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Electric Vehicle Sales Review Q1 2023



Foresight to drive the industry

May 2023



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0. Executive summary

End of subsidies in China slows global BEV growth

Although BEV sales in all 19 analyzed markets increased by 24% in the first quarter of 2023, in comparison with the corresponding quarter last year, the growth fell some way short of the stellar figures from recent years. This is mainly due to the sharp reduction in BEV sales growth in China during this period. Given the overwhelming dominance of the Chinese market, which accounted for 62% of BEV sales in all analyzed markets combined, any slackening of growth in that country has an inevitable impact on global figures.

BEV sales in China grew by 15% in Q1 2023 vs. Q1 2022, still an impressive performance when one considers that total sales of all powertrains in that country actually went down by 7% over the same period. However, BEV sales growth nevertheless fell some way below that recorded in previous quarters. Many Chinese consumers had rushed to buy BEVs before the termination of the government subsidy at the end of 2022, and there was bound to be some slowdown of demand immediately following this change.

In general, BEV sales growth was much higher in countries that have been followers, rather than leaders, in the plug-in revolution. This is perhaps to be expected, given how much ground they have to catch up. For example, BEV sales grew in Turkey by 251% in Q1 2023 vs. Q1 2022, by 158% in Australia, and by 119% in India.

Of the high-volume markets, the United States recorded the highest BEV sales increase (64%), continuing its rapid growth over the last couple of years. There were almost one quarter of a million BEV sales in the US in the first quarter, overtaking full-hybrid sales for the second time ever.

A major BEV growth area in the future will undoubtedly be the fleet market. However, to maximize this opportunity, OEMs will need to produce more electric equivalents of popular fleet models.



Almost two in three BEV sales in all analyzed markets in the first quarter of 2023 were recorded in China

62%

China BEV sales in Q1 2023 as a proportion of sales in all analyzed markets



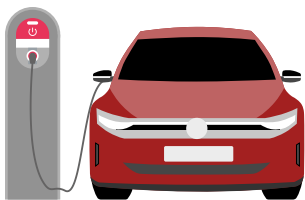
1. News and highlights

European OEMs focus on entry-level BEVs to capture mainstream market

OEMs move to cater for different consumer

Electric vehicle manufacturers in Europe have generally focused much of their energies on the luxury, sporty end of the market. However, recent models indicate that this is starting to change, and that OEMs are now seeking to offer a range of more affordable, entry-level vehicles to attract the mainstream consumer.

The VW ID.2 will be one of the lower priced models on the market when it arrives in 2025, priced at around €25,000. It is likely to undercut some of the current assortment of cheaper BEVs, such as the Renault Zoe and Fiat 500 Electric.¹ VW is also aiming to launch another model at an even lower price, the ID.1, set to be the smallest among VW's BEV range when it becomes available only around 2026.²



Meanwhile, Renault is revamping its once best-selling 5 supermini in the form of a low-cost BEV, the new Renault 5. Although not yet confirmed, the price is expected to be no more than €25,000.³

Chinese OEMs, which have proven expertise in making small, affordable cars, are now eyeing the budget segment in the European market. A tough competition or this territory between established European brands and new Chinese entrants is on the horizon.⁴

Circular solutions continue to be sought

Batteries can account for up to half of the cost of a BEV. If OEMs are able to bring the cost of batteries down, then the vehicles will become more affordable and more likely to be purchased by the mainstream consumer.

Not only are BEV batteries expensive to manufacture, it is often impossible to repair even slight damages after accidents. Insurers are therefore forced to write off the vehicles, forcing premiums up dramatically and further discouraging potential BEV buyers.⁵ OEMs are therefore looking to reduce costs through recycling, in this way also benefiting the environment by confronting the limited availability of important raw materials. For example, BMW is committed to a policy of recycling raw materials from cars and other products in collaboration with its partners.⁶

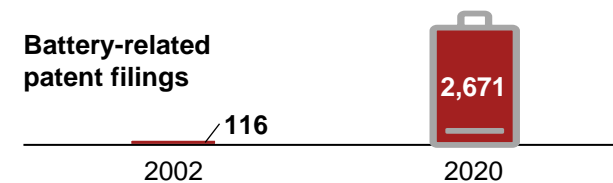
Others have announced plans to build new facilities of their own. CATL is set to build a new battery recycling and materials processing centre in China's

Guangdong province, recovering minerals from end-of-life batteries.⁷ Likewise, Mercedes-Benz has started the construction of a new battery recycling factory in Kuppenheim, Southern Germany.⁸

Green-conscious governments are keen to encourage these developments. The battery recycling start-up, Redwood Materials has secured a conditional US\$2 billion loan from the US Department of Energy to help build its US\$3.5 billion battery recycling complex in Nevada.⁹

Constant growth recorded in battery innovation

Strategy& research reveals that BEV players are permanently focused on making battery production more cost-efficient and sustainable. The research, based on the IP portfolios of the leading suppliers and OEMs, shows that battery-related patent filings have increased constantly over the last twenty years, with a CAGR of 20%. Approximately 60% were filed by suppliers and 40% by OEMs themselves. Asian players are at the vanguard of this battery innovation with emerging players, such as CATL, with their European and US counterparts lagging behind.



Sources
Strategy& ¹ Heycar, 16 March 2023; ² Autocar, 15 March 2023; ³ Autoexpress, 30 March 2023; ⁴ CleanTechnica, 1 February 2023; ⁵ Reuters, 20 March 2023; ⁶ Refinitiv, 31 March 2023; ⁷ Just Auto, 30 January 2023; ⁸ Reuters, 3 March 2023; ⁹ Automotive News, 6 March 2023



1. News and highlights

Protectionist measures increase as countries look to secure EV future

Governments act to boost local BEV markets

Aware that the BEV market will play a pivotal role in their future economies, and very vigilant in particular about potential Chinese dominance, governments throughout the world are lending a helping hand to local companies.

According to reports, South Korea is revising its BEV subsidy plan in a way that is said to favor locally manufactured cars over imported ones. The government will provide subsidies based on levels of vehicle performance, after-sales service infrastructure and battery energy density. Foreign OEMs operate fewer charging and other service centers in South Korea.¹

The Indonesian government has drafted legislation to cut sales tax from 11% to 1% on locally assembled BEVs.² In Turkey, the government has announced that it will impose an additional 40% customs duty on BEVs made in China.³

Investment pours into charging infrastructure

National governments, local authorities and BEV companies continue to prioritize the development of charging infrastructure.

The US government will provide US\$2.5 billion over five years to cities, counties and local governments

to introduce charging stations.⁴ The Canadian government has announced federal investments totaling nearly \$15 million (US\$11.2 million) for the installation of more than 2,350 EV chargers, 2,100 of which will be installed across the Greater Toronto Area.⁵ Meanwhile, China has doubled the number of the country's charging points for BEVs to 5.2 million during 2022. In total, there are now 3.4 million private charging points and 1.8 million public charging points in the country.⁶

From a company perspective, Fastned has won Europe's first tender for BEV-only service stations in relation to two locations on a highway near Ghent in Belgium. As well as offering charging facilities, the site will also host additional services, such as toilets and cafes.⁷



BP has revealed plans to invest US\$1 billion by 2030 in BEV charge points across the US.⁸ Nio intends to build 1,000 battery-swapping stations in China in 2023 to bring the total number of such facilities to 2,300.⁹

Tesla says it will open up a proportion of its US BEV charging network to rival brands. At least 7,500 chargers from its network will be available for all BEVs by the end of 2024, helping the government to expand the country's charging infrastructure.¹⁰

