

The cause of the divergence is the lack of availability of compact BEV models. Analysis of the BEV models currently on the EU market, as well as those expected to come in the next years<sup>19</sup>, shows that there has been a gradual ramp up in the number of new BEV models available thanks to the car CO2 standards (figure 5). BEV model offering has grown from just 12 new models launched in 2018 to 45 new models in 2023. Yet, the number of new, compact models in the A (e.g. Renault e-Twingo), B (Peugeot e-208) and C (VW ID3) size segments coming onto the market have largely stalled in recent years while the number of large, premium BEV models coming to the market has accelerated (figure 6).



Scope: Europe  
 Source: GlobalData Q3 2023 automotive forecast

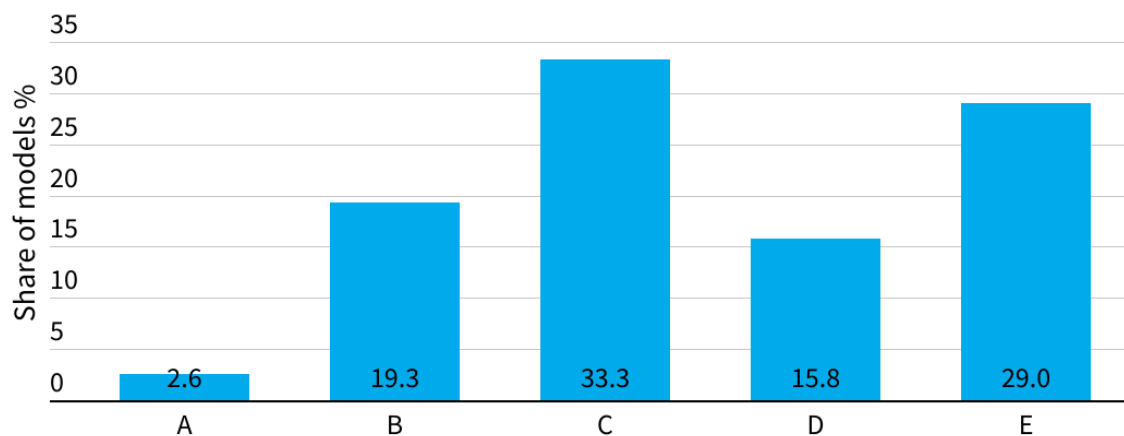
**Fig. 6 New European BEV models arriving on the market 2018-2030**

<sup>19</sup> GlobalData Automotive Q3 2023 forecast, EU+EFTA



The number of the smallest A and B segment models coming to the market has dropped in the past couple of years from 9 new models in 2019 (1 year before the new CO2 targets) down to 3-4 new models in 2021 and 2022. For B segment cars in particular, new models dropped from 6 in 2019 to 2 in 2022. In contrast, the number of larger D and E segment BEV models at most a few hundred models a year have accelerated from just 4 new models in 2018 to 24 in 2023, in the D segment new models doubled from 6 in 2019 to an average of 12 a year between 2020-2023. In 2021, the number of new large D and E models launched overtook the number of new compact A and B models. This could be definitive as compact BEV models are not expected to catch up with large EV models in the foreseeable future since between 2018 and 2023 only 40 A and B BEV models were launched compared to 66 which were D and E. In short, carmakers' product strategy shows a clear prioritisation of car makers towards launching larger, more premium models at the expense of smaller, more affordable cars in recent years.

There is also large variation in the amount of new small BEV models in each carmaker's portfolio. Stellantis has placed a third of the A and B BEVs on the market since 2018 (despite only having 18% market share). During the same time some carmakers such as Ford and JLR have placed no new A or B segment BEVs on the market since 2018 indicating a complete lack of interest in filling demand for smaller, often more affordable cars. While JLR is a premium carmaker, for Ford which is famous for making cars affordable for the mass market the move is surprising and follows their ICE strategy of scrapping smaller models in favour of larger, more expensive and higher margin products<sup>20</sup>. Some of the small models launched over the last few years were also low volume Chinese models such as the JAC Evo 3, Smart #1<sup>21</sup>, e.Go e.wave X, which sell at low volume in Europe (tens or low hundreds of models a year) and which do not contribute significantly to affordable BEV supply in Europe at present.



Source: EV database

**Fig. 7 Share of BEV models in each segment available to buy in Europe in 2023**

<sup>20</sup> BBC. (2023, 07, 07) [Final Ford Fiesta rolls off production line in Cologne.](#)

<sup>21</sup> Joint venture between Mercedes and Geely.

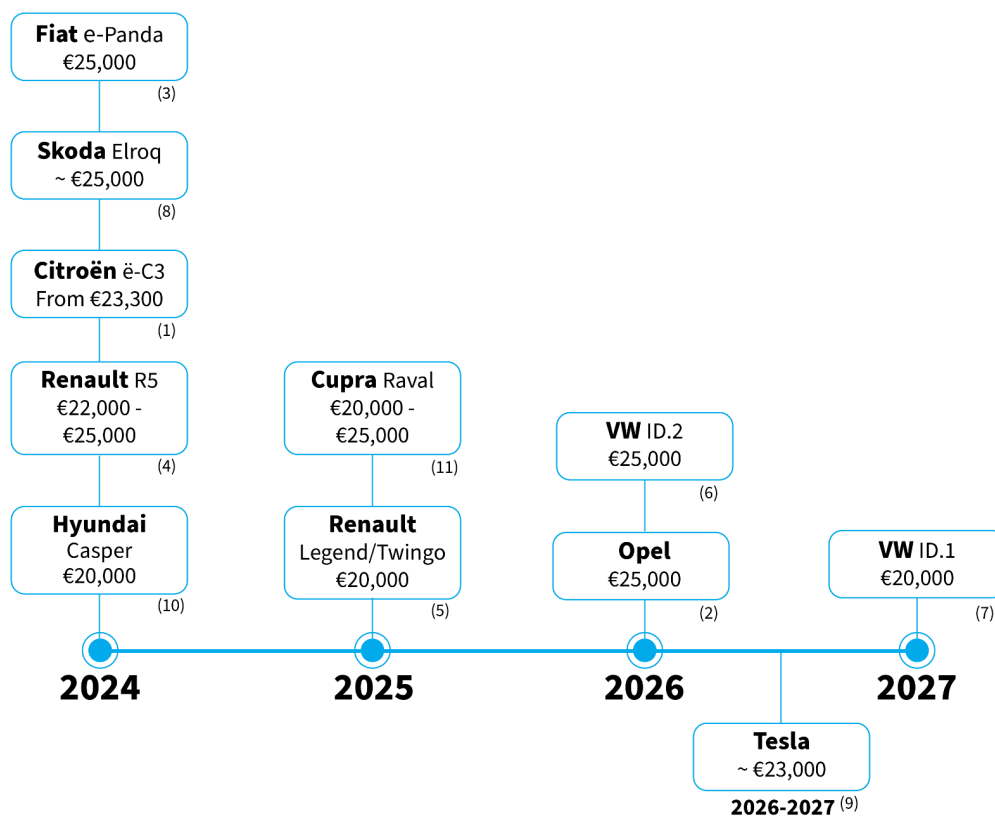


The impact of carmakers focus on launching larger, more premium cars in recent years is that in 2023<sup>22</sup> almost half (45%) of BEVs available to buy in Europe were large D and E segment BEVs (figure 7). Overall, the data points towards carmakers prioritising the limited number of BEVs that they are required to sell for the larger, premium models rather than the compact segments which dominate the EU market today.

From 2024, a series of new small affordable A and B sized BEVs is expected to reach the market (figure 8). It is no coincidence that, just like in 2019, this is happening one year before the entry into force of the new 2025 car CO2 targets as carmakers race to ramp up BEV sales to reach CO2 targets. In 2025, we also see new C BEV models peaking as the new targets kick in. This highlights that compact A-C segment BEVs are driven by car CO2 compliance .

### Upcoming new affordable EV models below €25k

These models only come in from 2024



Sources: (1) Electrive, (2) Reuters, (3) Bloomberg, (4) Autocar, (5) Electrive, (6) Automotive News Europe, (7) Carscoops., (8) Electrive, (9) Electrive, (10) Automotive News Europe, (11) Cupra

**Fig. 8 Entry-level models announced for the EU market<sup>23</sup>**

<sup>22</sup> Data extracted from EV database in October 2023.

<sup>23</sup> (1) Electrive. (2023) [Citroën takes aim for more affordable EVs with the ë-C3](#), (2) Reuters. (2023) [Opel expects to offer electric vehicle for around 25,000 euros by 2026](#), (3) Bloomberg. (2023) [Stellantis Plans Sub-€25,000 Panda EV to Take on Renault, BYD](#), (4) Autocar. (2023) [Renault 5 platform targets keen dynamics, low cost](#), (5) Electrive. (2023) [Electric car](#)



Yet, the few models announced are unlikely to satisfy demand for affordable, compact A, B and C segment cars which today account for 80% of total car sales. Of the affordable models available in figure 8 only 42,000 cars are expected to be produced in 2024<sup>24</sup> which means it is unlikely that mass market adoption of BEVs will accelerate in 2024. As the 2025 CO2 targets kick in, production will increase to 378,000 but this is still just 8% of total 2023 A and B segment European sales<sup>25</sup>. As new affordable models become available in 2026, production will increase to half a million (516,000). Growth will continue reaching 851,000 in 2030 when the -55% CO2 reduction target kicks into force<sup>26</sup>. Despite growth from the mid-2020's, production of the affordable models in 2030 will only be equal to a sixth of today's total car sales in the smallest A and B segments. Based on the data which is available in the public domain it is hard to see how European carmakers hope to meet European demand for affordable, compact BEVs without drastically ramping up production of affordable models beyond what has already been announced.