Prices of battery raw materials fall

The cost of cobalt and lithium, two key commodities for manufacturing BEV batteries, has been falling recently. For example, the price of cobalt has more than halved since the spring of 2022 due to reduced demand from the peak of the COVID-19 pandemic and a significant increase in production (forecast to jump by 38% in Congo in 2023).¹¹ Similarly, the cost of lithium has dropped by nearly 20% since January 2023.¹² It is hoped that these developments, and the development of cheaper chemistries such as lithium ferrous phosphate (LFP), will cut the cost of batteries and therefore BEVs. CATL is reportedly offering to supply some of its BEV company clients with batteries that involve a guaranteed lithium carbonate price at just a third of its high from November 2022.¹³

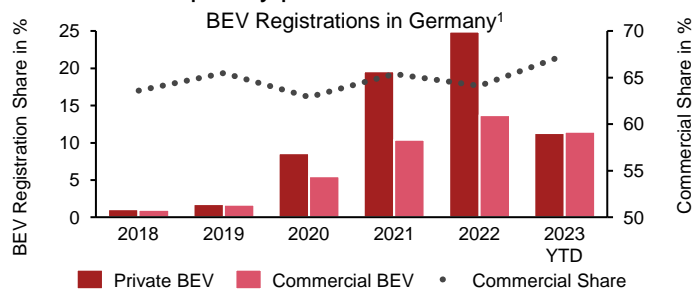
Sources



2. Analyst insights

More full electric models needed to maximize German fleet opportunity

On average, commercial registrations are responsible for over 60% of total passenger car sales but less than 50% of the total 2022 BEV volume.¹ In 2022, nearly 25% of private registrations were for a BEV vs. 13.7% of commercial registrations. With a reduced government subsidy in 2023, the situation has changed through March, with 11.3% of private registrations and 11.5% of commercial registrations. The recently reduced subsidy resulted in a temporary pull-ahead effect for customers.



Part of the reason for this apparent under-representation of BEVs within company fleets is the rather limited availability of models favored by company car consumers and also long delivery times. Many of the most popular fleet choices, such as the Mercedes-Benz C-Class, do not currently have a BEV equivalent. Some OEMs are inevitably missing out on sales as a result. If they fail to plug this gap, they run the risk of leaving this profitable field open to others with the right product and shorter delivery times. Moreover, they face two further obstacles as they seek to meet consumer demand and grow BEV fleet sales. Firstly, in September 2023, BEV subsidies will

only be available to private customers, a development that may act to temporarily suppress demand. Secondly, as an alternative to company cars, an increasing number of companies are starting to offer mobility packages as an employee perk. These mobility packages, instead of a company car, provide employees with a monthly allowance to spend on all conceivable means of transport, such as taxis, trains, e-scooters and bicycles.

Like Germany and many other European countries, Belgium has a high share of company cars and goal to reduce vehicle emissions. From 2026, only BEVs or other zero-emission vehicles will receive tax advantages that all company cars currently receive.² This in turn also provides a greater supply of used BEVs in coming years. Even with these measures, 36% of Belgian fleets currently do not expect to be fully zero-emission but still further along than previously planned.

Sustainability policies of companies are other big drivers towards more BEVs. This is why Telekom MobilitySolutions, the second largest corporate fleet in Germany as of January, only allows employees to select a BEV.³ Large fleets such as Telekom are expected to provide a boost in commercial BEV registrations.

The outlook is pretty clear, the share of zero-emission vehicles is expected to only continue to increase and the fleet market has much room to grow as we move towards a future dominated by BEVs. Future changes to company car tax and mobility budgets have the potential to make significant impacts.

Fleet BEV share in Germany – 2023 & 2024

Scenario	2023	2024
Base	16%	21%
Upside	21%	33%
Downside	13%	16%

Scenario assumptions

Base

- Overall BEV regulatory assumptions for Europe and “Fit for 55” ICE ban in 2035
- Greater product availability
- Some remaining PHEV interest due to tax incentive

Upside

- Green fleet policies
- Larger government incentives
- Reduced BEV prices
- Shorter delivery times
- Increased driver acceptance
- PHEV conversion to BEV

Downside

- Reduced government incentives
- Lack of product availability and long delivery times
- Lacking charging infrastructure
- PHEV and diesel focus

Sources

Strategy& ¹ Federal Motor Transport Authority (KBA); ² Fleet Europe, 11 May 2022; ³ Automobilwoche, 6 February 2023



2. Analyst insights

Tesla Model Y crowned in key markets

Top BEV models in Q1 2023

European Top 4



	Model	Sales Jan-Mar '23
	Tesla Model Y	29,796
	Fiat 500 EV	10,924
	Dacia Spring	10,782
	Tesla Model 3	9,054
	Peugeot 208 EV	8,947
	Volkswagen ID.4, ID.5	7,895
	Volkswagen ID.3	6,938
	MG4 EV	6,162
	Renault Megane Electric	6,006
	Audi Q4 e-tron	5,050

USA



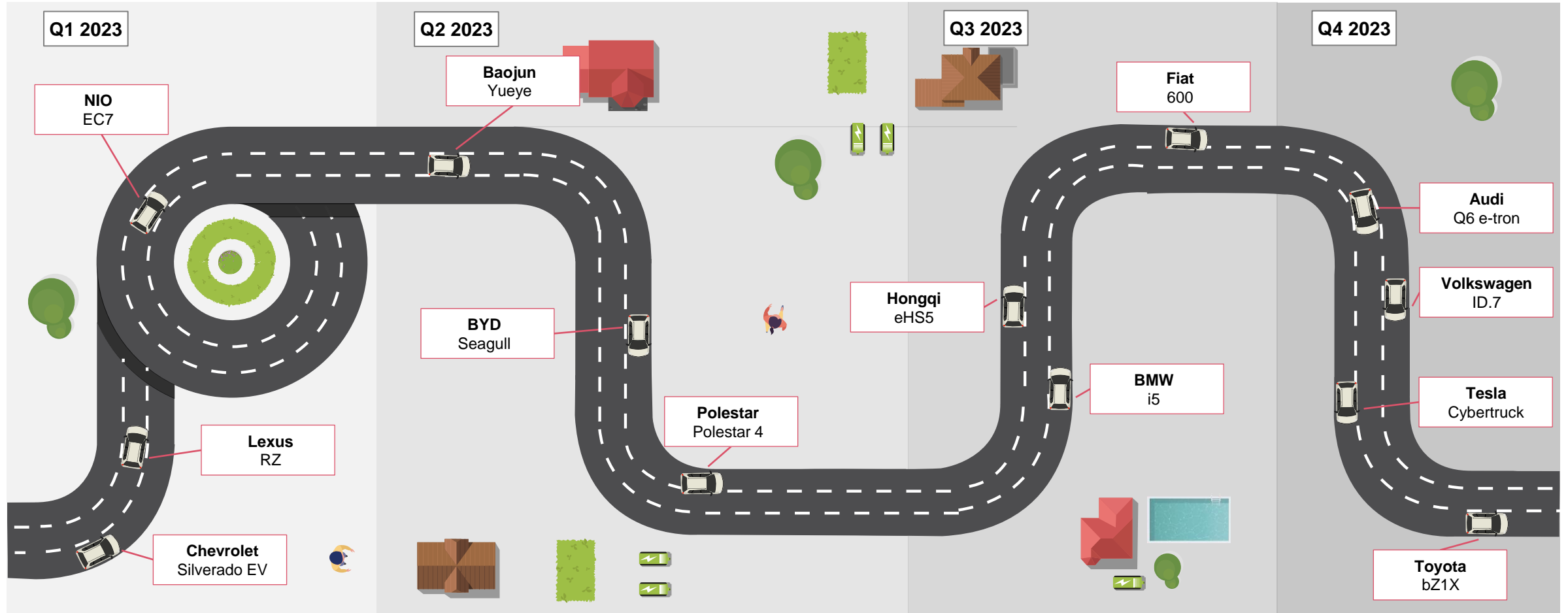
Model	Sales Jan-Mar '23
Tesla Model Y	95,362
Tesla Model 3	54,954
Chevrolet Bolt EV/EUV	19,700
Volkswagen ID.4	9,758
Tesla Model X	6,465
Rivian R1T	6,213
Hyundai Ioniq 5	5,736
Ford Mustang Mach-E	5,407
Tesla Model S	4,849
Ford F-150 Lightning	4,291