Without European carmakers taking further steps to address this gap in the market there is a risk that outside competition, primarily from Chinese carmakers (which have a large number of entry-level, compact models) will gain market share in those segments by providing the affordable, smaller BEVs that European consumers are currently missing. In 2023, shipping capacity limitations have constrained the import of Chinese BEVs to Europe, but this could change in 2024 as new shipping capacity is made available.<sup>27</sup> Chinese carmakers, such as BYD with one new ship in the water<sup>28</sup> and six on order<sup>29</sup>, are investing heavily in shipping capacity and will soon be able to increase their BEV imports to Europe.

### 3.2 Focus on large models makes BEVs more expensive

Generally, the larger the car the more expensive it is, accordingly D and E segment BEVs (like ICEs) are on average more expensive than smaller, entry level models. Analysis of BEV model price data from EV-database<sup>30</sup> shows that the average price of a D segment BEVs is 62% higher than that of the A, for the E segment the difference is 3.1 times higher (see figure 9).

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*from Renault for under 20,000 euros in 2025, Hatchback, (6) Automotive News Europe. (2024) VW said to delay small EV volume production amid Euro 7 changes, (7) Carscoops. (2023) VW Confirms Sub-\$21k Entry-Level ID.1 Small Electric, (8) Electrive. (2023) Skoda announces plans for electric station wagon to release in 2026, (9) Electrive. (2023) Musk biography reveals plans for compact model and robot taxi on the same platform. (10) Automotive News Europe. (2024, 02, 04) Hyundai will launch 20,000 euro mini EV in Europe, reports say. (11) Cupra website accessed 21/02/2024.*

<sup>24</sup> Models for which production forecast is available (GlobalData Q3 2023, European production). From Table 1 this excludes the Opel and Renault Legend/Twingo model.

<sup>25</sup> Based on ACEA 2023 registration data and Dataforce 2023 registrations.

<sup>26</sup> Projected production volume of announced affordable models and fig. 8 were updated to include the Cupra Raval on the 22nd of February 2024. The launch date of the R5 in fig.8 was also corrected to 2024.

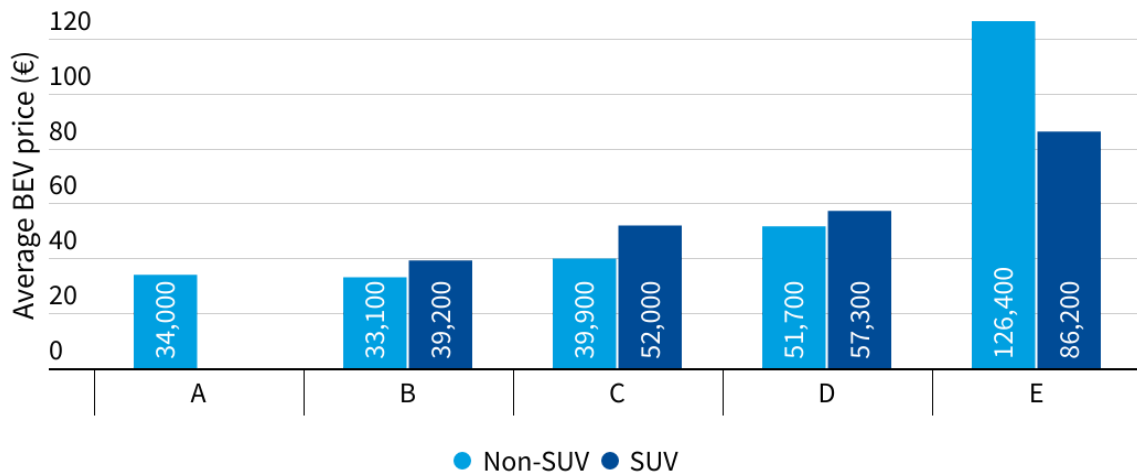
<sup>27</sup> Forbes. (2023, 12, 06) [China's EV advantage in Europe hits unexpected ship snag.](#)

<sup>28</sup> Rho motion (2023, 12) [BYD confirms first Ro-Ro ships.](#)

<sup>29</sup> Bloomberg. (2024, 01, 11) [BYD's first chartered cargo ship for EVs sets sail for Europe.](#)

<sup>30</sup> Data extracted in October 2023. Based on an average of prices in the Netherlands and Germany. Models available on the market today. Averages are not weighted by sales.





Source: EV-database, Average of DE+NL pricing

**Fig. 9 Average price of BEV in each size segment split between SUV and non-SUV.**

In the B and C segments the average price of a BEV remains high at €37,300 and €48,200 respectively. Even in the smallest (and usually cheapest) A segment the average price of a BEV remains above €30,000 and there is only one BEV (Dacia Spring in France) currently available in the EU below €20,000<sup>31</sup>, while many ICE cars are available below this price bracket (e.g. the Citroen C3 or the Seat Ibiza). It is also notable that SUV BEVs carry a significant price premium vs. non SUV models as seen for ICE cars<sup>32</sup>. On average an SUV BEV is a fifth more expensive. In the entry level B and C segments the difference is €6,100 (18%) and €12,100 (30%), respectively. Only in the E segment is the average price of SUVs lower due to the presence of premium sports cars in this segment such as the Porsche Taycan. As in the ICE market, the trend towards more SUVs also negatively impacts the affordability of BEVs.

The majority of BEV models which have been placed on the market since 2018 are SUVs (88 vs. 74), this is the case even in the B and C segments. 59% of B models are SUVs and 65% in the C segment. This will not improve in the next two years when the 2025 car CO2 standards enter into force as 62% of new BEVs made available in 2024 and 2025 will be SUVs. Even in the smallest, most affordable A segment 50% of new models will be SUVs.

### 3.3 EV price lessons from China

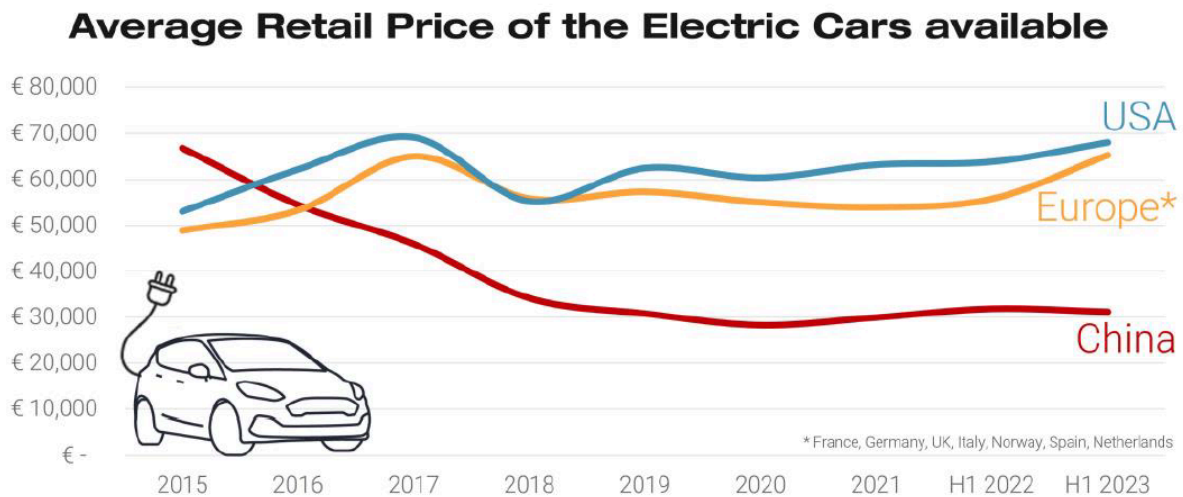
Overall the lack of compact, mass market models is hampering affordability of BEVs in Europe. According to JATO (figure 10), the EU has seen a large increase in the average BEV price since 2015, increasing from €49,000 to €67,000 (+37%) in the first half of 2023. This is in stark contrast with China, where over the same period, the average BEV price has decreased by more than 50% from €66,000 to €31,000. The rise in European prices particularly accelerated since the start of 2022, increasing by 20% in just a year as

<sup>31</sup> Price checked on Dacia website February 2023.

<sup>32</sup> T&E. (2023). [Small and profitable](#).



carmakers raised prices among record consumer demand for BEVs<sup>33</sup> but limited BEV supply. VW for example sold out of all its BEV models for the year by May<sup>34</sup>. Comparatively, during the same period the average BEV price fell by 2% in China<sup>35</sup>.



**Fig. 10 Average retail price of electric cars 2015 to H1 2023 as reported by JATO<sup>36</sup>.**

The sharp reduction in the average BEV price in China has been driven by Chinese carmakers focusing on producing BEVs for the entire market and not just the premium segment to gain market share, alongside getting a foothold in the entire EV value chain to control costs. This is evidenced by the large number of cheap Chinese BEVs available, in the first half of 2023 there were 75 BEV models available in China for less than €20,000 but only one in Europe<sup>37</sup>; the Chinese built Dacia spring<sup>38</sup>. Unlike Chinese carmakers, in recent years European carmakers have focused on an alternative strategy. Their focus has been on maximising profit through the sale of premium BEV models and limiting BEV supply in the affordable segments (instead of prioritising these models) also known as value over volume strategy. Since 2019 this has resulted in European carmakers making record profits<sup>39</sup> but failed to bring BEV prices down for consumers.