China



Model	Sales Jan-Mar '23
Tesla Model Y	94,647
Wuling Hongguang Mini	69,842
BYD Dolphin	67,951
BYD Yuan Plus	62,528
Aion S	48,310
Tesla Model 3	42,782
BYD Qin EV	31,067
Aion Y	31,055
Changan Lumin	24,033
BYD Song Plus EV	21,107

New BEV launches drive market growth

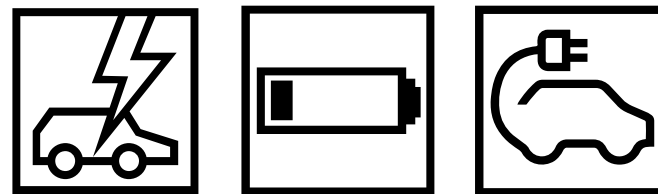




3. Electric vehicle sales data

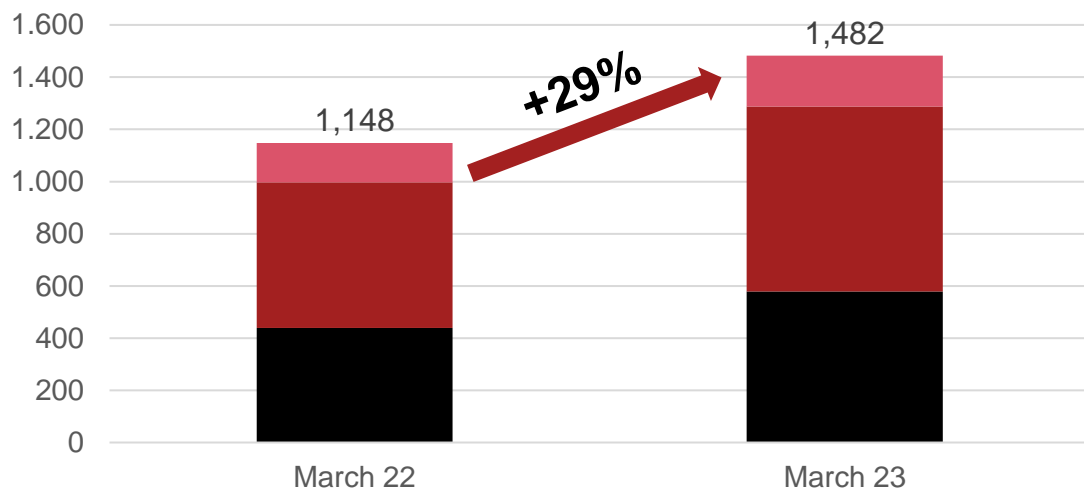
EV sales continue growth in 2023

Key Markets

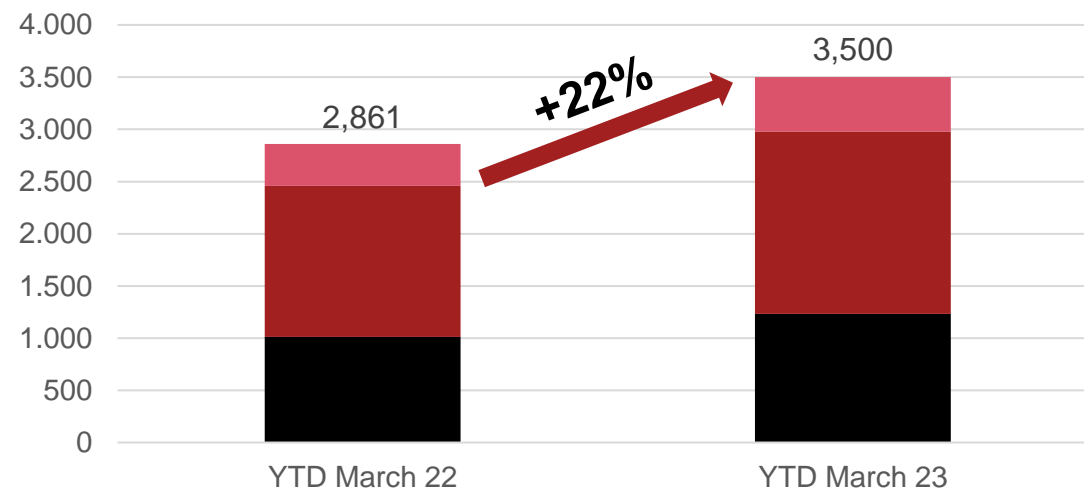


Electric Vehicles (EVs*)

March 22 vs. March 23 (in '000 units)



YTD March 22 vs. YTD March 23 (in '000 units)



■ WE 5+5 ■ China ■ USA

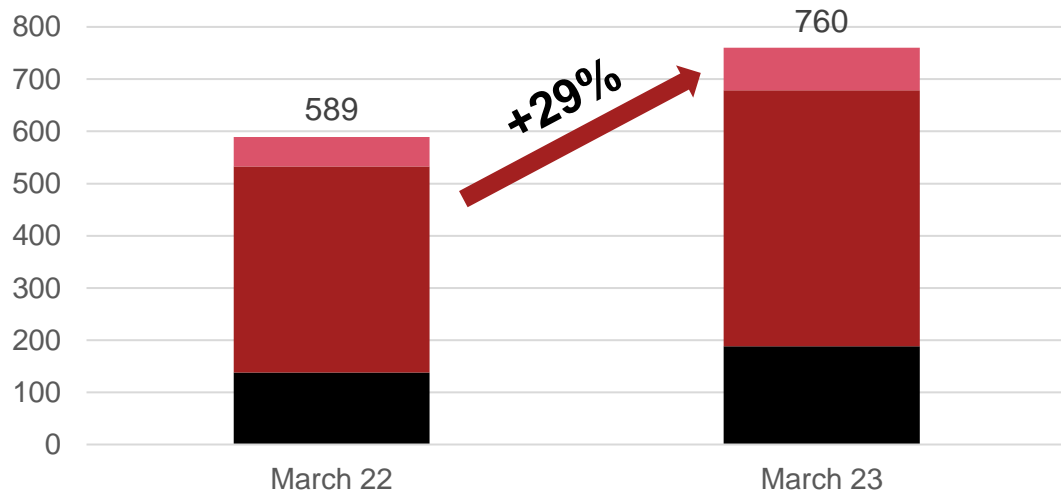


3. Electric vehicle sales data

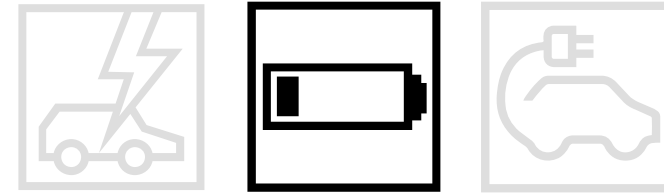
US growth outpaces other regions

Key Markets

March 22 vs. March 23 (in '000 units)

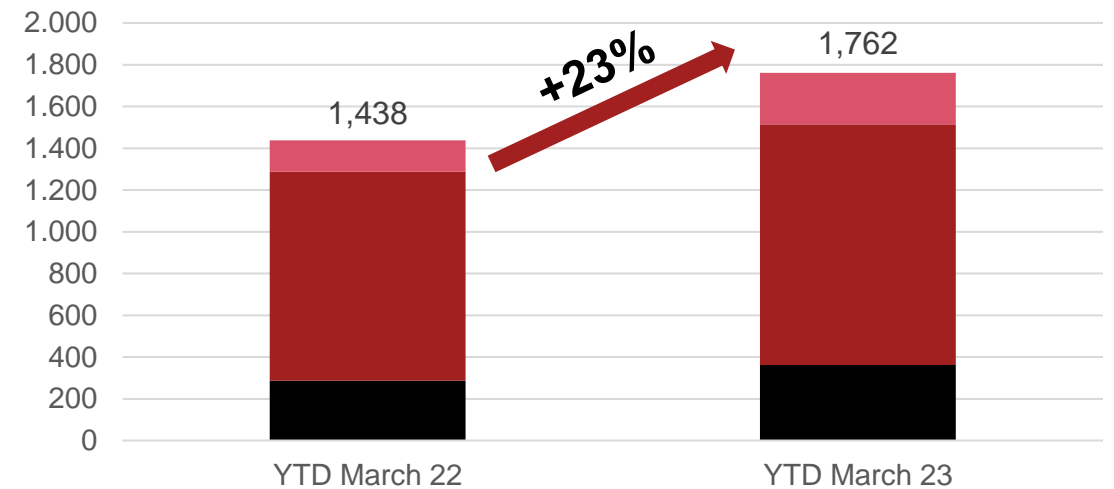


■ WE 5+5 ■ China ■ USA



Battery Electric Vehicles (BEVs)

YTD March 22 vs. YTD March 23 (in '000 units)

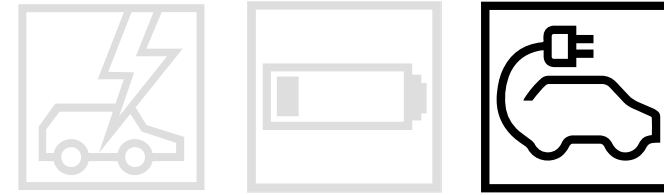




3. Electric vehicle sales data

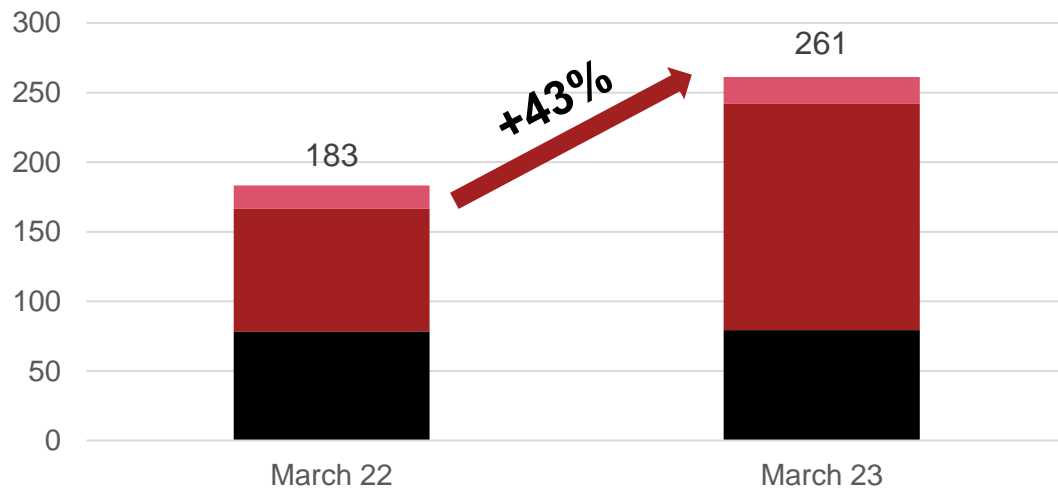
China drives overall plug-in growth

Key Markets

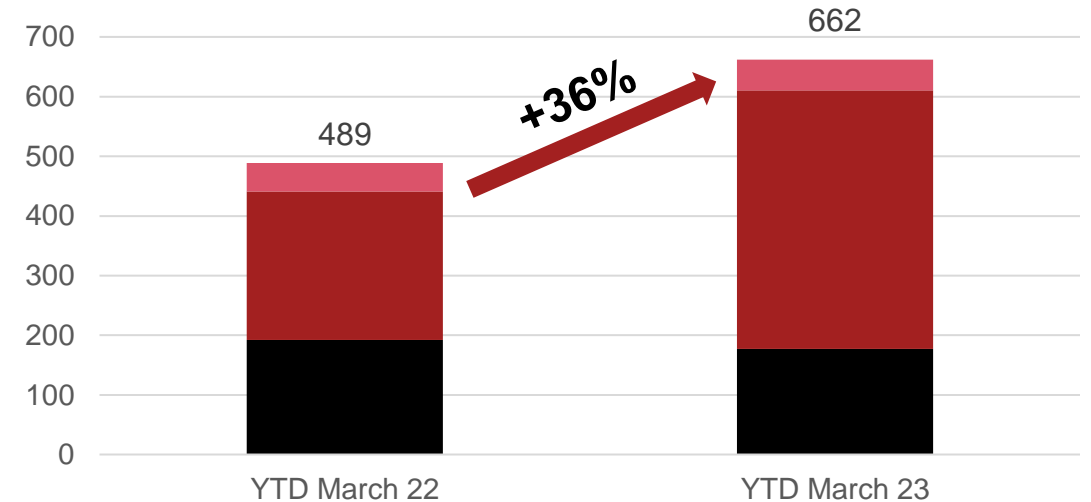


Plug-in Hybrid Electric Vehicles (PHEVs)

March 22 vs. March 23 (in '000 units)



YTD March 22 vs. YTD March 23 (in '000 units)



■ WE 5+5 ■ China ■ USA



4. Western Europe Top 5 and other European markets

Western Europe 5+5

European Top 5: France, Germany, Italy, Spain, and UK

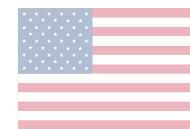
BEV sales in the top 5 European markets grew by 26% in the first quarter of 2023 compared to the corresponding period in 2022.

Significant growth in the French BEV market contributed greatly to this overall increase, going up by 49% vs. Q1 2022. Growth in the other dominant markets in the top 5, Germany and the UK, slowed to 13% and 19% respectively. The stalling of German growth can be attributed to a reduction in incentives at the end of 2022.

As a result of this increase, the BEV market share in France in the first quarter was exactly equal to the UK, at 15.4%. The BEV market share in Germany was close behind, at 14.2%.

The BEV market shares in Spain and Italy lag behind the others, at 5.7% and 3.8% respectively. Perhaps because they have more ground to make up, the BEV growth rates in Spain and Italy in the first quarter were substantial, up by 64% and 45% respectively from the first quarter of 2022.

Meanwhile, PHEV sales in the top five markets declined by 9% vs. Q1 2022. This overall reduction can be put down to a 45% fall in Germany, following a total elimination of PHEV incentives at the end of 2022.



	WE 5+5	2023 Q1	Comparison to 2022 Q1
BEV		362,000	+26%
PHEV		177,000	-8%
Hybrid		692,000	+30%
Total		1,232,000*	+22%

*Numbers may not add up due to rounding

Other European markets: +5

BEV sales in Norway declined by 10% in Q1 2023 vs. Q1 2022 (total market down 11%), but nevertheless still represented a market share of 84.5%, by far the highest in the world. The largest BEV sales growth in the other European markets was seen in the Netherlands and Austria, with increases of 104% and 57% respectively. PHEV sales declined in Norway and Sweden in comparison with Q1 2022.



4. United States

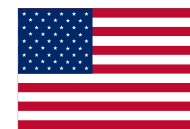
United States

USA

The US BEV market grew by 64% in the first quarter of 2023 compared to the equivalent quarter in 2022. BEV sales continue to be spurred by government incentives, an ever-expanding range of new models and the continuing development of the charging infrastructure. Now standing at 6.9%, the BEV market share has increased more than threefold in less than two years, but there is clearly still much more room for further growth.

For the second time and two quarters in a row, BEV sales outstripped hybrid sales in Q1 2023. With the growth in PHEV sales also slowing dramatically over the last couple of years, BEVs are set to become completely dominant within the EV market.