In fact, T&E's analysis of BEV prices<sup>40</sup> shows that BEV prices in the first half of 2023 reached record heights for many BEV models produced by European carmakers and sold in Europe, at least in part caused by high raw material prices in 2023 and early 2023<sup>41</sup>. While the prices for some models have now come down, such

<sup>33</sup> JATO. (2023) [EV price gap a divide in the global automotive industry](#).

<sup>34</sup> Euronews. (2022, 05, 05) [VW says its electric cars have 'sold out' for 2022 as demand for EVs in Europe doubles](#).

<sup>35</sup> JATO. (2023) [EV price gap a divide in the global automotive industry](#).

<sup>36</sup> JATO. (2023) [EV price gap a divide in the global automotive industry](#).

<sup>37</sup> JATO. (2023) [EV price gap a divide in the global automotive industry](#).

<sup>38</sup> Retailed in France for €18,400 in February 2023.

<sup>39</sup> T&E. (2023). [Small and profitable](#).

<sup>40</sup> Based on German price list data, November 2023.

<sup>41</sup> Bloomberg. (2023, 11, 26) [Battery prices are falling again as raw material costs drop](#).



as for the Renault Zoe, the Citroen e-C4 or the Fiat 500, the prices of many BEVs such as the Peugeot e-208 or the Renault Twingo have remained unchanged or even increased in the case of the Skoda Enyaq or the Volvo C40. Further price reductions may follow as the average battery price has decreased by 14% since 2022<sup>42</sup>.

Similarly, carmakers' sales strategies are not geared towards making BEVs more affordable for consumers. Interest rates on some BEV leasing contracts, provided directly by carmakers, are higher than those offered on comparable ICE models. This is the case for the Peugeot e-208 and the Renault e-Twingo<sup>43</sup>. The most basic (and cheapest) trim levels are not always available on BEV models, for example for the Peugeot 308 in Germany the cheapest trim level was offered for the ICE version but not the BEV version<sup>44</sup>.

#### **4. Corporate fleets are failing to lead on BEV sales**

Beyond the lack of availability of affordable, compact BEV models in Europe, there's another important factor holding back faster growth in the BEV market: low BEV uptake in the corporate car segment.

In the EU, the corporate segment accounts for 60% of car sales (with the private segment accounting for the remaining 40% in 2023)<sup>45</sup>. The segment is an ideal candidate for accelerated electrification since purchase decisions are driven by the total cost of ownership (TCO) and corporate cars tend to drive twice as much as private cars meaning that swift electrification of this segment will deliver larger CO2 and monetary savings than electrification of private cars. Moreover, the company car segment already benefits from large tax cuts. Company cars in the EU enjoy an annual €32 billion tax cut in the form of low benefit in kind taxation, VAT deductions and depreciation<sup>46</sup>.

However, the corporate car segment in Europe is currently failing to lead on BEV sales. In 2023, BEV sales in the corporate segment were at 14% versus 15% in the private segment. This is mainly driven by the fact that national company car taxes often incentivise companies to opt for ICEs by failing to provide a strong enough incentive to switch to BEV. It is important to underline that carmakers - notably in Germany - have been lobbying against a company car tax reform that would increase tax rates for fossil fuel cars and thereby make BEVs much more attractive.<sup>47</sup>

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<sup>42</sup> BloombergNEF. (2023, 11, 26) [Lithium-Ion battery pack prices hit record low of \\$139/kWh](#).

<sup>43</sup> As obtained from each carmaker's respective website in November 2023.

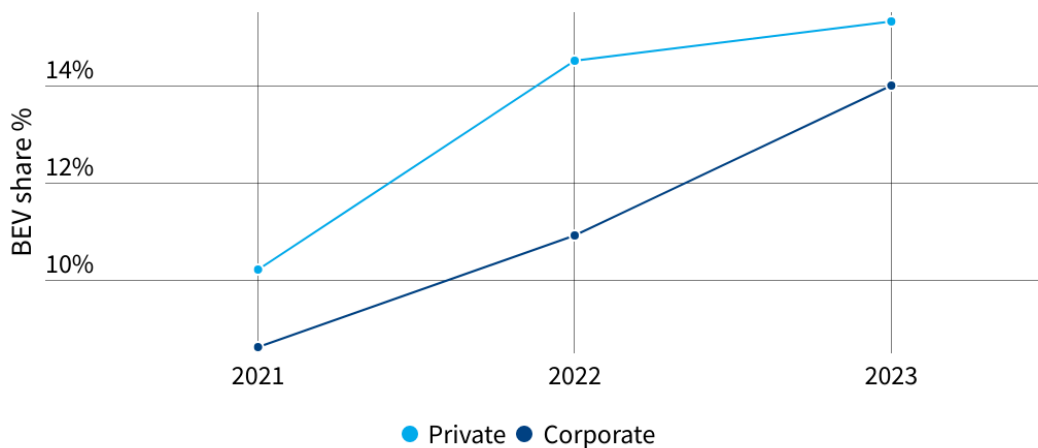
<sup>44</sup> In November 2023.