In last year's Inflation Reduction Act, the US government offered a \$7,500 revised 2023 tax credit for qualifying BEVs. Half of the credit is reserved for North American-assembled vehicles and batteries. The other half of the credit relies on at least 40% (with the required share increasing yearly) of the value of critical minerals in the battery being extracted or processed in the United States or a country with a US free trade agreement, or recycled in North America. Japan has now signed a trade agreement with the US on BEV battery minerals, potentially enabling those mined or processed in Japan to meet the requirements for the second half of the credit. A similar deal with the EU is also being negotiated.¹



	USA	2023 Q1	Comparison to 2022 Q1
BEV		247,000	+64%
PHEV		52,000	+9%
Hybrid		220,000	+7%
Total		519,000	+29%





4. China and other countries in Asia

China and other Asian countries

China

China's BEV sales increased by 15% in the first quarter of 2023 when compared with the corresponding quarter last year. Given that total sales of all powertrains actually went down by 7% over the same period, this level of growth can still be regarded as significant. Nevertheless, BEV growth was substantially down on that recorded in recent years. This is due to the termination of subsidies from the Chinese government at the end of 2022.

It is still expected that the BEV market will continue to grow as a result of major investment by OEMs, the rapid development of the charging infrastructure, increasing consumer enthusiasm, and other government incentives. With the BEV market share at 19%, there is still much scope for advancement.

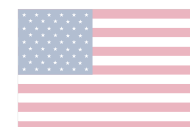
Globally, PHEV sales would have decreased in the first quarter of 2023 when compared to the same quarter last year, were it not for the significant growth in China. This growth can be attributed to many new PHEV models.

Japan

Japan's EV market is almost completely dominated by the sale of hybrids, which boasted an overall market share of 53.6% in Q1 2023. BEV sales grew by 48% from Q1 2022, albeit from a very low base. The BEV market share stands at 1.6%.

South Korea

BEV sales in South Korea increased by 34% in Q1 2023 from the equivalent period in 2022. The BEV market share for the quarter was 8.4%.



China	2023 Q1	Comparison to 2022 Q1
BEV	1,152,000	+15%
PHEV	433,000	+74%
Hybrid	164,000	-17%
Total	1,750,000*	+21%

*Numbers may not add up due to rounding



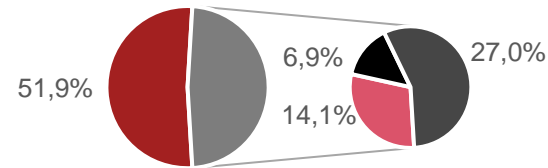
5. Rankings

Shares of EV registrations

EV registrations YTD March 2023

WE 5+5

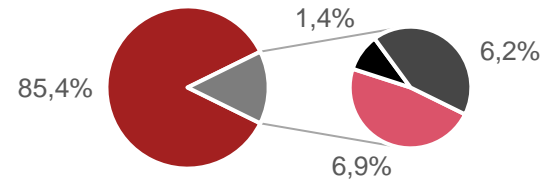
Total registrations	2,560,473
EV registrations	1,231,632



of which BEV	362,115
of which PHEV	177,192
of which Hybrid	692,325

USA

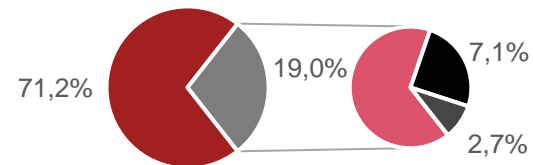
Total registrations	3,563,304
EV registrations	518,833



of which BEV	247,470
of which PHEV	51,656
of which Hybrid	219,707

China

Total registrations	6,076,000
EV registrations	1,749,579



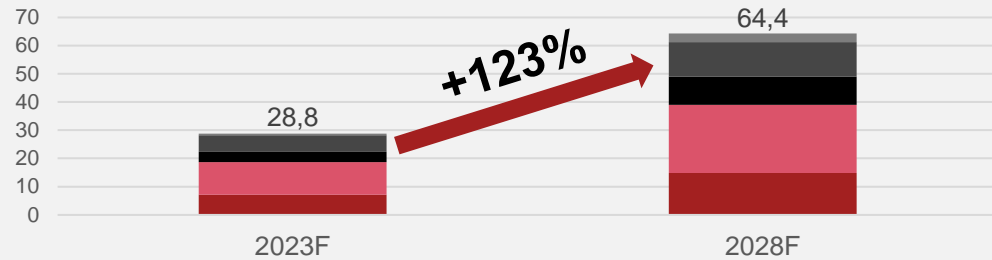
of which BEV	1,152,000
of which PHEV	433,400
of which Hybrid	164,179

■ ICE
 ■ BEV
 ■ PHEV
 ■ Hybrid

Electrified vehicle assembly forecast by region

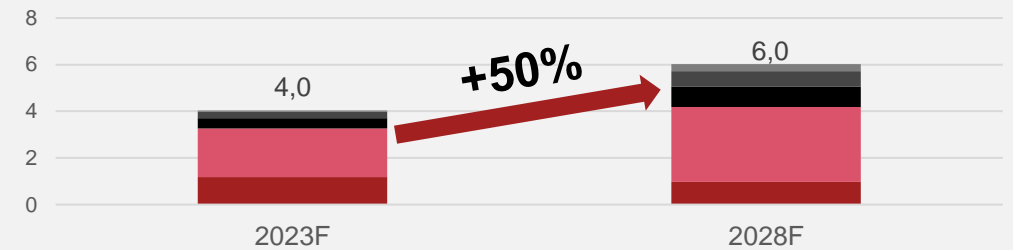
1 EV Assembly by Region

2023F vs. 2028F (in million units)



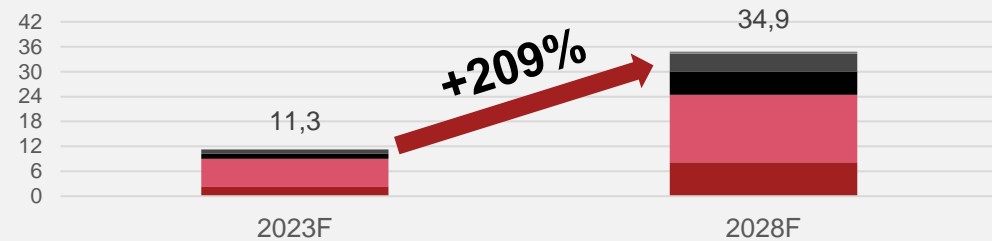
2 Plug-in Hybrid Vehicle Assembly

2023F vs. 2028F (in million units)



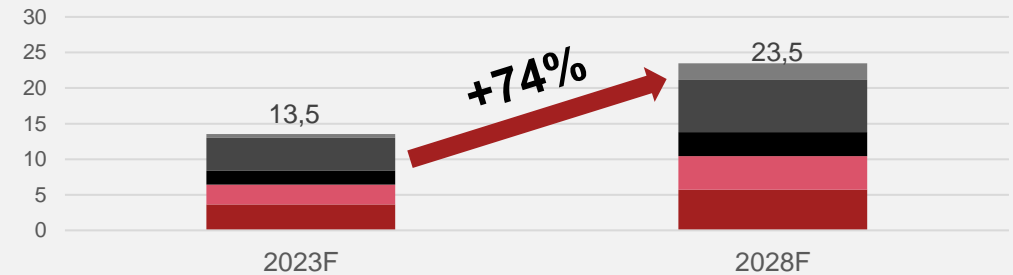
3 BEV Vehicle Assembly

2023F vs. 2028F (in million units)



4 Full and Mild Hybrid Vehicle Assembly

2023F vs. 2028F (in million units)

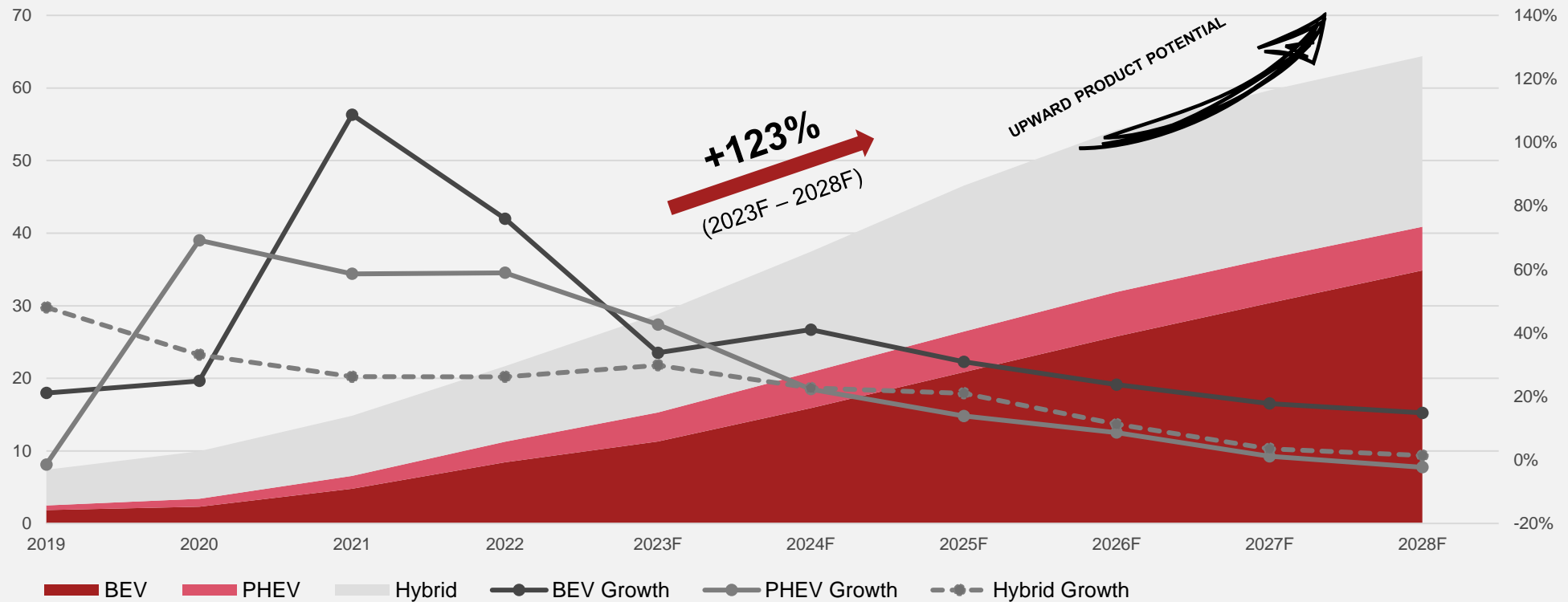


Western + Central Europe China NAFTA Asia-Pacific (w/o China) RoW

Electric vehicle assembly forecast

5

Global EV assembly by powertrain type
2019 – 2028F (in million units, percent)

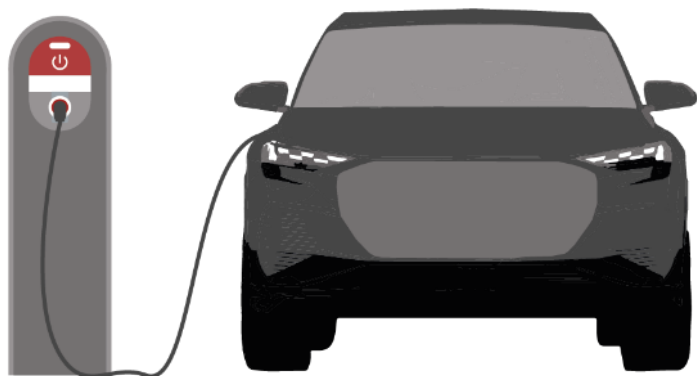




7. Electric vehicle model launches

Overview: BEV model launches

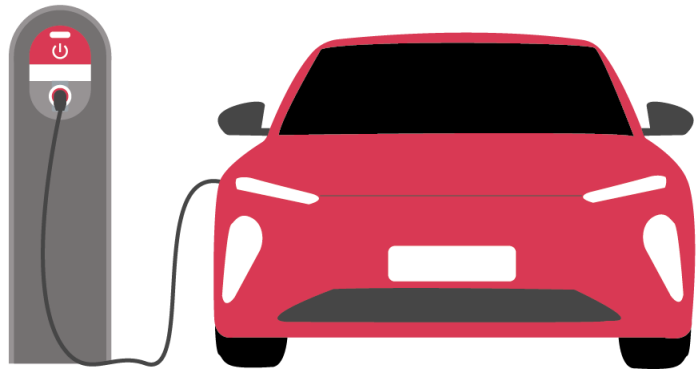
2023 (not exhaustive)



Brand	Model	Launch	Quarter
Aito	Wenjie M9	2023	Q4
Audi	Q6 e-tron	2023	Q4
Baojun	Yueye	2023	Q2
BMW	i5	2023	Q3
BYD	Seagull	2023	Q2
Deepal (Shenlan)	S7	2023	Q2
Fiat	600	2023	Q3
Hongqi	eHS5	2023	Q3
Kia	EV9	2023	Q2
Polestar	Polestar 4	2023	Q2
Tesla	Cybertruck	2023	Q4
Toyota	bZ1X	2023	Q4
Volkswagen	ID.7	2023	Q4
Wuling	Bingo	2023	Q3
Zeekr	X	2023	Q3

Overview: BEV model launches

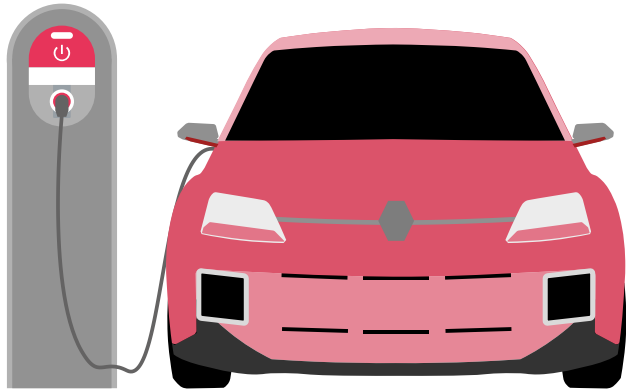
2024–2027 (not exhaustive)



Brand	Model	Launch
BMW	i1	2027
BMW	iX5	2026
Cadillac	Escalade IQ	2024
Chevrolet	Suburban EV	2026
Chrysler	Airflow	2025
Dodge	Charger Daytona	2024
Fisker	PEAR	2024
Ford	Maverick EV	2027
Foxtron	Model C	2024
Honda	e:N2	2024
Hyundai	Ioniq 3	2026
Hyundai	Ioniq 4	2024
Hyundai	Ioniq 8	2025
Jeep	Recon	2024
Kia	EV3	2025

Overview: BEV model launches

2024–2027 (not exhaustive)



Brand	Model	Launch
Kia	EV4	2024
Land Rover	Range Rover Evoque	2026
Lucid	Gravity	2024
Mahindra	BE.05	2025
Maruti-Suzuki	eVX	2024
Maserati	Quattroporte	2025
Mercedes-Benz	EQG	2024
Mini	Aceman	2024
Nissan	Maxima EV	2025
Renault	5	2024
Rolls-Royce	Cullinan	2027
Toyota	bZ5X	2026
Volkswagen	ID.1	2025
Volkswagen	ID.2	2026
Volkswagen	ID.3 X	2026