<sup>45</sup> 2023 Dataforce registration data.

<sup>46</sup> T&E (2023). [Company cars: how European governments are subsidising pollution and climate change](#).

<sup>47</sup> EKM (2023). [Policy Brief: Den Hochlauf der Elektromobilität stärken](#). Page 16. Regarding the proposal "BIK Taxation of a company car will be increased from the current 1% to 1.5 to 2%", the German Transport Ministry document notes that the VDA (German automotive industry association) "rejects this instrument". The VDA's [website](#) also defends the current tax advantages for combustion engine company cars.

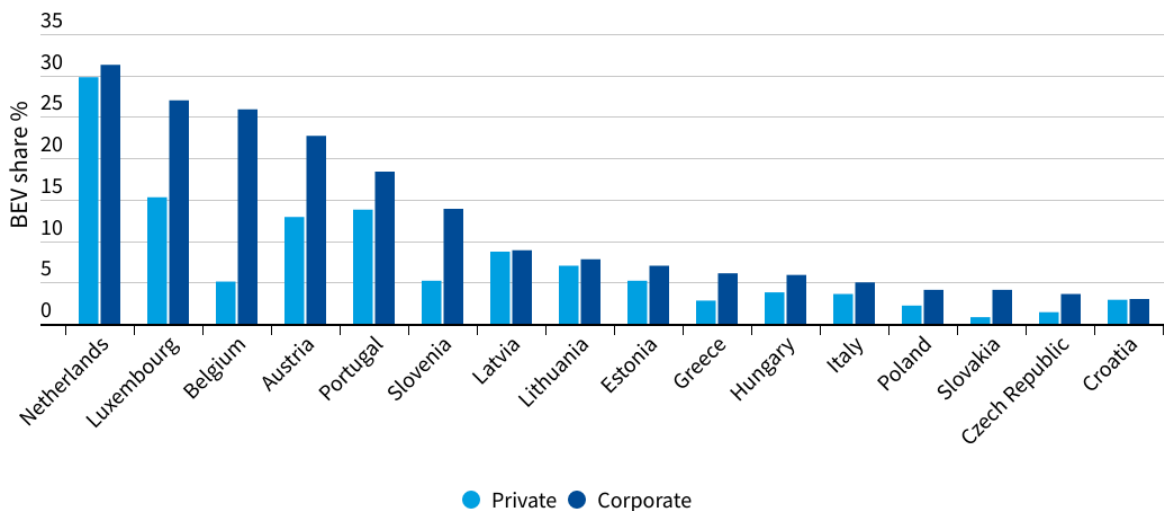




Source: Dataforce

**Fig. 11 BEV share in the private and corporate segments**

At present, only 16 EU countries out of 25 (for which data is available) and the UK<sup>48</sup> have company car taxation policies in place<sup>49</sup> which results in a higher BEV share in the corporate car segment than in private sales (figure 12). Only 9 EU countries plus the UK have a BEV share that is at least 50% higher in the corporate car segment than in the private segment<sup>50</sup>. Notably, the largest EU automotive markets -France, Germany, Italy and Spain- are absent from this list.



Source: Dataforce 2023 registrations

**Fig. 12 EU Member States which have a higher share of BEV registrations in the corporate vs. the private segment**

<sup>48</sup> 2023 Dataforce registration data. The two missing EU countries are Bulgaria and Malta.

<sup>49</sup> T&E. (2022) [The good tax guide](#).

<sup>50</sup> Austria, Belgium, Czech Republic, Greece, Hungary, Slovakia, Slovenia, Luxembourg and Poland.