8. Electric vehicle sales data

Electric vehicle sales data

Germany, UK, France, Italy, Spain, WE-5

		YTD 2023	Market Share	YTD 2022	YoY YTD	23 Q1	QoY 23 Q1	Mar 23	MoY Mar 23	Feb 23	MoY Feb 23	Jan 23	MoY Jan 23
	BEV	94,736	14.2%	83,672	13.2%	94,736	13.2%	44,125	28.0%	32,475	14.7%	18,136	-13.2%
	PHEV	37,545	5.6%	67,771	-44.6%	37,545	-44.6%	16,776	-38.5%	11,916	-44.8%	8,853	-53.2%
	Hybrid	156,236	23.4%	121,541	28.5%	156,236	28.5%	67,253	38.9%	47,064	24.2%	41,919	19.0%
Germany	Total EV	288,517	43.3%	272,984	5.7%	288,517	5.7%	128,154	16.3%	91,455	4.2%	68,908	-8.1%
	BEV	76,230	15.4%	64,165	18.8%	76,230	18.8%	46,626	18.6%	12,310	18.2%	17,294	19.8%
	PHEV	31,765	6.4%	29,761	6.7%	31,765	6.7%	17,933	11.8%	4,723	1.0%	9,109	0.7%
	Hybrid	156,051	31.6%	122,179	27.7%	156,051	27.7%	92,964	29.1%	21,749	35.7%	41,338	21.1%
UK	Total EV	264,046	53.4%	216,105	22.2%	264,046	22.2%	157,523	23.7%	38,782	24.6%	67,741	17.6%
	BEV	64,859	15.4%	43,506	49.1%	64,859	49.1%	30,636	54.5%	19,597	45.7%	14,626	43.2%
	PHEV	36,512	8.7%	29,310	24.6%	36,512	24.6%	15,717	34.4%	10,495	8.4%	10,300	29.8%
	Hybrid	93,679	22.3%	73,080	28.2%	93,679	28.2%	38,520	38.3%	29,134	29.1%	26,025	14.8%
France	Total EV	195,050	46.3%	145,896	33.7%	195,050	33.7%	84,873	42.9%	59,226	29.6%	50,951	24.8%
	BEV	16,356	3.8%	11,289	44.9%	16,356	44.9%	8,163	82.0%	4,861	54.0%	3,332	-8.7%
	PHEV	18,965	4.4%	16,670	13.8%	18,965	13.8%	7,278	23.1%	5,586	5.1%	6,101	12.0%
	Hybrid	152,838	35.8%	115,574	32.2%	152,838	32.2%	57,960	47.8%	47,749	23.9%	47,129	24.5%
Italy	Total EV	188,159	44.1%	143,533	31.1%	188,159	31.1%	73,401	48.0%	58,196	23.8%	56,562	20.5%
	BEV	13,617	5.7%	8,308	63.9%	13,617	63.9%	5,575	64.3%	4,157	48.7%	3,885	83.4%
	PHEV	14,953	6.3%	10,568	41.5%	14,953	41.5%	6,006	78.0%	4,833	21.6%	4,114	27.8%
	Hybrid	73,143	30.8%	47,566	53.8%	73,143	53.8%	29,199	74.3%	22,899	31.1%	21,045	57.8%
Spain	Total EV	101,713	42.8%	66,442	53.1%	101,713	53.1%	40,780	73.3%	31,889	31.5%	29,044	55.5%
	BEV	265,798	11.8%	210,940	26.0%	265,798	26.0%	135,125	33.1%	73,400	26.3%	57,273	11.6%
	PHEV	139,740	6.2%	154,080	-9.3%	139,740	-9.3%	63,710	-0.9%	37,553	-17.0%	38,477	-13.6%
	Hybrid	631,947	28.1%	479,940	31.7%	631,947	31.7%	285,896	40.0%	168,595	27.3%	177,456	23.9%
WE-5	Total EV	1,037,485	46.2%	844,960	22.8%	1,037,485	22.8%	484,731	31.0%	279,548	18.5%	273,206	14.3%

Legend

MoY = Month-on-Year
 QoY = Quarter-on-Year
 YoY = Year-on-Year
 YTD = Year-to-Date

8. Electric vehicle sales data

Electric vehicle sales data

Sweden, Norway, Netherlands, Switzerland, Austria, WE 5+5

		YTD 2023	Market Share	YTD 2022	YoY YTD	23 Q1	QoY 23 Q1	Mar 23	MoY Mar 23	Feb 23	MoY Feb 23	Jan 23	MoY Jan 23
	BEV	23,189	35.5%	19,966	16.1%	23,189	16.1%	12,644	36.6%	6,212	13.1%	4,333	-17.0%
	PHEV	12,871	19.7%	17,713	-27.3%	12,871	-27.3%	5,542	-18.8%	3,864	-29.9%	3,465	-35.6%
	Hybrid	7,388	11.3%	6,622	11.6%	7,388	11.6%	3,429	23.1%	2,170	6.1%	1,789	-0.1%
Sweden	Total EV	43,448	66.6%	44,301	-1.9%	43,448	-1.9%	21,615	14.6%	12,246	-6.1%	9,587	-22.6%
	BEV	24,231	84.5%	26,803	-9.6%	24,231	-9.6%	16,811	20.2%	6,183	0.4%	1,237	-81.4%
	PHEV	1,540	5.4%	2,338	-34.1%	1,540	-34.1%	837	-11.6%	521	-38.8%	182	-66.2%
	Hybrid	1,860	6.5%	1,182	57.4%	1,860	57.4%	1,191	170.7%	406	9.4%	263	-29.1%
Norway	Total EV	27,631	96.4%	30,323	-8.9%	27,631	-8.9%	18,839	22.6%	7,110	-3.7%	1,682	-77.8%
	BEV	27,412	28.0%	13,449	103.8%	27,412	103.8%	14,164	133.7%	7,614	91.4%	5,634	65.2%
	PHEV	13,444	13.7%	10,010	34.3%	13,444	34.3%	5,202	58.0%	4,224	57.7%	4,018	-0.5%
	Hybrid	22,205	22.6%	21,448	3.5%	22,205	3.5%	7,864	22.1%	6,577	1.9%	7,764	-9.2%
Netherlands	Total EV	63,061	64.3%	44,907	40.4%	63,061	40.4%	27,230	72.4%	18,415	40.5%	17,416	8.8%
	BEV	10,250	17.4%	8,820	16.2%	10,250	16.2%	4,812	13.1%	2,598	6.4%	2,840	33.6%
	PHEV	5,205	8.8%	4,998	4.1%	5,205	4.1%	2,131	8.9%	1,687	11.7%	1,387	-9.4%
	Hybrid	16,243	27.6%	13,359	21.6%	16,243	21.6%	6,920	30.7%	4,656	12.1%	4,667	19.3%
Switzerland	Total EV	31,698	53.9%	27,177	16.6%	31,698	16.6%	13,863	20.5%	8,941	10.3%	8,894	17.5%
	BEV	11,235	17.8%	7,166	56.8%	11,235	56.8%	5,075	67.0%	3,415	61.5%	2,745	36.4%
	PHEV	4,392	7.0%	3,206	37.0%	4,392	37.0%	1,898	61.5%	1,276	37.6%	1,218	10.3%
	Hybrid	12,682	20.1%	9,702	30.7%	12,682	30.7%	5,260	37.9%	3,679	13.7%	3,743	41.1%
Austria	Total EV	28,309	44.9%	20,074	41.0%	28,309	41.0%	12,233	52.4%	8,370	33.3%	7,706	33.6%
	BEV	362,115	14.1%	287,144	26.1%	362,115	26.1%	188,631	36.6%	99,422	27.0%	74,062	4.7%
	PHEV	177,192	6.9%	192,345	-7.9%	177,192	-7.9%	79,320	1.0%	49,125	-13.4%	48,747	-14.7%
	Hybrid	692,325	27.0%	532,253	30.1%	692,325	30.1%	310,560	39.2%	186,083	25.1%	195,682	21.9%
WE 5+5	Total EV	1,231,632	48.1%	1,011,742	21.7%	1,231,632	21.7%	578,511	31.6%	334,630	17.9%	318,491	10.5%

Legend

MoY = Month-on-Year
 QoY = Quarter-on-Year
 YoY = Year-on-Year
 YTD = Year-to-Date

8. Electric vehicle sales data

Electric vehicle sales data

Australia, Brazil, China, India, Indonesia

		YTD 2023	Market Share	YTD 2022	YoY YTD	23 Q1	QoY 23 Q1	Mar 23	MoY Mar 23	Feb 23	MoY Feb 23	Jan 23	MoY Jan 23
	BEV	17,396	6.5%	6,752	157.6%	17,396	157.6%	6,612	19.5%	5,932	888.7%	4,852	682.6%
	PHEV	1,461	0.5%	1,047	39.5%	1,461	39.5%	569	33.3%	454	48.9%	438	39.0%
	Hybrid	16,099	6.0%	20,581	-21.8%	16,099	-21.8%	5,247	-29.8%	5,716	-29.8%	5,136	3.5%
Australia	Total EV	34,956	13.0%	28,380	23.2%	34,956	23.2%	12,428	-7.5%	12,102	33.8%	10,426	76.7%
	BEV	1,980	0.5%	1,290	53.5%	1,980	53.5%	587	12.9%	638	58.7%	755	105.2%
	PHEV	5,262	1.2%	1,615	225.8%	5,262	225.8%	2,172	418.4%	1,383	134.8%	1,707	181.2%
	Hybrid	7,544	1.7%	6,939	8.7%	7,544	8.7%	3,230	10.9%	2,273	-7.0%	2,041	28.9%
Brazil	Total EV	14,786	3.4%	9,844	50.2%	14,786	50.2%	5,989	55.5%	4,294	25.0%	4,503	76.0%
	BEV	1,152,000	19.0%	1,000,000	15.2%	1,152,000	15.2%	490,000	24.1%	375,000	45.3%	287,000	-17.3%
	PHEV	433,400	7.1%	248,600	74.3%	433,400	74.3%	162,600	85.0%	149,400	98.4%	121,400	42.2%
	Hybrid	164,179	2.7%	197,513	-16.9%	164,179	-16.9%	57,003	-23.6%	53,714	-3.9%	53,462	-20.2%
China*	Total EV	1,749,579	28.8%	1,446,113	21.0%	1,749,579	21.0%	709,603	27.3%	578,114	48.5%	461,862	-7.5%
	BEV	17,127	1.3%	7,833	118.7%	17,127	118.7%	8,800	133.4%	4,842	95.7%	3,485	119.5%
	PHEV	8	0.0%	7	14.3%	8	14.3%	8	14.3%	0	0.0%	0	0.0%
	Hybrid	99,948	7.3%	28,229	254.1%	99,948	254.1%	37,671	366.3%	31,716	239.2%	30,561	183.0%
India**	Total EV	117,083	8.6%	36,069	224.6%	117,083	224.6%	46,479	292.0%	36,558	209.2%	34,046	174.9%
	BEV	1,800	0.9%	64	2712.5%	1,800	2712.5%	1,112	5752.6%	390	4233.3%	298	727.8%
	PHEV	1	0.0%	10	-90.0%	1	-90.0%	0	-100.0%	1	-50.0%	0	0.0%
	Hybrid	6,418	3.0%	646	893.5%	6,418	893.5%	2,167	957.1%	1,974	470.5%	2,277	2296.8%
Indonesia	Total EV	8,219	3.9%	720	1041.5%	8,219	1041.5%	3,279	1313.4%	2,365	562.5%	2,575	1865.6%

Legend

MoY = Month-on-Year
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 YTD = Year-to-Date

Source: PwC Autofacts Analysis, KBA, SMMT, PFA, ANFIA, ANFAC, SCB, OFV, RAI, auto-schweiz, Statistik Austria, CAAM, CPCA, JADA, ODMD, MoRTH, ABVE, FCAI, GAIKINDO

*BEV and PHEV sales based on CAAM data; hybrid sales based on CPCA wholesale data; **Partially estimated

8. Electric vehicle sales data

Electric vehicle sales data

Japan, South Korea, Turkey, USA, Analyzed Markets

		YTD 2023	Market Share	YTD 2022	YoY YTD	23 Q1	QoY 23 Q1	Mar 23	MoY Mar 23	Feb 23	MoY Feb 23	Jan 23	MoY Jan 23
	BEV	12,158	1.6%	8,191	48.4%	12,158	48.4%	5,149	22.0%	3,594	57.6%	3,415	102.0%
	PHEV	12,465	1.6%	10,336	20.6%	12,465	20.6%	5,570	57.2%	3,623	31.5%	3,272	-18.9%
	Hybrid	412,546	53.6%	308,505	33.7%	412,546	33.7%	175,957	32.7%	128,523	52.5%	108,066	18.0%
Japan	Total EV	437,169	56.8%	327,032	33.7%	437,169	33.7%	186,676	33.0%	135,740	52.0%	114,753	17.9%
	BEV	35,866	8.4%	26,739	34.1%	35,866	34.1%	17,400	27.4%	17,824	72.3%	642	-76.6%
	PHEV	1,953	0.5%	4,141	-52.8%	1,953	-52.8%	924	-52.3%	606	-51.8%	423	-55.4%
	Hybrid	79,295	18.5%	55,015	44.1%	79,295	44.1%	32,699	43.8%	25,306	35.3%	21,290	56.9%
South Korea	Total EV	117,114	27.3%	85,895	36.3%	117,114	36.3%	51,023	33.1%	43,736	44.3%	22,355	29.6%
	BEV	3,766	2.1%	1,073	251.0%	3,766	251.0%	1,844	189.0%	1,215	303.7%	707	427.6%
	PHEV	321	0.2%	82	291.5%	321	291.5%	180	275.0%	88	450.0%	53	194.4%
	Hybrid	18,553	10.6%	11,262	64.7%	18,553	64.7%	8,598	41.1%	5,673	60.7%	4,282	161.4%
Turkey	Total EV	22,640	12.9%	12,417	82.3%	22,640	82.3%	10,622	56.7%	6,976	81.3%	5,042	181.7%
	BEV	247,470	6.9%	150,560	64.4%	247,470	64.4%	81,346	45.2%	87,742	98.7%	78,382	55.6%
	PHEV	51,656	1.4%	47,618	8.5%	51,656	8.5%	19,259	14.2%	17,499	13.6%	14,898	-2.9%
	Hybrid	219,707	6.2%	205,246	7.0%	219,707	7.0%	93,318	19.6%	66,320	11.3%	60,069	-11.2%
USA*	Total EV	518,833	14.6%	403,423	28.6%	518,833	28.6%	193,923	28.5%	171,561	44.0%	153,349	15.0%
	BEV	1,851,678	11.7%	1,489,646	24.3%	1,851,678	24.3%	801,481	29.8%	596,599	50.3%	453,598	-4.6%
	PHEV	683,719	4.3%	505,801	35.2%	683,719	35.2%	270,602	42.7%	222,179	45.8%	190,938	16.6%
	Hybrid	1,716,614	10.8%	1,366,189	25.6%	1,716,614	25.6%	726,450	30.7%	507,298	29.7%	482,866	15.1%
Analyzed Markets	Total EV	4,252,011	26.8%	3,361,635	26.5%	4,252,011	26.5%	1,798,533	32.0%	1,326,076	41.0%	1,127,402	6.5%

Legend

MoY = Month-on-Year
 QoY = Quarter-on-Year
 YoY = Year-on-Year
 YTD = Year-to-Date

Source: PwC Autofacts Analysis, KBA, SMMT, PFA, ANFIA, ANFAC, SCB, OFV, RAI, auto-schweiz, Statistik Austria, CAAM, CPCA, JADA, ODMD, MoRTH, ABVE, FCAI, GAIKINDO
 *Partially estimated



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