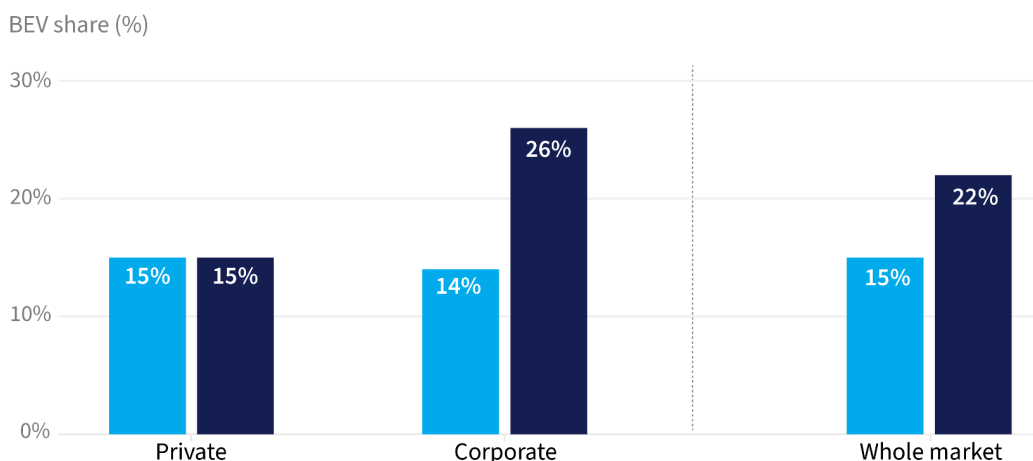


The nine EU Member States and the UK which perform well for corporate car sales show that with well designed corporate car taxation in place combined with the superior economics of BEVs in the corporate segment, the BEV share in the corporate segment can reasonably surpass the private segment. Belgium, which has a large corporate car market, has achieved a high share of corporate BEV registrations by differentiating corporate car taxation for BEV and ICE cars. Benefit-in-kind taxation is, in part, based on CO2 emissions meaning that BEVs are taxed less than ICE cars. Today, depreciation can also be fully written off for BEV cars compared to a minimum of 50% for ICE cars. From 2026, only zero-emission cars will be able to benefit from depreciation write-offs which is expected to further boost corporate BEV registrations by increasing the difference in the TCO between BEV and ICE corporate cars. Slovenia is the leader in Central and Eastern Europe where value added tax can only be recovered on zero-emission corporate cars. Similarly benefit-in-kind tax is reduced by 80% for ZEVs, providing a strong incentive for BEV purchase<sup>51</sup>.

Based on the experience of the 9 Member States and the UK it is reasonable to assume that a 50% higher BEV market share (in the corporate vs. the private segment) is feasible with adequate EU or national policies in place. T&E has modelled the impact that a 50% higher corporate BEV share (vs. private) would have on the EU car market. Under such a scenario (figure 13), the average EU BEV<sup>52</sup> share for corporate cars would be 26% in 2023 instead of 14%. This would surpass the private BEV share of 15% and result in an overall BEV market share of 22% in 2023.

### Accelerating corporate car electrification can boost BEV marketshare

— Current BEV uptake (2023)    — BEV uptake under corporate leading scenario



Source: Dateforce 2023 registrations and T&E modelling. T&E analysed a scenario where the corporate fleets market leads on electrification by selling at least 50% more BEVs than in the private market. This has already been achieved in 9 countries: Austria, Belgium, Czech Republic, Hungary, Greece, Luxembourg, Poland, Slovakia and Slovenia.

**Fig. 13 Forecast EU BEV share if corporate registration share surpassed private by 50%.**

<sup>51</sup> T&E. (2022) [The good tax guide](#).

<sup>52</sup> For the 25 Member States for which corporate registration data is available.



In short, if the corporate car segment was leading in BEV sales -as it should be because of favourable economics-, then BEV sales would have reached 22% in 2023, almost closing the gap between the EU and China. The failure to have an EU regulation mandating corporate BEV sales targets and to implement taxation systems which incentivise BEVs over ICEs in the corporate segment of most EU countries is constraining faster BEV growth.

## 5. Policy recommendations

The lack of ambition and of annual targets in the car CO2 regulation in the 2020s was a missed opportunity to boost the supply of EVs in Europe this decade. The lack of ambition has particularly hampered the availability of affordable, compact BEV models in the early 2020s. To accelerate Europe's electric car market additional policies are needed to ensure an increase in carmakers' affordable BEV supply. Effectives policies could deliver 18 million compact and affordable electric cars which are made in Europe by 2030<sup>53</sup>. Policies are also needed to stimulate BEV sales in the corporate car segment. Crucially the policies that are needed, are:

- **Maintain the 2035 ICE phase-out date and do not re-open the car CO2 standards in 2026.** Only regulatory certainty will ensure that carmakers continue to invest in BEVs, batteries and the extended supply chain in Europe. Any back peddling or weakening of the 2035 phase out date risks derailing and further slowing the EV transition putting the European car industry and jobs at risk, as well as Europe's climate targets. Instead, the EU should focus on implementing the Green Deal rather than adding uncertainty by re-opening the car CO2 standards in only two years.
- **Electrify all new sales of corporate fleet cars by 2030 at the very latest.** Car fleets have huge potential to rapidly accelerate electrification and reduce CO2 emissions while at the same time delivering large numbers of affordable EVs to the second hand market thereby improving fair access to e-mobility.
  - The Commission should come forward with a Regulation setting binding electrification targets for corporate fleets (cars and vans) of 100% by 2030 at the very latest. Earlier targets for the biggest fleets should be considered.
  - Apart from EU legislation, Member States should reform their company car taxation system and increase tax rates for fossil fuel cars. This would ensure an acceleration of the BEV company cars market well before 2030.
- **Secure small, affordable EVs for the EU market.** Europe needs a strategy for affordable, compact EVs to ensure that carmakers sell these cars, at volume in Europe.
  - The EU's Social Climate Fund should require countries to support affordable social leasing of BEVs (subsidised leasing of affordable BEVs for those on low incomes)<sup>54</sup>. This will ensure that e-mobility is accessible to the low and middle income households which require access to a private vehicle.

<sup>53</sup> T&E. (2023) [EU elections 2024: Full speed or full stop.](#)

<sup>54</sup> T&E. (2023) [Inventing the €100 a month electric car.](#)



- As suggested by the car CO2 standards, the EU should introduce a new EV environmental standard that ends the race towards ever larger, heavier electric cars and encourages car makers to produce the compact, energy efficient, electric vehicles.
  - Member State car taxation should promote rightsized, resource efficient vehicles by including weight and size metrics within the taxation framework.
- **Use EU funds to support the automotive transition.** Transitioning from producing predominantly ICE cars to going 100% electric will entail a profound transformation of the automotive industry, its supply chains and the workers involved. With a lack of stricter standards in the 2020s, industrial measures should be used to accelerate the BEV supply and assure Europe’s automotive competitiveness. Equally important will be the preparation of the future workforce for this transition with the necessary skills for future industries, such as electronic engineering, electrochemistry and IT:
    - The European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and the new Social Climate Fund (SCF) facility should be considered to provide loans for companies in the automotive supply chain to retool factories, reskill workforces and adapt production lines on the condition they increase the BEV supply above what the regulations require. Such policies can also be designed to support the uptake of EVs amongst low income groups.
    - Where carmakers benefit from public subsidies to help support the scale up of green technology, governments should require a certain percentage - whether it be of electric cars, vans or charging points - to be made available to lower income households.
    - Any of the funds given to car makers as part of national state aid (TCTF) or EU funding programmes to transition their factories should include a requirement to produce at least 50% of BEV models in segments A-C (non-SUV).
    - Vocational training and other technical education across Europe must be strengthened and reformed to align with e-mobility needs as soon as possible.
  - **Integrate “Made in EU” and environmental requirements into EV subsidy schemes.** EU governments should adapt to the changing dynamics of free trade and must support EU industry, jobs and technology. With China and now the US adopting EV subsidies and policies that explicitly favour domestic production and material sourcing, the EU should consider restricting electric-vehicle subsidies to cars built in the bloc (but by any global carmaker) on the basis of “Made in EU” requirements or environmental criteria. European governments should consider introducing, with support of the Commission:
    - EV purchase support that is conditional on “Made in EU” requirements, including EU vehicle and battery manufacturing, and sourcing of critical minerals either from Europe (e.g. recycling) or countries with high due diligence rules and transparency as per the newly agreed EU Critical Raw Materials Act.
    - The sustainability and resilience criteria in the EU Net Zero Industry Act should be agreed without delay, and should be used as a precedent in similar regulations involving public funding and contracting, notably in the upcoming EU Fleets Regulation.



- Set environmental eligibility rules for awarding electric vehicle subsidies, similar to what is done in France where Chinese EV models do not qualify for the EV subsidies from January 2024<sup>55</sup>. The European Commission must deploy a clear vision and develop guidelines for how EU countries can implement such green subsidy rules to ensure both harmonisation and effectiveness.

## 6. Conclusion

Carmakers have been citing low consumer demand for battery electric vehicles (BEVs) as the reason behind backpedalling on BEV production plans. Yet data shows that it is the failure of carmakers to deliver affordable, compact BEV models at volume which is hampering mass market adoption of BEVs. Lack of affordable compact models and high average prices make new BEVs unaffordable for cost conscious European consumers. If European carmakers are to be leaders in the e-mobility transition they can not continue to focus BEV supply on the large and premium segments while largely failing to supply the compact, more affordable A, B and C segments where 80% of new cars are sold. If they fail to do so, European carmakers leave the door wide open for Chinese competition to enter the European mass market with the compact, affordable models that European car buyers want.

Likewise, the corporate car segment which accounts for over 50% of new EU sales and benefits from large tax cuts, cannot continue to fall behind in BEV sales compared to private sales. The EU and Member States must take action - through an EU corporate fleet regulation mandating faster electrification and reform of national corporate car taxation - to boost electrification in corporate sales. If effective action is taken corporate fleets can accelerate the EU BEV market.

## Further information

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This briefing was edited on the 22nd of February 2024. The projected production volume of announced affordable models (pg.12) and fig. 8 were updated to include the Cupra Raval. The launch date of the R5 was also corrected to 2024 in fig. 8.

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<sup>55</sup> T&E. (2023) [France's eco-bonus shows how we can promote cleaner made in Europe EVs.](#)



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